# ΤΟΥΟΤΑ

# **Application For Certification - Part 1 2016 Model Year**

Durability Group	: GTYXHHGNNB26
<b>Evap/refueling Families</b>	: GTYXR0130J72
Test Group	: GTYXV01.8PC3
<b>Durability Group Description</b>	: Four Stroke, Otto Cycle, Gasoline Fueled,
	: Ported FI, Catalyst code : 3-IIZ40+3-IIS38
<b>Test Group Description</b>	: 1.8Liter I4 LDV
Applicable Standards	: Federal State: Tier2-Bin3 -LDV
	: California: LEVIII-SULEV30 (AT PZEV) -PC
<b>Carlines</b> Covered	: PRIUS (NiMH)
Vehicles Tested	:

Vehicle I.D.	Config.	Test	Test Number
16-ZV3H	00	FTP	GTYX10038745
16-ZV3H	00	HWY	GTYX10038747
16-ZV3H	00	SFTP	GTYX10038746, GTYX10038740
16-ZV1H	00	EVAP	GTYX10037860, GTYX10037861
16-ZV1H	00	Running Loss	GTYX10037899
16-ZV1H	00	Refueling	GTYX10037863
16-ZV3H	00	C.CO, C.HC	GTYX10038684

# **EPA Response Requested By :** October 26, 2015

For Questions, Contact : Kevin Webber

734-995-7132

Note :

#### Test group: GTYXV01.8PC3

#### **Table of Contents**

- Section 1 Correspondence and Communications
- Section 2 Durability Group Description
- Section 3 Evaporative/Refueling Family Description
- Section 4 Durability Procedure Description
- Section 5 Test Group Description
- Section 6 Test Vehicle Description
- Section 7 Test Results
- Section 8 Emission Testing Waiver Statements
- Section 9 OBD System Description
- Section 10 Description of Alternate-fueled Vehicles
- Section 11 AECD Descriptions
- Section 12 Description of vehicles covered by certificate and test parameters
- Section 13 Projected Sales
- Section 14 Request for Certificate
- Section 15 Other Information
- Section 16 Confidential Information
- Section 17 California ARB Information
- Section 18 Information on Service of Process

# 1. <u>Correspondence and Communications</u>

Please refer to the FOI common file.

# 2. <u>Durability Group Description</u>

Durability Group Name : GTYXHHGNNB26

Please refer to the common file for details.

### 3. <u>Evaporative/Refueling Family Description</u>

Evaporative/Refueling Family Name : GTYXR0130J72

Please refer to the FOI common file for details.

#### 4. <u>Durability Procedure Description</u>

- 4.1 Exhaust Durability Test Procedure
- 4.2 Durability Showing
- 4.3 Evap/refueling Durability Test Procedure Please refer to the CBI common file.
- 4.4 Exhaust Emission Deterioration Factors
- 4.5 Evap/refueling Emission Deterioration Factors
- 4.6 Equivalency Factor

Please refer to the Certification Summary Information Report in Section 7 or FOI common file.

# 5. <u>Test Group Description</u>

5.1	Test group name	:	GTYXV01.8PC3
5.2	Engine displacements covered	:	1,798 cm <sup>3</sup> (109.7 CID)
5.3	Arrangement and number of cylinders	:	I4
5.4	Vehicle class (es) covered	:	LDV
5.5	Federal emission standards class	:	Tier2-Bin3 -LDV
5.6	California emission standards class	:	LEVIII-SULEV30 (AT PZEV) -PC
5.7	Applicable emission standards		

Please refer to the Certification Summary Information Report in Section 7.

### 6. <u>Test Vehicle Description</u>

Please refer to section 7 for the following vehicles:

Vehicle ID	Config.	Vehicle Type	Tests Performed
16-ZV1H	00	Cert. Emission	2-Day Evap., 3-Day Evap, Refueling
16-ZV3H	00	Cert. Emission	FTP, HwFET, SFTP, Cold CO, Cold HC

### Test group: GTYXV01.8PC3

#### 7. Test Results

Certífica	tion Summary Information Report	
Toyota Motor Corporation	Manufacturer Code	TYX
GTYXV01.8PC3	<b>Evaporative/Refueling Family</b>	GTYXR0130J72
	CARB Executive Order #	
	Certificate Revision Date	
	Conditional Certificate	
	CSI Submission/Revision Date	10/25/2016 06:36:54 AM
2016		
	Toyota Motor Corporation GTYXV01.8PC3   	GTYXV01.8PC3Evaporative/Refueling FamilyCARB Executive Order #Certificate Revision DateConditional CertificateCSI Submission/Revision Date

Page 1 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Date: 10/25/2016 06:37:32 AM		Certification Summary Information Repo		
Test Group	GTYXV01.8PC3	Evaporative/Refueling Fami	ly	GTYXR0130J72
Test Group Information				
CSI Туре	Update for Correction	Running Change Reference I	Number	
GHG Exempt Status	Not Exempt			
Drive Sources and Fuel(s)				
Drive Source #1:	Combustion Engine			
Fu	el	Basic Fuel Metering System	Lean Burn Strateg	Indicator
Gaso	line	Multipoint/sequential fuel injection	No	
Drive Source #2:	Electric Motor			
Fu	el	Basic Fuel Metering System	Lean Burn Strateg	/ Indicator
Electr	icity		No	
Hybrid Indicator	Yes			
Multiple Fuel Storage		Rechargeable Energy Storag	e System Indicator	Yes
Multiple Fuel Combustion		Off-board Charge Capable I	•	No
Fuel Cell Indicator	No	EPA Vehicle Class		LDV
Federal Clean Fuel Vehicle	No	Federal Clean Fuel Vehicle S	standard	
Federal Clean Fuel Vehicle ILEV	No	California Partial Zero Emis	sions Vehicle Indicator	Yes
Durability Group Name	GTYXHHGNNB26	Durability Group Equivalen	cy Factor	1.2
Reduced Fee Test Group	No	Certification Region Code(s)		FA, CA
Complies with HD GHG 2b/3 regulations?	No			
Introduction into Commerce Date	11/30/2015	CAP2000 Conditional Certif	icate?	N/A
Independent Commercial Importer?		Alternative Fuel Converter (	Certificate?	
SFTP Federal Composite Compliance Identifier	Tier 2	SFTP Tier 2 Composite CO	Option	Yes
SFTP LEV-III Composite Compliance Indicator	Yes			
OBD Compliance Type	CARB	OBD Demonstration Vehicle	Test Group	GTYXV02.0KEA
Test Group OBD Compliance Level	Full - no deficiencies	Number of Test Group OBD	Deficiencies	0
OBD Deficiencies Comments				
Mfr Test Group Comments				
Mfr Exhaust / Evap Standards Comments				

#### **Certification Summary Information Report**

Page 2 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Date: 10/25/2016 06:37:32	AM		Certification Sum	nmary Information l	Report		
Test Group		GTYXV01.8PC3		Evaporative/Refueling	Family	GTYXR0130J	72
Evaporative/Refueli	ng Family Inform	ation					
Evaporative Summary I	nformation Type	New		Submission/Correction	Date	09/24/2015 10	:48:36 PM
Integrated ORVR?		No		Fuel(s)		Gasoline, Elec	tricity
Multiple Fuel Storage		Fuels Stored Together					
Bladder Fuel Tank?		No					
Fuel Tank Material		Plastic		Fuel Tank Material De	scription	EVOH	
Fill Pipe Seal Type		Liquid seal					
Air Intake System Vapo	r Storage Device?	Yes		Air Intake System Vap	or Storage Device Descri	ption Carbon filter in	n the air cleaner box
Fuel System Vapor Stor	age Canister?	Yes		Other Vapor Storage			
Fuel System Vapor Stor Working Capacity (gran	age Canister(s) Total ns)	130		Number of Primary Ca	nisters	1	
Number of Bleed Canist	ers	0		Bleed Canister Total W	orking Capacity (grams)		
Mfr Evaporative/Refuel	ing Family Comments						
Leak Family Details							
Leak Family Indicator		No					
Canister Bleed Test Indi	cator	No		Applicability of Evapor	ative Canister Bleed Tes	t	
Evaporative Canister Bl	eed Test Comments						
CARB Fuel Only (Rig) 7	est Indicator	No		Applicability of CARB	Fuel Only (Rig) Test		
CARB Fuel Only (Rig)	est Comments						
Models Covered by	this Certificate						
Carline Manufacturer	Division	Carline	Certification Region Code(s)	Drive System	Trans - Type	- # of Gears	Trans - Lockup
Toyota Motor Corporation	1 - TOYOTA	60 - PRIUS	Federal	2-Wheel Drive, Front	Continuously Variable	1	No
Toyota Motor Corporation	1 - TOYOTA	60 - PRIUS	California + CAA Section 177 states	2-Wheel Drive, Front	Continuously Variable	1	No
Engine Description							
Hybrid Type		IC Engine/Electric Motor	:	Hybrid Description			
Engine Type		4-Stroke Spark Ignition		Mfr Engine Description	1		
Engine Block Arrangem	ent	Inline		Mfr Engine Block Arra			
Camless Valvetrain Indi		No		Oil Viscosity/Classifica	•	0W-20	
				•••			

#### Certification Summary Information Report

Page 3 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Date: 10/25/2016	06:37:32 AM		Cer	tification Summa	ary Information I	Report				
Test Group		GTYXV	)1.8PC3	Ev	vaporative/Refueling	Family		GTYXR	.0130J72	
After Treatm	ent Device(s) (A	TD)								
ATE	) Number	ATD	Туре	ATD Preciou	is Metal	Substrate	e Material	s	ubstrate Cons	truction
	1	Three-wa	y catalyst	Paladium + R	hodium	Cer	amic		Monolith	1
	2	Three-wa	y catalyst	Platinum + R	hodium	Cer	amic		Monolith	1
Mfr After Treat Comments	tment Device (ATD)									
Direct Ozone R	eduction (DOR) Dev	r <b>ice</b> Not Equi	pped							
Mfr Emission C	Control Device Comm	nents								
Engine Confi	iguration Numbe	r 1								
Engine Displace	ement (liters)	1.8		Er	ngine Rated Horsepo	wer		96		
	t Valves Per Cylinder	r 2		N	umber of Exhaust Va	dves Per Cylin	der	2		
Air Aspiration N	Method	Naturally	Aspirated	N	umber of Air Aspirat	tion Devices				
Air Aspiration I	Device Configuration	ı '	-	CI	harge Air Cooler Ty	pe		N/A		
Cylinder Deacti	vation	No								
Cylinder Deacti	vation Description									
Variable Valve	Timing	Yes								
Variable Valve '	Timing System Desc	ription Intake								
Variable Valve I	Lift?	No								
Variable Valve !	Lift System Descript	ion								
Number of Kno	ck Sensors	1		N	umber of Air/Fuel Se	nsors		2		
Air/Fuel Sensor	# 1 Type	Heated or	xygen	Ai	ir/Fuel Sensor # 1 De	scription				
Air/Fuel Sensor	# 2 Type	Heated ai	r fuel	Ai	ir/Fuel Sensor # 2 De	scription				
Mfr Air/Fuel Se	ensor Comments									
Exhaust Gas Re	circulation	Yes		Ce	ooled Exhaust Gas R	ecirculation		Yes		
EGR Type		Electronic	c/Electric	Ex	xhaust Gas Recircula	tion Description	on if 'Other'			
Closed Loop Aiı	r Injection System	No								
Air Injection Ty	pe	Not Appl	icable	Ai	ir Injection Type if 'C	Other'				
Mfr Engine Cor	nfiguration Commen	ts								
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 Weightin Factor
	GTYX10038745	GTYX10038746	GTYX10038740	GTYX10038684	GTYX10038747	187.9	284.3	999.9	628.9	
Gasoline	GIIA10056/45	011/10000/40								

