



Volkswagen AG, a member of the Volkswagen Group

## Application for Emissions Certification Part 1

### 2013 Model Year

**Durability Group:** DVWXGPGNNU46

**Evap. Family:** DVWXR0125D46

**Test Group:** DVWXV03.6U46

**Certificate Number:** DVWXV03.6U46-001

**Durability Group Description:** Four Stroke, Otto Cycle, Gasoline Fueled,  
Direct Fuel Injection, Catalyst Code: MLKX6

**Test group Description:** 3.6 Liter V6 - LDV

**Applicable Standards:** 50-State: Federal: TIER 2 BIN 5  
CA: LEV-II ULEV

**Carlines Covered:** CC / CC 4motion

#### Vehicles Tested:

VID	Config.	Test Type / #	Test Type / #
VW461 90122/09	0	FTP / 9VWX01087097	HFET / 9VWX01087095
VW461 90122/09	0	US06 / 9VWX01087096	SC03 / 9VWX01087099
VW461 90122/09	0	Cold CO / 9VWX01087100	50° FTP / 9VWX01087098
461-60137/06	0	2-Day / 8VWX01065489	ORVR / 8VWX01065488
461-60137/06	0	3-Day / 8VWX01065514	Running Loss / 8VWX10002331

Issue Date: 12-13-2011

Update: 11-13-2012

**For Questions, Contact:**

Michael Giles, (248) 754-4229  
William Rodgers, (248) 754-4219

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<b>Section 5</b>	<b>Pg. 1</b>	<b>Test Group Description</b>	<b>Engine Code:</b>	<b>R.CH-No.</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group: DVWXV03.6U46</b>		<b>All</b>		<b>11-13-2012</b>

### 5.1 Test Group Description

Test Group Name	DVWXV03.6U46
Certificate Number	DVWXV03.6U46-001
Engine displacements covered	3.6 liters
Arrangement and number of cylinders	V 6
Vehicle class (es) covered	LDV
Federal Emissions Standards Class	Tier 2 BIN 5
California Emissions Standards Class	LEV-II ULEV

### 5.2 Test Group Emission Standards

Please refer to Certification Information Summary Report included in Section 7 for applicable emission standards.

<b>Section 6</b>	<b>Pg. 1</b>	<b>Test Vehicle Description</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group: DVWXV03.6U46</b>		<b>All</b>		<b>11-13-2012</b>

**6. Test Vehicle Description**

Please refer to included Certification Information Summary Report for the following vehicles:

Certificate Number: DVWXV03.6U46-001  
 Test Group: DVWXV03.6U46  
 Evaporative/Refueling Family: DVWXR0125D46

VID	Config.	Vehicle Type	Tests Performed
<b>VW461 90122/09</b>	00	Cert. Emission	FTP, HFET, US06, SC03, Cold CO, CST, 50° FTP
	01	Fuel Economy	FTP, HFET, US06, SC03, Cold CO
	02	Fuel Economy	FTP, HFET, US06, SC03, Cold CO
<b>461-60137/06</b>	00	Cert. Emission	2-Day EVAP, 3-day EVAP, ORVR

<b>Section 7</b>	<b>Pg. 1</b>	<b>Test Results</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		<b>11-13-2012</b>

**7.           Test Results**

Please refer to included Certification Information Summary Report.

Certificate Number:           DVWXV03.6U46-001  
Test Group:                        DVWXV03.6U46  
Evaporative/Refueling Family:   DVWXR0125D46

## Certification Summary Information Report

<b>Manufacturer</b>	Volkswagen	<b>Manufacturer Code</b>	VWX
<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Certificate Number</b>	DVWXV03.6U46-001	<b>CARB Executive Order #</b>	N/A
<b>Certificate Issue Date</b>	12/16/2011	<b>Certificate Revision Date</b>	N/A
<b>Certificate Effective Date</b>	12/16/2011	<b>Conditional Certificate</b>	No
<b>CSI Revision #</b>	N/A	<b>CSI Submission/Revision Date</b>	11/13/2012
<b>Model Year</b>	2013		

**Test Group Information**

<b>CSI Type</b>	Update for Correction	<b>Running Change Reference Number</b>	N/A
<b>GHG Exempt Status</b>	Not Exempt		

**Drive Sources and Fuel(s)**

**Drive Source #1:** Combustion Engine

Fuel	Basic Fuel Metering System	Lean Burn Strategy Indicator
Gasoline	Spark Ignition Direct fuel injection	N