#### Certification Summary Information Report

Page 4 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Date: 10/25/2016 06:37:32 AM		Certification Summary Information Re	eport	
Test Group	GTYXV01.8PC3	Evaporative/Refueling Fa	amily	GTYXR0130J72
SFTP LEV-III Official Test Numbers				
Test Group Fuel	FTP	US06	SC03	
Electricity	GTYX10038745	GTYX10038746	GTYX10038740	
Gasoline	GTYX10038745	GTYX10038746	GTYX10038740	
Hybrid Electric Vehicle And Fuel Cel	I Information			
Rechargable Energy Storage System	Battery(s)	Rechargable Energy Stor	rage System, if Other	
Battery Type	NiMH	Number of Battery Packs	s	1
Total Voltage of Battery Packs	202	Battery Energy Capacity	,	6.5
Battery Specific Energy	46.4	Battery Charger Type		On-Board
Number of Capacitors		Capacitor Rating (In Far	ads)	
Mfr Capacitor Comments				
Hydraulic System Description				
Regenerative Braking Type	Electrical Regen Brake			
Regenerative Braking Source	Front Wheels	Driver Controlled Regen	erative Braking	No
Mfr Regenerative Braking Description				
Drive Motor(s)/Generator(s)	1			
Motor/Generator Type 1	AC Induction	Rated Motor/Generator 1	Power	37
Mfr Fuel Cell Description				
Fuel Cell On-Board H2 Storage Capacity (kg)		Usable H2 Fill Capacity (	(kg)	
Mfr Hybrid Electric/ Electric Vehicle Comments				

Page 5 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Test Group	GTYXV01.8PC3	Evaporative/Refueling F	amily	GTYXR0130J72
Emission Data Vehicle Informatio	on			
Vehicle ID / Configuration	16-ZV1H/0	Manufacturer Vehicle C	onfiguration Number	0
Original Test Group Name	GTYXV01.8PC4	Original Evaporative/Re	•	GTYXR0130J72
Original Test Vehicle Model Year	2016		Automing Family	011111015072
Vehicle Model	2010			
Represented Test Vehicle Make	ΤΟΥΟΤΑ	Represented Test Vehicle	e Model	PRIUS
-	1010111	Represented Fest venter	Mouch	TRIOD
Leak Family Details				
Leak Family Identifier		Leak Family Name		
Drive Sources and Fuel System D	etails			
Drive So	urce and Fuel#	Drive Source	Fuel	
Diffe So	1	Electric Motor	Electric	
	2	Combustion Engine	Gasoli	-
		<i>o</i>		
Hybrid Indicator	Yes			
Multiple Fuel Storage		Multiple Fuel Combustion	on and a second s	
Fuel Cell Indicator	No	Rechargeable Energy St	orage System Indicator	Yes
Rechargeable Energy Storage System	Battery(s)	Rechargeable Energy St	orage System, if 'Other'	
Off-board charge Capable Indicator	No			
Odometer Correction Initial	43	Odometer Correction Fa	ctor	1
Odometer Correction Sign	- = System Miles is equal to	(Test odometer reading - Initial system miles) $*$	Correction factor	
Odometer Correction Units	Miles			
Engine Code	01	Rated Horsepower		96
Displacement (liters)	1.798			
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, i	if 'Other'	
Number of Air Aspiration Devices		Air Aspiration Device Co	onfiguration	
Charge Air Cooler Type	N/A	Drive Mode While Testi	ng	2-Wheel Drive, Fron
Shift Indicator Light Usage	Not eqipped	Aged Emission Compone	ents	4,000 (mi)
Curb Weight (lbs)	3080	Equivalent Test Weight	(pounds)	3375
GVWR (lbs)		N/V Ratio		20.1
Axle Ratio	2.83			
	Continuously Variable	# of Transmission Gears		1
Transmission Type		Creeper Gear		No

	GTYXV01.8PC	3	Evaporative	/Refueling Fa	amily	GTYXR0130J72	
oefficients:							
T	arget Coefficients		Set Coefficier	ts			
A (lbf)	0	of/mph**2) A (I					
24.153	0.33502 (	.014096 10.1	16 0.1598	0.015	033	10.2	
24.153	0.33502 (	.014096 10.1	16 0.1598	0.015	033	N/A	
	 POWER SHIFT	PATTERN					
	GTYX100378	360	Test Proce	lure		27 - California f	fuel 2-day eva
is Evan Test	GTVX1003785	3	Test Fuel Ty	ne			E10 Regular
is is the rest		-	Fuel	F.		Gasoline	
	WC5B05			tion Number	•	1	
	N/A		DF Type			Mfr. Determined	
	Higashifuji Tec	hnical Center					
		with speciation)					
Reading						М	
	NO		Diesei Adjus	tment Facto	rUsage		
	 Liced Part 1066	$(\pm/-2.0 \text{ mph} \pm/-1.0 \text{ s})$	ac) Road Snood	Fan Ueago		No	
	03001 at 1000	(77-2.0 mpi, 77-1.0 s	Koau Speeu	Fan Usage		110	
Test	Result Name	U	nrounded Test Result				]
		on	0.117004			<u>ny</u>	-
							Pass/Fail
120,000 miles	Federal LEV-II	HC-TOTAL-EQUIV	0.117	0.000	0.12	0.65	Pass
	Evap	HC-TOTAL-EQUIV	0.1170	0.000	0.117	0.300	Pass
	A (lbf) 24.153 24.153 vice Comments ehicle Comments is Evap Test t Measurement Mer Reading blerance Criteria Test HC-TOTAL-EQI equivale comments Useful Life	Target Coefficients:         Target Coefficients         A (lbf)       B (lbt/mph)       C (ll         24.153       0.33502       0         24.153       0.33502       0         24.153       0.33502       0         24.153       0.33502       0         ce Comments          ehicle Comments       POWER SHIFT         GTYX100376         is Evap Test       GTYX1003785         09/08/2015       WC5B05         N/A       Higashifuji Tec         Actual Total Hy       Measurement (v         Reading       4034         No          Defrance Criteria       Used Part 1066         Test Result Name         HC-TOTAL-EQUIV (Total Hydrocarh equivalent - Evap only)         Somments       HSL=0.0088, 1         Useful Life       Standard Level	Target Coefficients         A (lbf)       B (lb/mph)       C (lb/mph**2)       A (l         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.33502       0.014096       10.1         24.153       0.03502       0.014096       10.1         3600087015       WCSB05       WCSB05       WCSB05         WA       Higashifuji Technical Center Measurement (with speciation)       Actual Total Hydrocarbon Equivalent Measurement (with speciation)         Reading       4034 No       No       -         Operance Critteria       Used Part 1066 (+/- 2.0 mph, +/- 1.0 s)         Image: Additional equivalent - Evap only       Image: Additional equivalent - Evap only         Image: Additional equivalent - Evap only       Image: Additional equivalent - Evap only<	A (bf)       B (bf/mph)       C (bf/mph*2)       A (bf)       B (bf/mph)         24.153       0.33502       0.014096       10.116       0.1598         24.153       0.33502       0.014096       10.116       0.1598         24.153       0.33502       0.014096       10.116       0.1598         24.153       0.33502       0.014096       10.116       0.1598         24.153       0.33502       0.014096       10.116       0.1598         24.153       0.33502       0.014096       10.116       0.1598         24.153       0.33502       0.014096       10.116       0.1598         24.153       0.33502       0.014096       10.116       0.1598         rice Comments              ehicle Comment Method       Measurement (with speciation)       Measurement (with speciation)           Measurement Method       Measurement (with speciation)       Measurement (with speciation)       Reading       4034       Odometer U         No       Diesel Adjus             berance Criteria       Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)       Road Speed	Image: Coefficients         Set Coefficients         Set Coefficients         A (lbf)       B (lbf/mph)       C (lbf/mph**2)         A (lbf)       B (lbf/mph)       C (lbf/mph**2)       A (lbf)       B (lbf/mph)       C (lbf/mph**2)       A (lbf)       B (lbf/mph)       C (lbf/mph**2)       A (lbf)       B (lbf/mph)       C (lbf/mph**2)       A (lbf)       B (lbf/mph)       C (lbf/mph**2)       A (lbf)       B (lbf/mph)       C (lbf/mph**2)       A (lbf)       B (lbf/mph *2)       A (lbf)       B (lbf = 0.0088, 1ST DBL=0.1083, 2ND DBL=0.0953, 1ST DBL IS ADDED F	Image: Construct of the second secon	not

est Group		GTYXV01.8PC	3	Evaporativ	e/Refueling Fa	mily	GTYXR0130J72	
Test #		GTYX100378	361	Test Proce	edure		38 - CA fuel 3-da	ay evap.
Exhaust Test # fo	n this Evon Tost	GTYX1003785	2	Test Fuel T			46 - CARB LEV3 I Gasoline	E10 Regular
Test Date	r uns Evap rest	09/15/2015	2	Fuel	ype		Gasoline	
Fuel Batch ID		WC5B04			ation Number		1	
Vehicle Class		N/A		DF Type			Mfr. Determined	
Verify Test Lab I	D	Higashifuji Tec	hnical Center					
• E10 Evaporative <sup>•</sup>	Test Measurement Meth		vdrocarbon Equivalent vith speciation)					
Test Start Odome	eter Reading	3979		Odometer I	Units		М	
4WD Test Dyno		No		Diesel Adju	istment Factor	Usage		
State of Charge D	)elta							
Drive Cycle Spee	d Tolerance Criteria	Used Part 1066	(+/- 2.0 mph, +/- 1.0 s	ec) Road Speed	l Fan Usage		No	
Test Results								
	Test Re	esult Name	U	nrounded Test Result		Verify Calculated FE Equi per gallor		
	HC-TOTAL-EQUI equivalent	V (Total Hydrocarb t - Evap only)	on	0.1308488				
Certification	st Comments	HSL=0.0223, 1	·	DBL=0.0875, 3RD DB		DBL IS ADDED KEY OFF	`	,
Manufacturer Te Certification Region Fed		• •	ST DBL=0.1085, 2ND Emission Name HC-TOTAL-EQUIV		L=0.0844, 1ST Add DF 0.000	DBL IS ADDED KEY OFF Certification Level 0.13	MONITOR LOSS(0.00 Standard 0.50	)18GRAM) <u>Pass/Fai</u> Pass

#### Contification Su Information Poport

Page 8 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

CORVR)           Exhaust Test # for this Evap Test         CORVEN           Test Part For His Evap Test         G1 - Tirz 2 Cart Gasoline           Test Part Part Part Part Part Part Part Par	GTYXR0130172		nation Repo	ion Summary Info	Certifica		7:32 AM	Date: 10/25/2016 06:3				
Ide Vision Visi	61174(0150072	nily		fest Group								
Exhaust Test # for this Evap Test         GTYX10037853         Test Fuel Type         of 1 - Tier 2 Cert Gasoline           Test Date         06/09/2015         Fuel         Gasoline           Fuel Batch ID         WE5B02         Fuel Calibration Number         1           Verify Cest Lab ID         Higashiftiji Technical Center         Mfr. Determined           Verify Test Lab ID         Higashiftiji Technical Center         Mfr. Determined           E10 Evaporative Test Measurement Method          Mfr. Determined           AWD Test Dyno         No         Odometer Units         M           State of Charge Delta         Yes             State of Charge Delta         Yes         Yes            Test Result S         Verify Calculated FE Equivalent Value (miles per gallon)            No         0.0085961             Test Result Name         Unrounded Test Result         Verify Calculated FE Equivalent Value (miles per gallon)           No         0.0085961             Manufacturer Test Comments         WITH 1200BV BENCH PURGE            Verification         Verification Level         Standard Level         Pa           Fed         120,000 miles	24 - Federal fuel refueling (ORVR)		ure	Test Proce	3	GTYX100378		Test #				
Test Date     06/09/2015     Fuel     Calibration       Fuel Batch ID     WE 5B02     Fuel Calibration Number     1       Vehicle Class     N/A     DF Type     Mfr. Determined       Verity Test Lab ID     Higashifuji Technical Center     Higashifuji Technical Center     Higashifuji Technical Center       E10 Exaporative Test Measurement Method      Higashifuji Technical Center     M       Fest Start Odometer Reading     4045     Odometer Units     M       WD Test Dyno     No     Diesel Adjustment Factor Usage        State of Charge Delta     Yes     Yes     Yes       Test Results     Yes     Yes     Yes       Test Results     Verity Calculated FE Equivalent Value (miles per gallon)     No       Manufacturer Test Comments     WITH 1200BV BENCH PURGE        Verification     Yes     Yes     Yes       Fed     120,000 miles     Federal LEV-II     HC     0.009     0.000     0.01     0.20     Yes	. ,		e	Test Fuel T		GTYX10037853	this Evan Test	Exhaust Test # for 1				
Verify Test Lab ID       N/A       DF Type       Mfr. Determined         Verify Test Lab ID       Higashifuji Technical Center       -         E10 Exaporative Test Measurement Method       -       -         Test Start Odometer Reading       4045       Odometer Units       M         WD Test Dyno       No       Diesel Adjustment Factor Usage          State of Charge Delta       Yes           Test Results       Verify Calculated FE Equivalient Value (miles per gallow)          Imaufacturer Test Name       Imrounded Test Result       Verify Calculated FE Equivalient Value (miles per gallow)         Manufacturer Test Name       WITH 1200BV BENCH PURGE           Kerification       Verification Level       Standard Level       Emission Name       Rounded Result       Add DF       Certification Level       Standard       Pa         Fed       120,000 miles       Federal LEV-II       HC       0.009       0.000       0.01       0.20       Image: Page         CA       150,000 miles       California LEV-III       HC       0.009       0.000       0.01       0.20       Image: Page							<u>-</u>					
Verify Test Lab ID       Higashifuji Technical Center         E10 Evaporative Test Measurement Method          Fest Start Odometer Reading       4045       Odometer Units       M         WD Test Dyno       No       Disel Adjustment Factor Usage          WD Test Dyno       No       Disel Adjustment Factor Usage          State of Charge Delta       Yes           Drive Cycle Speed Tolerance Criteria       Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)       Road Speed Fan Usage       Yes         Fest Results	1		ion Number	Fuel Calibr		WE5B02		Fuel Batch ID				
C10 Evaporative Test Measurement Method          Fest Start Odometer Reading       4045       Odometer Units       M         WD Test Dyno       No       Diesel Adjustment Factor Usage          State of Charge Delta       Yes           Drive Cycle Speed Tolerance Criteria       Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)       Road Speed Fan Usage       Yes         Cest Results             Image: Comparison of the Running Loss and Output Comparison of the Running Loss and Output Comparison of ORVR)       0.0085961          Manufacturer Test Comments       WITH 1200BV BENCH PURGE           Manufacturer Test Comments       WITH 1200BV BENCH PURGE       Standard Level       Emission Name       Rounded Result       Add DF       Certification Level       Standard       Pa         Fed       120,000 miles       Federal LEV-II       HC       0.009       0.000       0.01       0.20       Image: California LEV-III       HC       0.009       0.000       0.01       0.20       Image: California LEV-III       HC	Mfr. Determined	DF Type Mfr. Determined				N/A		Vehicle Class				
No       Odometer Units       M         Mo       Dive Cycle Speed Tolerance Criteria       Mail Part 1066 (+/- 2.0 mph, +/- 1.0 sec)       Road Speed Fan Usage					ical Center	Higashifuji Tech		/erify Test Lab ID				
WD Test Dyno       No       Diesel Adjustment Factor Usage          itate of Charge Delta       Yes       Yes       Yes         Drive Cycle Speed Tolerance Criteria       Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)       Road Speed Fan Usage       Yes         Test Results       Yes       Yes       Yes         Image: Comparison of the transme       Umrounded Test Result       Verity Calculated FE Equivalent Value (miles per gallow)         HC (Hydrocarbon for Running Loss and ORVR)       0.0085961          Atanufacturer Test Comments       WITH 1200B VENCH PURGE       Standard Level       Federal LEV-III       Rounded Result       Add DF       Certification Level       Standard       Pa         Fed       120,000 miles       Federal LEV-III       HC       0.009       0.000       0.01       0.20       Image: per gallow)         CA       150,000 miles       California LEV-III       HC       0.009       0.000       0.01       0.20       Image: per gallow)						hod	est Measurement Met	210 Evaporative Te				
Yes         HC (Hydrocarbon for Running Loss and O.0085961         Jeanufacturer Test Comments       WITH 1200BV BENCH PURGE         Yes <th <="" colspan="4" td="" yes<=""><td>М</td><td></td><td>its</td><td>Odometer U</td><td></td><td>4045</td><td>er Reading</td><td>est Start Odomete</td></th>	<td>М</td> <td></td> <td>its</td> <td>Odometer U</td> <td></td> <td>4045</td> <td>er Reading</td> <td>est Start Odomete</td>				М		its	Odometer U		4045	er Reading	est Start Odomete
Drive Cycle Speed Tolerance Criteria       Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)       Road Speed Fan Usage       Yes         Fees Uls         Test Result Name       Unrounded Test Result       Verify Calculated FE Equivalent Value (miles per gallon)         HC (Hydrocarbon for Running Loss and ORVR)       0.0085961          Manufacturer Test Comments       WITH 1200BV BENCH PURGE       WITH 1200BV BENCH PURGE         Certification Region       Useful Life       Standard Level       Emission Name       Rounded Result       Add DF       Certification Level       Standard       Pa         Fed       120,000 miles       Federal LEV-II       HC       0.009       0.000       0.01       0.20       I         CA       150,000 miles       California LEV-III       HC       0.009       0.000       0.01       0.20       I		Usage	ment Factor Us	Diesel Adju		No		WD Test Dyno				
Test Result Name       Unrounded Test Result       Verify Calculated FE Equivalent Value (miles per gallon)         HC (Hydrocarbon for Running Loss and ORVR)       0.0085961          Manufacturer Test Comments       WITH 1200BV BENCH PURGE       WITH 1200BV BENCH PURGE         Certification Region       Useful Life       Standard Level       Emission Name       Rounded Result       Add DF       Certification Level       Standard       Pa         Fed       120,000 miles       Federal LEV-II       HC       0.009       0.000       0.01       0.20       I         CA       150,000 miles       California LEV-III       HC       0.009       0.000       0.01       0.20       I						Yes	ta	state of Charge Del				
Image: I	Yes		`an Usage	ec) Road Speed	+/- 2.0 mph, +/- 1.0	Used Part 1066	Folerance Criteria	Orive Cycle Speed 1				
Image: second s								Fest Results				
Manufacturer Test Comments     WITH 1200BV BENCH PURGE       Certification Region     Useful Life     Standard Level     Emission Name     Rounded Result     Add DF     Certification Level     Standard     Pa       Fed     120,000 miles     Federal LEV-II     HC     0.009     0.000     0.01     0.20     1       CA     150,000 miles     California LEV-III     HC     0.009     0.000     0.01     0.20     1					1	Test Result Name						
Manufacturer Test Comments       WITH 1200BV BENCH PURGE         Certification Region       Useful Life       Standard Level       Emission Name       Rounded Result       Add DF       Certification Level       Standard       Pa         Fed       120,000 miles       Federal LEV-II       HC       0.009       0.000       0.01       0.20       1         CA       150,000 miles       California LEV-III       HC       0.009       0.000       0.01       0.20       1				0.0085961	I							
Fed         120,000 miles         Federal LEV-II Evap         HC         0.009         0.000         0.01         0.20           CA         150,000 miles         California LEV-III         HC         0.009         0.000         0.01         0.20         1	evel Standard Pass/Fa	Contification Loval		Pounded Pocult				Certification				
CA 150,000 miles California LEV-III HC 0.009 0.000 0.01 0.20												
						· · · · · · · · · · · · · · · · · · ·						
Zero Evap (Option 2)	0.20 Pass	0.01	0.000	0.009	HC	Zero Evap (Option	150,000 miles	CA				

#### Contification S. **T** 0 mation D.

Page 9 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Fest #		GTYXV01.8PC	3	Evaporativ	ve/Refueling Fa	GTYXR0130J72			
		GTYX10037	899	Test Proc	37 - California Fuel Rum Loss				
	4.4. F T4	CTTXX1002706	2	Taut Frail 7	r		46 - CARB LEV3 E10		
Exhaust Test # for 1	this Evap Test	GTYX1003785	92	Test Fuel 1	l ype		Gasoline		
est Date		09/15/2015		Fuel			Gasoline		
fuel Batch ID		WC5B05	Fuel Calibration Number DF Type				1		
/ehicle Class		N/A	hui ul Quata	DF Type			Mfr. Determined		
/erify Test Lab ID		hnical Center							
•	est Measurement Metl	· · · · · · · · · · · · · · · · · · ·	8 x FID Total Hydrocar	<i>'</i>	14				
fest Start Odomete	er Reading	4657		Odometer			М		
WD Test Dyno		No		Diesel Adj	ustment Factor	Usage			
state of Charge Del		Yes							
Drive Cycle Speed	Tolerance Criteria	Used Part 1066	(+/- 2.0 mph, +/- 1.0 se	ec) Road Spee	ed Fan Usage		Yes		
fest Results									
	Test R	esult Name	U	nrounded Test Resul		ited FE Equivalent Value (miles per gallon)			
-		IV (Total Hydrocarl 1t - Evap only)	on	0			-)		
Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fa	
Fed	120,000 miles	Federal LEV-II	HC-TOTAL-EQUIV	0.000	0.000	0.00	0.05	Pass	
		Evap							
	150,000 miles	California LEV-III Zero Evap (Option 2) HC-TOTAL-EQUIV 0.000 0.000 0.000				0.00	0.05	Pass	

Page 10 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Test Group	GTYXV01.8PC3	Evaporative/Refueling Family	GTYXR0130J72	
Emission Data Vehicle Informatio	'n			
Vehicle ID / Configuration	16-ZV3H / 0	Manufacturer Vehicle Config	uration Number	0
Original Test Group Name	GTYXV01.8PC3	Original Evaporative/Refueli	GTYXR0130J72	
Original Test Vehicle Model Year	2016	original Diaportation		
Vehicle Model				
Represented Test Vehicle Make	ΤΟΥΟΤΑ	Represented Test Vehicle Mo	del	PRIUS
Leak Family Details	1010111			11000
Leak Family Identifier		Leak Family Name		
·		Leak Fanny Name		
Drive Sources and Fuel System De	etails			
Drive Sou	urce and Fuel#	Drive Source	Fuel	
	1	Electric Motor	Electricit	y
	2	Combustion Engine	Gasolin	e
Hybrid Indiastan	Vaa			
Hybrid Indicator Multiple Fuel Storage	Yes 	Multiple Fuel Combustion		
Mumple Fuel Storage Fuel Cell Indicator	 No	Multiple Fuel Combustion Rechargeable Energy Storage	System Indicator	 Yes
			•	i es
Rechargeable Energy Storage System Off-board charge Capable Indicator	Battery(s) No	Rechargeable Energy Storage	system, il Other	
Odometer Correction Initial	11	<b>Odometer Correction Factor</b>		1
Odometer Correction Sign		Test odometer reading - Initial system miles) * Corre	action factor	1
Odometer Correction Units	Miles	rest odometer reading - midur system miles) - corre		
Engine Code	01	Rated Horsepower		96
Displacement (liters)	1.798			
Air Aspiration Method	Naturally Aspirated	Air Aspiration Method, if 'Ot	her'	
Number of Air Aspiration Devices		Air Aspiration Device Config		
Charge Air Cooler Type	N/A	Drive Mode While Testing		2-Wheel Drive, Fron
Shift Indicator Light Usage	Not eqipped	Aged Emission Components		4,000 (mi)
Curb Weight (lbs)	3075	Equivalent Test Weight (pour	ıds)	3375
GVWR (lbs)		N/V Ratio		20
	2.83			
Axle Ratio	Continuously Variable	# of Transmission Gears		1
Axle Ratio Transmission Type		Creeper Gear		No

	2 AM		Cer					
est Group		GTYXV01.8PC3 Evaporative/Refueling Family				efueling Family	GTYXR0130J72	
Dynamometer Coe	efficients:							
		Target Coefficien	ts		Set Coefficients			
Coefficient Category	tegory A (lbf) B (lbf/mph) C (lbf/mph**2) A (lbf) B (ll		B (lbf/mph)	C (lbf/mph**2)	EPA Calculated Total Road Load Horse Power 1 City/Highway/Evap Coefficients			
City/Highway/Evap	31.145	0.35285	0.013956	18.843	0.17373	0.015138	11.2	
Cold CO	34.605	0.39206	0.015507	16.019	0.08909	0.018067	N/A	
US06	31.145	0.35285	0.013956	18.843	0.17373	0.015138	N/A	
Emission Control Devid Aanufacturer Test Vel		 Power	SHIFT PATTERN					

Page 12 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

		Ce	01 0D/12 Even and the /D for the Fourth					
Test Group	GT	YXV01.8PC3	Evaporative/Refueling	GTYXR0130J72				
Test #	GI	YX10038684	Test Procedure	11 - Cold CO				
Exhaust Test # for	r this Evap Test		Test Fuel Type		26 - Cold CO Regular (Tier 2			
Test Date	09/	08/2015	Fuel		Gasoline			
Fuel Batch ID	WI	.4C03	Fuel Calibration Num	6				
Vehicle Class	LD	V/Passenger Car	DF Type		Mfr. Determined			
Verify Test Lab II	D Hig	ashifuji Technical Center						
E10 Evaporative 1	Test Measurement Method							
Test Start Odome	ter Reading 484	4	Odometer Units		М			
4WD Test Dyno	No		Diesel Adjustment Fac					
State of Charge D	elta Yes	;						
Drive Cycle Speed	d Tolerance Criteria Use	ed Part 1066 (+/- 2.0 mph	, +/- 1.0 sec) Road Speed Fan Usage	e	No			
Test Results								
	Test Result Na	ne	Unrounded Test Result	Verify Calculated FE Equip per gallor				
	CO2 BAG 1 (Bag 1 Carb	on Dioxide)	262.7096					
	FE BAG 1 (Bag 1 Fuel	Economy)	32.283648	32.28364	3			
	CO2 BAG 2 (Bag 2 Carbon Dioxide) FE BAG 2 (Bag 2 Fuel Economy)		148.1485					
			59.2792461	59.279246	1			
	CO2 BAG 3 (Bag 3 Carb	on Dioxide)	194.7439					
	FE BAG 3 (Bag 3 Fuel	Economy)	44.9979276	44.997927				
	CO2 BAG 4 (Bag 4 Carb	on Dioxide)	115.8064					
	FE BAG 4 (Bag 4 Fuel	Economy)	75.421059	75.42105	9			
	TE DAG 4 (Dag 4 Fuer							
	CO (Carbon Mono	xide)	1.1222072					
		· · ·	1.1222072 1.98					
	CO (Carbon Mone DT-ASCR (Drive Trace Absol	ite Speed Change						
	CO (Carbon Mone DT-ASCR (Drive Trace Absol Rating)	ite Speed Change Economy Rating)	1.98					
	CO (Carbon Mond DT-ASCR (Drive Trace Absol Rating) DT-EER (Drive Trace Energy DT-IWRR (Drive Trace Iner Rating) MFR FE (Manufacturer F	Ite Speed Change Economy Rating) tia Work Ratio uel Economy)	1.98 0.73		9			
	CO (Carbon Mond DT-ASCR (Drive Trace Absol Rating) DT-EER (Drive Trace Energy DT-IWRR (Drive Trace Iner Rating) MFR FE (Manufacturer F NOX (Nitrogen O	Ite Speed Change Economy Rating) 'tia Work Ratio uel Economy) xide)	1.98 0.73 3.25 49.5938769 0.018425		9			
	CO (Carbon Mond DT-ASCR (Drive Trace Absol Rating) DT-EER (Drive Trace Energy DT-IWRR (Drive Trace Iner Rating) MFR FE (Manufacturer F NOX (Nitrogen O HC-NM (Non-methane H	Ite Speed Change Economy Rating) (tia Work Ratio uel Economy) (xide) (ydrocarbon)	1.98 0.73 3.25 49.5938769 0.018425 0.1575709	   49.593876	9			
	CO (Carbon Mond DT-ASCR (Drive Trace Absol Rating) DT-EER (Drive Trace Energy DT-IWRR (Drive Trace Iner Rating) MFR FE (Manufacturer F NOX (Nitrogen O	Ite Speed Change Economy Rating) (tia Work Ratio uel Economy) (xide) (ydrocarbon)	1.98 0.73 3.25 49.5938769 0.018425	   49.593876 	9			
	CO (Carbon Mond DT-ASCR (Drive Trace Absol Rating) DT-EER (Drive Trace Energy DT-IWRR (Drive Trace Iner Rating) MFR FE (Manufacturer F NOX (Nitrogen O HC-NM (Non-methane H	Ite Speed Change Economy Rating) (tia Work Ratio uel Economy) (xide) (ydrocarbon)	1.98 0.73 3.25 49.5938769 0.018425 0.1575709	   49.593876 	9			
	CO (Carbon Mond DT-ASCR (Drive Trace Absol Rating) DT-EER (Drive Trace Energy DT-IWRR (Drive Trace Iner Rating) MFR FE (Manufacturer F NOX (Nitrogen O HC-NM (Non-methane H	Ite Speed Change Economy Rating) Itia Work Ratio Uel Economy) Stide) Stide) Sydrocarbon) Irocarbon)	1.98 0.73 3.25 49.5938769 0.018425 0.1575709	   49.593876 				

Page 13 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

#### **Certification Summary Information Report**

Test Group			GTYXV01.8PC3		Evaporative/Refueling Family					GTYXR01	30J72	
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	50,000 miles		CO	1.12				0.02		1.1	10.0	Pass
Fed	150,000 miles		HC-NM	0.16				0.00		0.2	0.3	Pass
CA	50,000 miles	California LEV- III SULEV30	CO	1.12				0.02		1.1	10.0	Pass
		moodbio	1			1	II					

Page 14 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

	Certification S			
lest Group	GTYXV01.8PC3	Evaporative/Refueling Family	GTYXR0130J72	
Test #	GTYX10038745	Test Procedure	35 - California fuel 3-day exhaust	
Exhaust Test # for this Evap Test		Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	
Test Date	09/03/2015	Fuel	Gasoline	
Fuel Batch ID	WC5B05	Fuel Calibration Number	1	
Vehicle Class	LDV/Passenger Car	DF Type	Mfr. Determined	
Verify Test Lab ID	Higashifuji Technical Center			
E10 Evaporative Test Measurement Meth	od			
Test Start Odometer Reading	4677	Odometer Units	М	
4WD Test Dyno	No	Diesel Adjustment Factor Usage		
State of Charge Delta	Yes			
Drive Cycle Speed Tolerance Criteria	Used Part 1066 (+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usage	Yes	

Test Result Name	Unrounded Test Result	Verify Calculated FE Equivalent Value (miles per gallon)
CO2 BAG 1 (Bag 1 Carbon Dioxide)	0	
FE BAG 1 (Bag 1 Fuel Economy)	999	999
CO2 BAG 2 (Bag 2 Carbon Dioxide)	0	
FE BAG 2 (Bag 2 Fuel Economy)	999	999
CO2 BAG 3 (Bag 3 Carbon Dioxide)	0	
FE BAG 3 (Bag 3 Fuel Economy)	999	999
CO2 BAG 4 (Bag 4 Carbon Dioxide)	0	
FE BAG 4 (Bag 4 Fuel Economy)	999	999
METHANE (CH4 - Methane)	0.0020532	
CO (Carbon Monoxide)	0.0840111	
DT-ASCR (Drive Trace Absolute Speed Change Rating)	0.18	
DT-EER (Drive Trace Energy Economy Rating)	-0.23	
DT-IWRR (Drive Trace Inertia Work Ratio Rating)	0.25	
MFR FE (Manufacturer Fuel Economy)	999	999
NOX (Nitrogen Oxide)	0.0033324	
N2O (Nitrous Oxide)	0.0003784	
HC-NM (Non-methane Hydrocarbon)	0.010122	
NMOG (Non-methane organic gas (California))	0.0111342	
PM (Particulate Matter)	0.0002801	
HC-TOTAL (Total Hydrocarbon)	0.0120896	

Page 15 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

est Group			GTYXV01.8PC3			Evaporati	ve/Refueling Fa	mily	30J72				
		Test Result Name Unrounded Test Result Veri						Verify (	Verify Calculated CREE/OPT-CREE 999				
	Ca	Carbon-Related Exhaust Emissions				0							
		Test Resul	t Name		Unrou	nded Test Resul	t		Verify Calcula	ated CO2			
		Carbon dioxide				0	-						
Manufacture	Test Comme	nts	NMOG = HC-NM	1 x 1.10	x 1.10								
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/Fai	
Fed	150,000 miles	Federal Tier 2 Bin 3	CO	0.08				0.07		0.2	2.1	Pass	
Fed	150,000 miles	Federal Tier 2 Bin 3	CO-COMP	0.22						0.2	3.5	Pass	
Fed	150,000 miles	Federal Tier 2 Bin 3	CREE	999				0.075		999			
Fed	150,000 miles	Federal Tier 2 Bin 3	HC-NM+NOX- COMP	0.019						0.02	0.62	Pass	
Fed	150,000 miles	Federal Tier 2 Bin 3	METHANE	0.0021				0.0010		0.003	0.030	Pass	
Fed	150,000 miles	Bin 3	NMOG	0.0111	1	1.04		0.0047		0.016	0.055	Pass	
Fed	150,000 miles	Bin 3	NOX	0.003				0.0006		0.00	0.03	Pass	
Fed	150,000 miles	Bin 3	PM	0.000				0.0002		0.00	0.01	Pass	
CA	150,000 miles	III SULEV30	CO	0.08				0.07		0.2	1.0	Pass	
CA	150,000 miles	III SULEV30	CO-COMP	0.22				0.07		0.2	4.2	Pass	
CA	150,000 miles	California LEV- III SULEV30	NMOG	0.0111	1	1.10		0.0047		0.016	999.999	Pass	
CA	150,000 miles	California LEV- III SULEV30	NMOG+NOX	0.0144	1	1.10				0.020	0.030	Pass	
CA	150,000 miles	III SULEV30	NMOG+NOX- COMP	0.0200	1	1.03		0.0053		0.020	0.030	Pass	
CA	150,000 miles	III SULEV30	NOX	0.0033				0.0006		0.004	999.999	Pass	
CA	150,000 miles	III SULEV30	PM	0.0003				0.0002		0.000	0.003	Pass	
		NOTE: For Non	-charge depleting	tests, the Roun	ded Result	for CREE/OP1	-CREE Emissi	on names are	Verify-calcu	lated values.			

est 09/03/2015 WC5B05 LDV/Passenger Higashifuji Tec  4720 No	Car	Test Procedure Test Fuel Type Fuel Fuel Calibration Nun DF Type	aber	<b>3 - HWFE</b> 46 - CARB LEV3 E10 Regul Gasoline Gasoline
09/03/2015 WC5B05 LDV/Passenger Higashifuji Tec ement Method 4720		Fuel Fuel Calibration Nun	nber	Gasoline
09/03/2015 WC5B05 LDV/Passenger Higashifuji Tec ement Method 4720		Fuel Fuel Calibration Nun	aber	Gasoline
WC5B05 LDV/Passenger Higashifuji Tec ement Method 4720		Fuel Calibration Nun	nber	
LDV/Passenger Higashifuji Tec ement Method 4720			nber	
Higashifuji Tec ement Method 4720		DF Type		1
ement Method 4720	hnical Center			Mfr. Determined
4720				
				М
No		Odometer Units		
		Diesel Adjustment Factor Usage		
Yes				
Criteria Used Part 1066	(+/- 2.0 mph, +/- 1.0 sec)	Road Speed Fan Usag	ge	Yes
Test Result Name         METHANE (CH4 - Methane)         CO (Carbon Monoxide)         DT-ASCR (Drive Trace Absolute Speed Change Rating)		nded Test Result		E Equivalent Value (miles gallon)
		0.000844		
		0.0201125		
		0.91		
		-0.04		
Rating)		0.89		
	y)			999
· · · · · · · · · · · · · · · · · · ·				
/				
IOTAL (Total Hydrocarbon)		0.0013382		
Test Result Name	Unrou	nded Test Result	Verify Calculate	d CREE/OPT-CREE
		0	· · ·	999
Test Result Name	Unrou	nded Test Result	Verify C:	alculated CO2
Carbon dioxide		0		
NMOG = HC-N	IM x 1.03			
	IETHANE (CH4 - Methane) CO (Carbon Monoxide) (Drive Trace Absolute Speed C Rating) Drive Trace Energy Economy R (R (Drive Trace Inertia Work R Rating) FE (Manufacturer Fuel Econom NOX (Nitrogen Oxide) N20 (Nitrous Oxide) M (Non-methane Hydrocarbon on-methane organic gas (Califo -TOTAL (Total Hydrocarbon) Test Result Name bon-Related Exhaust Emissions Test Result Name Carbon dioxide	IETHANE (CH4 - Methane)         CO (Carbon Monoxide)         (Drive Trace Absolute Speed Change Rating)         Drive Trace Energy Economy Rating)         R (Drive Trace Inertia Work Ratio Rating)         SR (Drive Trace Inertia Work Ratio Rating)         *E (Manufacturer Fuel Economy)         NOX (Nitrogen Oxide)         N2O (Nitrous Oxide)         M (Non-methane Hydrocarbon)         on-methane organic gas (California))         -TOTAL (Total Hydrocarbon)         On-Related Exhaust Emissions         Test Result Name         Unrou         Carbon dioxide	IETHANE (CH4 - Methane)0.000844CO (Carbon Monoxide)0.0201125(Drive Trace Absolute Speed Change Rating)0.91Drive Trace Energy Economy Rating)-0.04CR (Drive Trace Inertia Work Ratio Rating)0.89FE (Manufacturer Fuel Economy)999NOX (Nitrogen Oxide)0NO2 (Nitrous Oxide)0Mon-methane Hydrocarbon)0.0005294on-methane organic gas (California))0.0013382Test Result NameUnrounded Test Resultbon-Related Exhaust Emissions0	IETHANE (CH4 - Methane)0.000844CO (Carbon Monoxide)0.0201125(Drive Trace Absolute Speed Change Rating)0.91Orive Trace Energy Economy Rating)-0.04CR (Drive Trace Inertia Work Ratio Rating)0.89'E (Manufacturer Fuel Economy)999NOX (Nitrogen Oxide)0NO2 (Nitrous Oxide)0On-methane Hydrocarbon)0.0005294on-methane organic gas (California))0.00013382Test Result NameUnrounded Test ResultVerify Calculate OTest Result Name0Carbon dioxide0O

Test Group			GTYXV01.8PC3			Evaporati	ve/Refueling Fa	amily		GTYXR0	130J72	
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	150,000 miles	Federal Tier 2 Bin 3	CREE	999				0.075		999		
Fed	150,000 miles	Federal Tier 2 Bin 3	NOX	0.000				0.0006		0.00	0.04	Pass
CA	150,000 miles	California LEV- III SULEV30	NMOG	0.0005	1	1.03		0.0047		0.005	999.999	Pass
CA	150,000 miles	California LEV- III SULEV30	NMOG+NOX	0.0005	1	1.03				0.006	0.030	Pass
CA	150,000 miles	California LEV- III SULEV30	NOX	0.0000				0.0006		0.001	999.999	Pass
		NOTE: For Non	-charge depleting	tests, the Roun	ded Result	for CREE/OPT	-CREE Emissi	ion names are	Verify-calcu	lated values.		

Page 18 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Fest Group		GTYXV01.8PC3		Evaporative/Refuelin	ıg Family	GTYXR0130J72	
Test #		GTYX10038746		Test Procedure		90 - US06	
1 est m		011210050740		itst i fottuit		46 - CARB LEV3 E1	10 Regula
Exhaust Test # for this	s Evap Test			Test Fuel Type		Gasoline	
Test Date		09/03/2015		Fuel		Gasoline	
Fuel Batch ID		WC5B05		Fuel Calibration Nun	nber	1	
Vehicle Class		LDV/Passenger Car	DF Type			Mfr. Determined	
Verify Test Lab ID		Higashifuji Technical C	lenter				
E10 Evaporative Test	Measurement Method						
Test Start Odometer I	Reading	4740		Odometer Units		М	
4WD Test Dyno		No		Diesel Adjustment Fa	actor Usage		
State of Charge Delta	0						
Drive Cycle Speed To	lerance Criteria	Used Part 1066 (+/- 2.0	) mph, +/- 1.0 sec)	Road Speed Fan Usa	ge	Yes	
Test Results							
	Test Result	t Name	Unroun	ded Test Result	Verify Calcula	ted FE Equivalent Value (miles per gallon)	
	CO2 BAG 1 (Bag 1	Carbon Dioxide)		0			
	FE BAG 1 (Bag 1 ]	Fuel Economy)		999		999	
	CO2 BAG 2 (Bag 2 )		0				
	FE BAG 2 (Bag 2 l	Fuel Economy)	999			999	
	CO (Carbon M	Monoxide)	0.2289439				
D	Г-ASCR (Drive Trace A Ratin			-0.84			
D	-EER (Drive Trace End	ergy Economy Rating)		-0.41			
:	DT-IWRR (Drive Trace Ratin			-1.16			
	MFR FE (Manufactur	er Fuel Economy)		999		999	
	NOX (Nitrog	en Oxide)	0	.0019095			
	HC-NM (Non-metha	ne Hydrocarbon)	0	.0151911			
N	MOG (Non-methane org	ganic gas (California))	0	0156468			
	PM (Particula	te Matter)		.001295			
	IIC-TOTAL (Total	Hydrocarbon)	0	0171269			
	Test Result	t Name	Unroun	ded Test Result	Ver	ify Calculated CO2	
	Carbon d	ioxide		0			

Page 19 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Test Group			GTYXV01.8PC3			Evaporati	ve/Refueling Fa	amily		GTYXR01	30J72	
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	4,000 miles	Federal Tier 2 Bin 3	CO	0.23						0.2	8.0	Pass
Fed	4,000 miles	Federal Tier 2 Bin 3	HC-NM+NOX	0.017						0.02	0.14	Pass
CA	150,000 miles		PM	0.0013				0.0002		0.002	0.010	Pass

Page 20 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Fest Group			GTYXV01.8PC3			Evaporati	ve/Refueling F	amily		GTYXR01	30J72	
Test #			GTYX1003874	0		Test Proc	edure			95 - SC03		
F. I	"e at 5	- T- 4				T. ( F. 1)	<b>F</b>				LEV3 E10 F	Regular
	# for this Evap	o lest				Test Fuel Fuel	1 ype			Gasoline Gasoline		
Test Date Fuel Batch ID			09/14/2015 WC5B05			Fuel Fuel Calib	ration Numbe			1		
Vehicle Class			LDV/Passenger C	o <i>r</i>	DF Type					Mfr. Deteri	minad	
Verify Test La	ьD		Higashifuji Techn		••						IIIIeu	
•		urement Method			Center							
-	ometer Readir		4979			Odometer	Units			М		
4WD Test Dy		-B	No				ustment Facto					
State of Charg						210001710						
	peed Toleranc	e Criteria	Used Part 1066 (-	⊦/-20mph +	/- 1.0 sec)	Road Snee	ed Fan Usage			Yes		
	DT-EEF	Ratin <u>K (Drive Trace En</u> VRR (Drive Trace	bsolute Speed Cha g) ergy Economy Rat 9 Inertia Work Rat	ing)		0.147765 0.5 0.06 0.95			per galle   	>n)		
	MEI	Ratin R FF (Manufactu	g) rer Fuel Economy)			46.838829		46.838829				
		NOX (Nitrog	• /		0.000518							
	нс	-NM (Non-metha	,		0.011199							
		IC-TOTAL (Total	• /			0.014						
		Test Resul Carbon d			Unrounded Test Result 0		Verify Calculated CO2					
Certification	• Test Comme			Rounded	<b>D</b> • <b>D</b>		Diesel Adjustment			Certification	<i></i>	
Region Fed	Useful Life 4,000 miles	Federal Tier 2	CO CO	<b>Result</b> 0.15	RAF	HC Ratio	Factor 	Add DF 	Mult DF 	0.2	Standard 2.7	Pass/F Pass
					_							

Page 21 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

#### Test group: GTYXV01.8PC3

Date: 10/25/2016 06:37:32 AM

#### **Certification Summary Information Report**

Test Group	GTYXV01.8PC3	Evaporative/Refueling Family	GTYXR0130J72
Fuel Properties			
Fuel Batch ID	WC5B05	Fuel Calibration Number	1
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	03/29/2015
Fuel Batch Calibration Effective Date	06/01/2015	Fuel Batch Calibration Ineffective Date	06/30/2015
Carbon Weight Fraction NMHC		Carbon Weight Fraction HC	
Exhaust Carbon Weight Fraction	0.86	Fuel Methanol Volume Fraction	
Fuel Density (grams/cubic ft)		Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)		Fuel Net Heating Value (BTU / lb)	17867
Fuel Blend Carbon Weight Fraction	0.825	Weight Fraction CO2	
Fuel Batch ID	WC5B04	Fuel Calibration Number	1
Test Fuel Type	46 - CARB LEV3 E10 Regular Gasoline	Fuel Batch Calibration Date	03/15/2015
Fuel Batch Calibration Effective Date	05/11/2015	Fuel Batch Calibration Ineffective Date	05/31/2015
Carbon Weight Fraction NMHC		Carbon Weight Fraction HC	
Exhaust Carbon Weight Fraction	0.861	Fuel Methanol Volume Fraction	
Fuel Density (grams/cubic ft)		Fuel Specific Gravity	0.742
Fuel Ethanol Volume Percent (%)		Fuel Net Heating Value (BTU / lb)	17861
Fuel Blend Carbon Weight Fraction	0.825	Weight Fraction CO2	
Fuel Batch ID	WE5B02	Fuel Calibration Number	1
Test Fuel Type	61 - Tier 2 Cert Gasoline	Fuel Batch Calibration Date	05/11/2015
Fuel Batch Calibration Effective Date	06/05/2015	Fuel Batch Calibration Ineffective Date	06/30/2015
Carbon Weight Fraction NMHC		Carbon Weight Fraction HC	
Exhaust Carbon Weight Fraction		Fuel Methanol Volume Fraction	
Fuel Density (grams/cubic ft)		Fuel Specific Gravity	0.738
Fuel Ethanol Volume Percent (%)		Fuel Net Heating Value (BTU / lb)	18496
Fuel Blend Carbon Weight Fraction	0.864	Weight Fraction CO2	
Fuel Batch ID	WL4C03	Fuel Calibration Number	6
Test Fuel Type	26 - Cold CO Regular (Tier 2)	Fuel Batch Calibration Date	11/17/2014
Fuel Batch Calibration Effective Date	09/01/2015	Fuel Batch Calibration Ineffective Date	09/30/2015
Carbon Weight Fraction NMHC		Carbon Weight Fraction HC	
Exhaust Carbon Weight Fraction		Fuel Methanol Volume Fraction	
Fuel Density (grams/cubic ft)		Fuel Specific Gravity	0.731
Fuel Ethanol Volume Percent (%)		Fuel Net Heating Value (BTU / lb)	18529
Fuel Blend Carbon Weight Fraction	0.863	Weight Fraction CO2	

Page 22 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Test Group	GTY	XV01.8PC3		Evapora	tive/Refueling Fam	uly	GT	YXR0130J72	
			Consolid	ated List of St	andards				
Exhaust Standar	·ds								
Cert Region	Calif	ornia + CAA Section	1 177 states	Cert/In-1	Use Code		Both		
Vehicle Class		/Passenger Car	i i i / / States	Standard Level			California LEV-III SULEV30		
Fuel	Gasc	e		Test Pro				ifornia fuel 3-day	
						Downward		,	
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	СО							0.07	1.0
150,000 miles	CO-COMP							0.07	4.2
150,000 miles	НСНО							0.0000	0.004
150,000 miles	NMOG		1	1.10				0.0047	999.999
150,000 miles	NMOG+NOX		1	1.10				0.0053	0.030
150,000 miles	NMOG+NOX-COMP		1	1.03				0.0053	0.030
150,000 miles	NOX							0.0006	999.999
	73.6							0.0000	0.003
150,000 miles	PM							0.0002	0.003
Cert Region Vehicle Class	Fede	ral /Passenger Car			Use Code d Level		Bot Fed	1	
Cert Region Vehicle Class	Fede LDV	ral /Passenger Car	RAF	Cert/In-V Standard	Use Code d Level	 Downward Diesel Adjustment Factor	Bot Fed	h leral Tier 2 Bin 3	
Cert Region Vehicle Class Fuel	Fede LDV Gasc	ral /Passenger Car line <b>Rounded</b>		Cert/In- Standard Test Pro NMOG /	Use Code i Level cedure Upward Diesel Adjustment	Downward Diesel Adjustment	Bot Fed Cal	h leral Tier 2 Bin 3 ifornia fuel 3-day	exhaust
Cert Region Vehicle Class Fuel Useful Life	Fede LDV Gasc Emission Name	ral /Passenger Car line <b>Rounded</b> <b>Result</b>	RAF	Cert/In- Standard Test Pro NMOG / NMHC	Use Code d Level cedure Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Bot Fed Cal <b>Mult DF</b>	h leral Tier 2 Bin 3 ifornia fuel 3-day Add DF	exhaust Std
Cert Region Vehicle Class Fuel Useful Life 150,000 miles	Fede LDV Gasc <b>Emission Name</b> CO	ral /Passenger Car line Rounded Result 	RAF 	Cert/In- Standard Test Pro NMOG / NMHC 	Use Code d Level cedure Upward Diesel Adjustment Factor 	Downward Diesel Adjustment Factor 	Bot Fed Cal Mult DF 	h leral Tier 2 Bin 3 ifornia fuel 3-day <b>Add DF</b> 0.07	Std 2.1 3.5
Cert Region Vehicle Class Fuel Useful Life 150,000 miles 150,000 miles	Fede LDV Gasc Emission Name CO CO-COMP	ral /Passenger Car line Rounded Result  	RAF  	Cert/In- Standard Test Pro NMOG / NMHC  	Use Code d Level cedure Upward Diesel Adjustment Factor  	Downward Diesel Adjustment Factor  	Bot Fed Cal Mult DF  	h leral Tier 2 Bin 3 ifornia fuel 3-day Add DF 0.07 	Std 2.1 3.5
Cert Region Vehicle Class Fuel Useful Life 150,000 miles 150,000 miles 150,000 miles	Fede LDV Gasc Emission Name CO CO-COMP CREE	ral /Passenger Car line Rounded Result   	RAF   	Cert/In- Standard Test Pro NMOG / NMHC   	Use Code d Level cedure Upward Diesel Adjustment Factor   	Downward Diesel Adjustment Factor  	Bot Fed Cal Mult DF  	h leral Tier 2 Bin 3 ifornia fuel 3-day Add DF 0.07  0.075	Std 2.1 3.5 999.999
Cert Region Vehicle Class Fuel Useful Life 150,000 miles 150,000 miles 150,000 miles	Fede LDV Gasc CO CO-COMP CREE HC-NM+NOX-COMP	ral /Passenger Car line Rounded Result    	RAF    	Cert/In-I Standarc Test Pro NMOG / NMHC    	Use Code d Level cedure Upward Diesel Adjustment Factor   	Downward Diesel Adjustment Factor   	Bot Fed Cal Mult DF    	h leral Tier 2 Bin 3 ifornia fuel 3-day Add DF 0.07  0.075 	Std 2.1 3.5 999.999 0.62
Cert Region Vehicle Class Fuel Useful Life 150,000 miles 150,000 miles 150,000 miles 150,000 miles 150,000 miles 150,000 miles	Fede LDV Gasc CO CO-COMP CREE HC-NM+NOX-COMP HCHO	ral Passenger Car line  Rounded Result	RAF     	Cert/In-I Standarc Test Pro NMOG / NMHC     	Use Code d Level cedure Upward Diesel Adjustment Factor     	Downward Diesel Adjustment Factor    	Bot Fed Cal Mult DF    	h leral Tier 2 Bin 3 ifornia fuel 3-day Add DF 0.07  0.075  0.075  0.0000	Std 2.1 3.5 999.999 0.62 0.011
Cert Region           Vehicle Class           Fuel           Useful Life           150,000 miles           150,000 miles	Fede LDV Gasc CO CO-COMP CREE HC-NM+NOX-COMP HCHO METHANE	ral /Passenger Car line Rounded Result      	RAF       	Cert/In-I Standard Test Pro NMOG / NMHC       	Use Code d Level cedure Upward Diesel Adjustment Factor     	Downward Diesel Adjustment Factor      	Bot Fed Cal: 	h leral Tier 2 Bin 3 ifornia fuel 3-day Add DF 0.07  0.075  0.0000 0.0000 0.0010	Std 2.1 3.5 999.999 0.62 0.011 0.030
Cert Region Vehicle Class Fuel Useful Life 150,000 miles 150,000 miles 150,000 miles 150,000 miles 150,000 miles 150,000 miles	Fede LDV Gasc CO CO-COMP CREE HC-NM+NOX-COMP HCHO METHANE N2O	ral /Passenger Car line Rounded Result      	RAF         	Cert/In-I Standard Test Pro NMOG / NMHC        	Use Code d Level cedure Upward Diesel Adjustment Factor     	Downward Diesel Adjustment Factor      	Bot Fed Cal: 	h leral Tier 2 Bin 3 ifornia fuel 3-day Add DF 0.07  0.075  0.0000 0.0010 	Std 2.1 3.5 999.999 0.62 0.011 0.030 0.010

#### Test group: GTYXV01.8PC3

#### 7. Test Results

Test Group	GTY	XV01.8PC3		Evaporat	ive/Refueling Fam	ily	GT	YXR0130J72		
Cert Region Vehicle Class Fuel		ornia + CAA Section /Passenger Car line	n 177 states	states Cert/In-Use Code Standard Level Test Procedure				Both California LEV-III SULEV30 CA fuel 50 Deg(F) exhaust test		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std	
4,000 miles	СО							0.00	1.0	
4,000 miles	HCHO							0.0000	0.008	
4,000 miles	NMOG		1	1.10				0.0000	999.999	
4,000 miles	NMOG+NOX		1	1.10				0.0000	0.060	
4,000 miles	NOX	NOX						0.0000	999.999	
Cert Region     California + CAA Sect       Vehicle Class     LDV/Passenger Car       Fuel     Gasoline			n 177 states	Cert/In-U Standard Test Proc	Level		Boti Cali HW	fornia LEV-III SU	JLEV30	
	Gasoline Rounded			Upward Diesel NMOG / Adjustment		Downward				
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC		Diesel Adjustment Factor	Mult DF	Add DF	Std	
Useful Life 150,000 miles	Emission Name NMOG		RAF 1		Ådjustment	Diesel Adjustment	Mult DF	<b>Add DF</b> 0.0047		
		Result	<b>RAF</b> 1	NMHC	Ådjustment Factor	Diesel Adjustment Factor	Mult DF  			
150,000 miles	NMOG	Result	1	<b>NMHC</b> 1.03	Adjustment Factor 	Diesel Adjustment Factor 		0.0047	999.999 0.030	
150,000 miles 150,000 miles	NMOG NMOG+NOX NOX Feder	Result al /Passenger Car	1	NMHC           1.03           1.03	Adjustment Factor   Use Code Level	Diesel Adjustment Factor  	   Bot	0.0047 0.0053 0.0006 h eral Tier 2 Bin 3	999.999 0.030	
150,000 miles       150,000 miles       150,000 miles       Cert Region       Vehicle Class       Fuel	NMOG NMOG+NOX NOX Fede LDV Gaso	Result                'al       /Passenger Car       tine	1 1 	NMHC 1.03 1.03 Cert/In-L Standard Test Proc NMOG /	Adjustment Factor    Use Code Level xedure Upward Diesel Adjustment	Diesel Adjustment Factor    Downward Diesel Adjustment	   Bott Fed HW	0.0047 0.0053 0.0006 h eral Tier 2 Bin 3 FE	999.999 0.030 999.999	
150,000 miles 150,000 miles 150,000 miles Cert Region Vehicle Class	NMOG NMOG+NOX NOX Feder LDV	Result             al       Passenger Car       line	1	NMHC 1.03 1.03 Cert/In-U Standard Test Proc	Adjustment Factor    Use Code Level zedure Upward Diesel	Diesel Adjustment Factor   Downward Diesel	   Boti Fed	0.0047 0.0053 0.0006 h eral Tier 2 Bin 3	999.999 0.030	

### Test group: GTYXV01.8PC3

#### 7. Test Results

Test Group	GT	YXV01.8PC3		Evapora	tive/Refueling Fam	ily	GT	YXR0130J72	
Cert Region Vehicle Class Fuel	LD	ifornia + CAA Sectior V/Passenger Car soline	n 177 states	Cert/In- Standard Test Pro			Both California LEV-III SULEV US06		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
150,000 miles	РМ							0.0002	0.010
Cert Region     Federal       Zehicle Class     LDV/Passenger Car       Yuel     Gasoline				Cert/In- Standard Test Pro				h eral Tier 2 Bin 3 ſ two speed idle te:	st
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								0.5
120,000 miles	HC-TOTAL								100
Cert Region Vehicle Class Fuel	California + CAA Section 177 states LDV/Passenger Car Gasoline			Cert/In-Use Code Standard Level Test Procedure Downward			Both California LEV-III SULEV30 Cold CO		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO							0.02	10.0
Cert Region Vehicle Class Fuel	LD	leral Cert/In-Use Code V/Passenger Car Standard Level soline Test Procedure					h eral Tier 2 Bin 3 d CO		
Useful Life	Emission Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
50,000 miles	CO							0.02	10.0
00,000 111100	HC-NM							0.00	0.3

Test Group C				Certification	WW101 0D/2 Evanemetive/Defueling Eamily					
Test Group		GTYXV	/01.8PC3		Evaporat	ive/Refueling Fam	uly	GT	YXR0130J72	
Cert Region		Federal			Cert/In-U	se Code		Bot	th	
Vehicle Class		LDV/Pa	ssenger Car		Standard	Level		Fed	leral Tier 2 Bin 3	
Fuel		Gasoline	e		Test Proc	edure		SC	03	
Useful Life	Emissio	on Name	Rounded Result	RAF	NMOG / NMHC	Upward Diesel Adjustment Factor	Downward Diesel Adjustment Factor	Mult DF	Add DF	Std
4,000 miles	C	CO								2.7
4,000 miles	HC-NM	M+NOX								0.20
Cert Region		Federal			Cert/In-U	se Code		Bot	th	
Vehicle Class		LDV/Pa	ssenger Car		Standard	Level		Fed	leral Tier 2 Bin 3	
Fuel		Gasoline	•		Test Proc			US		
		N.	Rounded	DAE	NMOG /	Upward Diesel Adjustment	Downward Diesel Adjustment			641
Useful Life		on Name	Result	RAF	NMHC	Factor	Factor	Mult DF	Add DF	Std
4,000 miles		CO M+NOX								8.0 0.14
Evaporative/Ref	ueling Stand	ards								
Evaporative/Refueli Cert/In-Use Code	-	GTYXR Both	20130J72		Cert Regi Standard				ifornia + CAA Sec ifornia LEV-III Ze	
Evaporative/Refueli Cert/In-Use Code Test Procedure	-	GTYXR Both CA fuel	3-day evap.		Standard	Level		Cal: 2)	ifornia LEV-III Ze	ro Evap (Op
Evaporative/Reft Evaporative/Refueli Cert/In-Use Code Test Procedure Fuel	-	GTYXR Both CA fuel <b>Useful Life</b>	3-day evap.	Emission Name	Standard Re			Cal: 2) Std	ifornia LEV-III Ze	ro Evap (Op d DF
Evaporative/Refueli Cert/In-Use Code Test Procedure	-	GTYXR Both CA fuel	3-day evap.	<b>Emission Name</b> C-TOTAL-EQUIV	Standard Re	Level		Cal: 2)	ifornia LEV-III Ze	ro Evap (Op
Evaporative/Refueli Cert/In-Use Code Test Procedure Fuel Gasoline Evaporative/Refueli	ng Family	GTYXR Both CA fuel Useful Life 150,000 miles GTYXR	3-day evap.		Standard Re	Level Dunded Result 		Cal 2) 5td 0.300 Fed	ifornia LEV-III Ze Ad 0. leral	ro Evap (Op d DF
Evaporative/Refueli Cert/In-Use Code Test Procedure Gasoline Evaporative/Refueli Cert/In-Use Code	ng Family	GTYXR Both CA fuel 150,000 miles GTYXR Both	3-day evap. H( 20130J72	C-TOTAL-EQUIV	Standard Re	Level ounded Result 		Cal 2) 5td 0.300 Fed	ifornia LEV-III Ze Ad	ro Evap (Op d DF
Evaporative/Refueli Cert/In-Use Code Test Procedure Fuel Gasoline Evaporative/Refueli	ng Family	GTYXR Both CA fuel 150,000 miles GTYXR Both	3-day evap.	C-TOTAL-EQUIV	Standard Re Cert Regi	Level ounded Result 		Cal 2) 5td 0.300 Fed	ifornia LEV-III Ze Ad 0. leral	ro Evap (Op d DF
Evaporative/Refueli Cert/In-Use Code Test Procedure Gasoline Evaporative/Refueli Cert/In-Use Code	ng Family	GTYXR Both CA fuel 150,000 miles GTYXR Both	3-day evap. H( 20130J72 iia fuel 2-day eva	C-TOTAL-EQUIV	Standard Re Cert Reg Standard Re	Level ounded Result 		Cal 2) 5td 0.300 Fed	ifornia LEV-III Ze Ad 0. leral leral LEV-II Evap Ad	ro Evap (Op d DF

Page 26 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

#### Test group: GTYXV01.8PC3

Test Group	GTYXV01.8PC	23	<b>Evaporative/Refueling Family</b>	C	GTYXR0130J72
Evaporative/Refueling Family	GTYXR0130J	72	Cert Region	C	alifornia + CAA Section 177 states
	<b>D</b> 4				alifornia LEV-III Zero Evap (Optic
Cert/In-Use Code	Both	р і I	Standard Level	2	)
Test Procedure	California Fuel	Running Loss			
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EQUIV		0.05	0.000
Evaporative/Refueling Family	GTYXR0130J7	72	Cert Region		alifornia + CAA Section 177 states
Cert/In-Use Code	Both		Standard Level	2	California LEV-III Zero Evap (Optic
Test Procedure		ineling test (ORVR)	Stanual u Level	2	)
		refueling test (ORVR)		<i>a</i> . <b>.</b>	
Fuel	Useful Life	Emission Name	Rounded Result	Std	Add DF
Gasoline	150,000 miles	HC		0.20	0.000
Evaporative/Refueling Family	GTYXR0130J	72	Cert Region	F	ederal
Cert/In-Use Code	Both		Standard Level	F	ederal LEV-II Evap
Test Procedure	Federal fuel ref	ueling test (ORVR)			-
Fuel	Useful Life	Emission Name	<b>Rounded Result</b>	Std	Add DF
Gasoline	120,000 miles	НС		0.20	0.000
Evaporative/Refueling Family	GTYXR0130J7	72	Cert Region	C	alifornia + CAA Section 177 states
Cert/In-Use Code	Both		Standard Level	C 2	alifornia LEV-III Zero Evap (Optic
Test Procedure	California fuel	2-day eyap	Standar u Lever	2	)
Fuel	Useful Life	Emission Name	<b>Rounded Result</b>	Std	Add DF
Gasoline	150,000 miles	HC-TOTAL-EOUIV	Kounded Kesun	0.300	0.000
Gasoline	150,000 miles	HC-IOTAL-EQUIV		0.300	0.000
Evaporative/Refueling Family	GTYXR0130J7	72	Cert Region	F	ederal
Cert/In-Use Code	Both		Standard Level	F	ederal LEV-II Evap
Test Procedure	California Fuel	Running Loss			
Fuel	Useful Life	<b>Emission</b> Name	<b>Rounded Result</b>	Std	Add DF
	120,000 miles	HC-TOTAL-EQUIV		0.05	0.000

#### Certification Summary Information Report

Page 27 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Date: 10/25/2016 06:37:33 AM		Certification Su	mmary Information Report		
Test Group	GTYXV01.8PC3	3	Evaporative/Refueling Family	GTY	XR0130J72
Evaporative/Refueling Family	GTYXR0130J72		Cert Region	Fede	eral
Cert/In-Use Code	Both Standard Level			Fede	eral LEV-II Evap
Test Procedure	Spitback				
Fuel	Useful Life	<b>Emission</b> Name	<b>Rounded Result</b>	Std	Add DF
Gasoline	120,000 miles	SPITBACK		1.0	0.000
Evaporative/Refueling Family	GTYXR0130J72		Cert Region	Fedd	
			•		
Cert/In-Use Code	Both		Standard Level	Fede	eral LEV-II Evap
Test Procedure	CA fuel 3-day ev	ap.			
Fuel	Useful Life	Emission Name	<b>Rounded Result</b>	Std	Add DF
Gasoline	120,000 miles	HC-TOTAL-EOUIV		0.50	0.000

Page 28 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

Date: 10/25/2016 06:37:33 AM

### **Certification Summary Information Report**

Test Group	GTYXV01.8PC3	Evaporative/Refueling	Family GTYXR0130J72
	Gl	ossary	
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
НСНО	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	CO2-COMB	Combined Carbon Dioxide for HD 2b/3 Vehicles Only
Certification Region			
CA	California + CAA Section 177 states	FA	Federal
Exhaust Emission Star	ndard 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

## 7. Test Results

Date: 10/25/2016 06:37:33 AM

### Certification Summary Information Report

Test Group	GTYXV01.8PC3	Evaporative/Refueling	g Family GTYXR0130J72	
B6	Federal Tier 2 Bin 6	L3LEV630	California LEV-III LEV630	
В7	Federal Tier 2 Bin 7	L3ULEV570	California LEV-III ULEV570	
B8	Federal Tier 2 Bin 8	L3ULEV400	California LEV-III ULEV400	
В9	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 C				
AMS	Automated Manual- Selectable (e.g. Automated Manual with paddles)	М	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	А	All Wheel Drive	
R	2-Wheel Drive, Rear			

Page 30 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

## 7. Test Results

### **Certification Summary Information Report**

Test Group	GTYXV01.8PC3	Evaporative/Ref	ueling Family	GTYXR0130J72
Additional Terr	ms and Acronyms			
AFC	Alternative Fuel Converter	ICI	Independent Comn	nercial Importer
CSI	SI Certificate Summary Information		Onboard Refueling	y Vapor Recovery
DF	DF Deterioration Factor		Shift Indicator Lig	ht
Evap	Evaporation, Evaporative	Trans	Transmission	

Page 31 of 31 CSI Submission/Revision Date: 10/25/2016 06:36:54 AM

## 8 Emission testing waiver statements

Please refer to the FOI common file for the following test waiver statements:

- High Altitude Exhaust Emissions
- High Altitude Evap/Refueling Emissions
- 91 RON fuel testing
- Certification Short Test
- Idle CO for LDTs
- Formaldehyde (HCHO)
- Nitrous Oxide (N2O)
- Spitback
- Total Hydrocarbon (THC)

# 9. <u>OBD System Description</u>

Please refer to the CBI common file for the common information. The representative test group OBD application is uploaded into Verify system. Please refer to the file named below.

# File name: OBD\_GTYXV02.5PC4\_A-L.pdf

Toyota states that the OBD application meets the requirements of 40 CFR 86.1806-05 and 86.1844-01(d)(9) and is considered part of the Part 1 certification application.

# 10. Description of Alternate-fueled Vehicles

# 11. <u>Auxiliary Emission Control Devices (AECD) Descriptions</u>

## 12. Description of Vehicles Covered by Certificate and Test Parameters

12.1 Vehicle parameters

Durability Group	: GTYXHHGNNB26
Test Group	: GTYXV01.8PC3
Evap./Refueling Family	: GTYXR0130J72
Emission Control System	: SFI,EGR,EGRC,WR-HO2S,TWC(2),HO2S
-	

Carline	Model name	Model code	Engine Code	Valves/ cyl	Engine Disp. (L)	Sales Area	Trans- mission*2/ Overdrive	SIL	Tire*1	N/V	ETW (lb.)	Fuel tank vol. (L)	Rated HP
PRIUS	ΤΟΥΟΤΑ	ZVW50L-AHXEBA	01	4	1.798	50	P610 (AV-3) / N/A	N/A	195/65R15 SM#2	20.0	3375	43	96@5200
PRIUS	PRIUS TWO		01	4	1.798	50	P610 (AV-3) / N/A	N/A	P195/65R15 AS	20.0	3375	43	96@5200

Note\*1: AS : All-season tire

SM/SM#2 : Summer-tire

\*2: The number after "-" indicates the number of transmission mode.

## 12.2 Test Parameters

# 13. <u>Projected Sales and Compliance Plans</u>

## 14. <u>Request for Certificate</u>

Test group	: GTYXV01.8PC3
Evap/refueling family	: GTYXR0130J72

TOYOTA MOTOR CORPORATION requests that EPA issue a 2016 model year certificate of conformity for the above specified test group/evaporative family combination more fully described in this application. This combination complies with the following emission standards:

Federal: Tier1 Interin Tier2	nNon-Tier2	low-altitude	high altitu X	de 	Bin No
California:	LEVI: LEV LEVII: LEV SULEV LEVIII:LEV16 ULEV70 SULEV30(AT I		ULEV ULEV ULEV125 ULEV50 SULEV20	_ _ 	

This combination meet all applicable regulations contained within 40 CFR Part 85, 86, and 600, the application is current as of this date.

Kur D. Wehher

Kevin Webber General Manager Toyota Technical Center U.S.A. Inc.

# 15. <u>Other Information</u>

15.1 Fee filing form

€PA	U.S. Environmental Protection Motor Vehicle and Engine Compl On-Highway Fee Filing	iance Program
<b>T</b>	For Certification Applications Received In	
	vota Motor Engineering & Mfg. NA, Inc. (TE	MA) - 11C
Address 1555 Woodridge		
City/State/Zip Code/0	Country Ann Arbor, MI 48105 (USA)	
	On-Highway Certification Request	Type (check one)
X LDV/LDT/MDPV/HDV	(Chassis cert) FEDERAL (\$26,741)	HDV EVAP-ONLY (\$563)
LDV/LDT/MDFV/HDV	(Chassis cert) CAL-ONLY (\$14,193)	HDE CALIF-ONLY (\$563)
🗌 HDE (Engine Dync	cert) FEDERAL (\$47,664)	MOTORCYCLE (\$1,852)
		LD/MDPV/HDV ICI (\$76,399)
EPA standard family or	test group:	G T Y X V 0 1 . 8 P C 3
Amount paid (U.S. Funds	• Only):	\$ 26,741.00
Enter the check number,	or the statement "WIRE" or "ACH":	"WIRE"
Reduced fee calculation	Reduced Fee Section (40 CFR (minimum initial payment \$750): To	· · · · · · · · · · · · · · · · · · ·
Aggregate retail sales ;	(minimum initial payment \$750): To price of the vehicles/units: \$	tal number of vehicles/units covered:
Aggregate retail sales : Check box if an Indepen	(minimum initial payment \$750): To price of the vehicles/units: \$ dent Commercial Importer: [] List the 	tal number of vehicles/units covered:
Aggregate retail sales ; Check box if an Indepen Company Representative;	(minimum initial payment \$750): To price of the vehicles/units: \$	tal number of vehicles/units covered:
Aggregate retail sales : Check box if an Indepen Company Representative: Title: General Mgr VRCI E-mail Address: Certificatio Submission of payments (1) Online: Forms may b	(minimum initial payment \$750): To price of the vehicles/units: \$ dent Commercial Importer: [] List the 	tal number of vehicles/units covered:
Aggregate retail sales : Check box if an Indepen Company Representative: Title: General Mgr VRCI E-mail Address: Certificatio Submission of payments (1) Online: Forms may b	<pre>(minimum initial payment \$750): To price of the vehicles/units: \$</pre>	tal number of vehicles/units covered:
Aggregate retail sales : Check box if an Independ Company Representative: Title: General Mgr VRCI E-mail Address: Certification Submission of payments (1) Online: Forms may b (2) By mail: For check (3) Transmit offline <u>Wi</u> (4) Transmit offline <u>A</u> (5) Forms not submitted Forms and payments sent	<pre>(minimum initial payment \$750): To price of the vehicles/units: \$ dent Commercial Importer: □ List ti</pre>	tal number of vehicles/units covered:
Aggregate retail sales : Check box if an Independ Company Representative: Title: General Mgr VRCI E-mail Address: Certification Submission of payments (1) Online: Forms may b (2) By mail: For check (3) Transmit offline <u>Wi</u> (4) Transmit offline <u>Mi</u> (5) Forms not submitted Forms and payments sent Instructions for sendin The public reporting and record comments on EPA's need for the respondent burden, including the Environmental Protection Agency	<pre>(minimum initial payment \$750): To price of the vehicles/units: \$ dent Commercial Importer: List ti</pre>	tal number of vehicles/units covered:

# 15.2 SFTP / Lean Best Torque (LBT) Air fuel Ratio Information

# 16. <u>Confidential Information</u>

## 17. <u>California ARB Information</u>

17.1	Statement of Compliance
17.2	High-Altitude Test Requirements
17.3	Compliance with fuel fill pipe specifications
17.4	Compliance with the location requirement of the vent tube opening in the fill pipe
17.5	Supplemental information and data for compliance with the enhanced evaporative
	requirements for California
17.6	New unique or changed emission control technology
17.7	Service literature
17.8	Emission Control Information Labels
17.9	Service Information Availability
17.10	Identification of AB71-Qualified Vehicles (Mail-Out #MSO-2000-04)

# 2016 MODEL-YEAR AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufacturer: TOYOTA Exh Test Group: <u>GTYXV01.8PC3</u> Evap Fam: <u>GTYXR0130J72</u>
All Eng Codes in Eng Fam: CA 49S 50S _x AB965, ORVR: YES _x NO
Exh Std: CA LEVII: LEV ULEV SULEV US EPA Interim Non-Tier2
LEVIII: LEV160 ULEV125 ULEV70 Tier2 _x
ULEV50SULEV30SULEV20SULEV30(AT PZEV)_x
Evap Std:       LEVII Zero-Evap       LEVIII (Option 1)       LEVIII (Option 2)       x
Veh Class(es):         PC x         LDT1         LDT2         MDV1         MDV2         MDV3         MDV4         MDV5
Single Cert Std for Multi-Class Eng Fam: <u>N/A</u> (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4)
Fuel Type(s):       Dedicated x       Flex-Fuel       Dual-Fuel       Bi-Fuel       Gasoline x       Diesel
CNG         LNG         LPG         M85         Other (specify)
Exh Emiss Test Fuel(s): Indo CBG x CNG LPG M85 Other (specify)
Diesel: 13 CCR 2282 40 CFR 86.113-90 40 CFR 86.113-94
Evaporative Emission Test Procedure: California <u>x</u> Federal
Service Accum: Std AMA Mod AMA Mfr ADP _x Other (specify)
NMOG Test Procedure: N/A Std Equiv x R/L Test Proc: SHED Pt Source x
Engine Configuration:       I-4         Displacement:       1.8 Liters         109.7 Cubic Inches
Valves per Cylinder:4Rated HP1: 96@5,200RPM
Engine: Front <u>x</u> Mid Rear Drive: FWD _x RWD 4WD-FT 4WD-PT
Exhaust ECS (e.g., MFI, EGR, TC, CAC): SFI,EGR,EGRC,WR-HO2S,TWC(2),HO2S
(use abbreviations per SAE J1930 JUN93)

	Vehicle Models	(M5, A4,		DPA or
50ST	(if coded see attachment)	$etc.)^{*1}$	Wt	RLHP
01	ZVW50L-AHXEBA	AV-3	3375	9.0/11.2

Comment : Please refer to manufacturer's HP list for correct dyno HP setting based on model and equipment.

Note \*1: The number after "-" indicates the number of transmission mode.

## VEHICLE MODELS: PRIUS ZVW50L-AHXEBA

#### Page 2016 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES Manufacturer: TOYOTA Exh Test Group: <u>GTYXV01.8PC3</u> Evap Fam: GTYXR0130J72 All Eng Codes in Eng Fam: CA 49S ORVR: YES x 50S x AB965 NO Exh Std: CA LEVII: LEV ULEV **SULEV** US EPA Interim Non-Tier2 LEVIII: LEV160 ULEV125 ULEV70 Tier2 x SULEV30 (AT PZEV) x ULEV50 SULEV30 SULEV20 Evap Std: LEVII LEVII Zero-Evap LEVIII (Option 1) LEVIII (Option 2) MDV2 MDV3 MDV4 MDV5 Veh Class(es): PC x LDT1 LDT2 MDV1 Single Cert Std for Multi-Class Eng Fam: (specify: N/A, LDT1, MDV1, MDV2, MDV3, MDV4) N/A Dual-Fuel Fuel Type(s): Dedicated x Flex-Fuel Bi-Fuel Gasoline x Diesel CNG LPG M85 Other (specify) LNG Indo \_\_\_\_ CBG <u>x</u> CNG\_ M85 \_\_\_\_ Exh Emiss Test Fuel(s): LPG Other (specify) 40 CFR 86.113-90 Diesel: 13 CCR 2282 40 CFR 86.113-94 Evaporative Emission Test Procedure: California x Federal Mfr ADP <u>x</u> Service Accum: Mod AMA Other (specify) Std AMA R/L Test Proc: SHED NMOG Test Procedure: N/A Pt Source x Std Equiv x 1.8 Liters 109.7 Cubic Inches Engine Configuration: I-4 Displacement: Valves per Cylinder: 4 Rated HP1: 96@5,200 RPM Engine: Drive: FWD <u>x</u> RWD 4WD-FT 4WD-PT Front x Mid Rear \_\_\_\_ SFI,EGR,EGRC,WR-HO2S,TWC(2),HO2S Exhaust ECS (e.g., MFI, EGR, TC, CAC): (use abbreviations per SAE J1930 JUN93) Section # Section # 1 Authorized Representative 22 Gen std, increase in Emiss, FOI-1.2 2 **Fuel Specifications** Safety, Meets all Reqm FOI-8 3 23 Test Equipment **Driveability Statement** FOI-17.1 4 **Test Procedure** 24 Adjustable Parameters 25 5 Mileage Accumulation Route CBI-4 Tamper Resistance Method(s) 6 **Emission Warranty Statement** Part2 FOI-6.00.01 26 **Fill Pipe Specifications** FOI-17.3 7 Maint: Cert/Req'd/Recm'd 27 High Altitude Compliance FOI-17.2 -28 **OBD** Sys incl Marked Revisions 8 Emiss Label/Vac Hose Diag CBI-9.1 9 Evap Control System FOI-3 29 I & M Test Procedure & Data 50 Degree F Compliance 10 **Engine Parameters** 5 30 -11 Fuel System 31 Manufacturer's RAF 12 Ignition System 32 Phase-In Plans CBI-17 13 Exhaust Control System FOI-5 33 NMOG+NOx Fleet Average 14 Proj Sales(LDT/MDV Split) CBI-17.1 Calculation CBI-17.13 15 Vehicle Description 12.1 34 AB965 Credits/Withdrawals 16 Evap Bench Test Procedure 35 **EPA** Certificate to follow 17 R/L Temp & Press Profiles FOI-4.3 36 Equiv NMOG Proc-ARB Approval NMOG/NMHC= 18 **EDV Selection** FTP=1.10, SFTP&HWY=1.03 FOI-17.1 19 Prod Veh same as Test Veh 20 Emission Label Durability Durability Emission Emission Emission 21 Test Vehicle Information Data Vehicle Data Vehicle Data Vehicle Data Vehicle C/O or C/A MY ID C/A 16B-ZV1H 16-ZV1H 16-ZV3H Vehicle Log Page(s) 6 6 7 7 Zero Mile Book Page(s) Maint Logs & Engr Eval \_ -

Continued on next page

## 17.11.00 Certification Review Sheet

E.O.# Page

## 2016 MODEL-YEAR AIR RESOURCES BOARD CERTIFICATION REVIEW SHEET PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

Manufact	turer:	T	ΓΟΥΟ	)TA		Ex	haust [	Test Gr	oup:	GTYX	KV01	.8PC3		Evapo	orative	Family	: <u>G</u> T	TYXR0	130J72
											P R	OJEC	СТЕ	DEN	MISS	JON	S		
								(gr	ams/n	nile, exce	ept, g	.rams/te	st for	D+HS	and g	rams/ga	allon fo	or ORV	R) (1)
								0			r							ATIV	
															Whole		Whole		<u> </u>
Emission	-	-				MPG						Hwy	~		Vehicle	;	Vehicle	;	-
Data Vehicle ID		Test	Trans	FTW	RLH	City/ P Hwy	/ Mile	NMOG +NOx	CO	PM	20°F CO	NMOG +NOx			3-day D+HS <sup>*1</sup>	<sup>1</sup> R/L	2-day D+HS <sup>*1</sup>	<sup>1</sup> ORVR	Canister Bleed <sup>*4</sup>
16-ZV3H	01	MFR			11.2	-/		N/A	N/A	N/A		N/A	-	-	N/A	N/A	N/A	N/A	N/A
(00)*3	01	1911 11	AV	5515	11.2	-/		N/A	N/A	N/A		N/A	-	-	N/A	N/A	N/A	N/A	N/A N/A
(00) 5								0.0198	0.15	0.0005					-	-	-	-	N/A N/A
16-ZV1H	01	MFR	AV	3375	10.2	-/		N/A	N/A	N/A	-	N/A	-	-	N/A	N/A	N/A	N/A	N/A
(00)*3	01	1911 1.	71.	5515	10.2	_	120k		N/A	N/A		N/A	-		N/A	N/A	N/A	N/A	N/A N/A
(00) 5							150k		-	-	N/A	-					0.1170		N/A
(1) The E	EDV(s)	above	compl	v with	standa	rds of (			N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A	N/A
(•)	JE ( (2)	weell	сонт <sub>г</sub> .	<i>y</i>	Jun	(	@120k):		N/A	N/A		N/A	N/A		N/A	N/A	N/A	N/A	N/A
							@150k):		1.0	0.003		0.030	N/A		0.300	0.05	0.300	0.20	N/A
		Dete	rioratic	on Fact	.ors(DF		@50k):		N/A	N/A		N/A	N/A	N/A		N/A	N/A	N/A	N/A
							@120k):		N/A	N/A		N/A	N/A		N/A	N/A	N/A	N/A	N/A
							@150k):		0.07	0.0002	N/A	0.0053	N/A	N/A	N/A*2	N/A*2	N/A*2	N/A*2	N/A
				50°F (	emissi		/o DFs):		-										
							andards:		1.0										
SFTP Te	est re	sults:																	
Emission																			
Data Vahiala ID	E/G	Test	Т	CTW.	7 DIT	m	Mile	US06		DM		SC03		NMC		<u> </u>	×		
Vehicle ID 16-ZV3H	01	Loc MFR		s ETW	7 KLH		150k	CO2		PM 0.0015		CO2		+NO2	x-Comp	0.22	omp	—	
16-ZV3H (00)*3	01	МГК	Av	55/5	11.2		1 3 U K	-		0.0015		-		0.020	)0	0.22			
(1) The E	DV(s)	above	comply	with s	standar	ds of ((	@150k):	N/A		0.010		N/A		0.030	0	4.2			
. /							@150k):			0.0002		N/A		0.005	53	0.07			
					,	· · -	· · ·												
Remarks	2 *1.	· 1st D	RI is	added	l kev c	off mo	nitor lo	ee (0.00	18oran	2)									
Remarks       *1: 1st DBL is added key off monitor loss (0.0018gram).         *2: DFs are not applicable because aged components were adopted to EDV.																			
*3: Power shift pattern.																			
*4: Vehicles with a non-integrated refueling canister-only system are exempt from the canister bleed emission standard																			
according to CALIFORNIA EVAPORATIVE EMISSION STANDARDS AND TEST PROCEDURES FOR 2001 AND SUBSEQUENT MODEL MOTOR VEHICLES PART I.E.1.(e)(i)(B)(4)								)											
		<u>SUBS</u>	EQUE	<u>NT M</u>	ODE	<u>l MO</u>	TOR V	EHICLE	<u>ES PAF</u>	<u> RT I.E.1.</u>	<u>(e)(i)(</u>	<u>B)(4)</u>							

Application			
Processed	Date:	Reviewed by:	Date:
by Data Issued:			

## 17.11.00

## Attestation of compliance with California Inspection and Maintenance emission standards

Toyota states that the models in this test group comply with the California Inspection and Maintenance emission requirements base on our good engineering evaluation.

- 17.12 Test group and Evaporative family sales for California
- 17.13 Compliance with fleet average FTP NMOG+NOx standard
- 17.14 Compliance with OBD-II Phase-in Requirements
- 17.15 Hybrid Electric Vehicle information (if applicable)

## 18. <u>Information on Service of Process</u>

Please refer to Section 1 of the FOI common file.