<b>Hybrid Indicator</b>	No	<b>Rechargeable Energy Storage System Indicator</b>	--
<b>Multiple Fuel Storage</b>	--	<b>Off-board Charge Capable Indicator</b>	--
<b>Multiple Fuel Combustion</b>	--	<b>EPA Vehicle Class</b>	LDV
<b>Fuel Cell Indicator</b>	--	<b>Federal Clean Fuel Vehicle Standard</b>	--
<b>Federal Clean Fuel Vehicle</b>	No	<b>California Partial Zero Emissions Vehicle Indicator</b>	No
<b>Federal Clean Fuel Vehicle ILEV</b>	No	<b>Durability Group Equivalency Factor</b>	1.1
<b>Durability Group Name</b>	DVWXGPGNNU46	<b>Certification Region Code(s)</b>	FA, CA
<b>Reduced Fee Test Group</b>	No		
<b>Complies with HD GHG 2b/3 regulations?</b>	No		
<b>Introduction into Commerce Date</b>	03/05/2012	<b>CAP2000 Conditional Certificate?</b>	No
<b>Independent Commercial Importer?</b>	--	<b>Alternative Fuel Converter Certificate?</b>	--
<b>SFTP Compliance Indicator</b>	Yes	<b>SFTP Composite CO Option</b>	No
<b>OBD Compliance Type</b>	CARB	<b>OBD Demonstration Vehicle Test Group</b>	DVWXV03.6U46
<b>Mfr Test Group Comments</b>	--		
<b>Mfr Exhaust / Evap Standards Comments</b>	--		

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46				
<b>Evaporative/Refueling Family Information</b>							
<b>Evaporative Summary Information Type</b>	New	<b>Submission/Correction Date</b>	08/08/2011				
<b>Integrated ORVR?</b>	Yes	<b>Fuel(s)</b>	Gasoline				
<b>Multiple Fuel Storage</b>	--						
<b>Bladder Fuel Tank?</b>	No						
<b>Fuel Tank Material</b>	Plastic	<b>Fuel Tank Material Description</b>	HDPE + EVOH multilayer				
<b>Fill Pipe Seal Type</b>	Liquid seal						
<b>Air Intake System Vapor Storage Device?</b>	No	<b>Air Intake System Vapor Storage Device Description</b>	N/A				
<b>Fuel System Vapor Storage Canister?</b>	Yes	<b>Other Vapor Storage</b>	N/A				
<b>Fuel System Vapor Storage Canister(s) Total Working Capacity (grams)</b>	125	<b>Number of Primary Canisters</b>	1				
<b>Number of Bleed Canisters</b>	0	<b>Bleed Canister Total Working Capacity (grams)</b>	N/A				
<b>Mfr Evaporative/Refueling Family Comments</b>	FEDERAL LEV-II / CALIFORNIA LEV-II EVAP STANDARDS.						
<b>Models Covered by this Certificate</b>							
<b>Carline Manufacturer</b>	<b>Division</b>	<b>Carline</b>	<b>Certification Region Code(s)</b>	<b>Drive System</b>	<b>Trans - Type</b>	<b>- # of Gears</b>	<b>Trans - Lockup</b>
Volkswagen	1 - Volkswagen	298 - CC 4MOTION	Federal	All Wheel Drive	Semi-Automatic	6	Yes
Volkswagen	1 - Volkswagen	293 - CC	California + CAA Section 177 states	2-Wheel Drive, Front	Semi-Automatic	6	Yes
Volkswagen	1 - Volkswagen	298 - CC 4MOTION	California + CAA Section 177 states	All Wheel Drive	Semi-Automatic	6	Yes
Volkswagen	1 - Volkswagen	293 - CC	Federal	2-Wheel Drive, Front	Semi-Automatic	6	Yes
<b>Engine Description</b>							
<b>Hybrid Type</b>	--	<b>Hybrid Description</b>	--				
<b>Engine Type</b>	4-Stroke Spark Ignition	<b>Mfr Engine Description</b>	--				
<b>Engine Block Arrangement</b>	V-shaped engine	<b>Mfr Engine Block Arrangement Description</b>	--				
<b>Camless Valvetrain Indicator</b>	No	<b>Oil Viscosity/Classification</b>	5W-40 VW50200				
<b>Number of Cylinders/Rotors</b>	6						
<b>After Treatment Device(s) (ATD)</b>							
<b>ATD Number</b>	<b>ATD Type</b>	<b>ATD Precious Metal</b>	<b>Substrate Material</b>	<b>Substrate Construction</b>			
1	Three-way catalyst	Paladium + Rhodium	Ceramic	Monolith			
2	Three-way catalyst	Paladium + Rhodium	Metal	Monolith			
3	Three-way catalyst	Paladium + Rhodium	Ceramic	Monolith			
4	Three-way catalyst	Paladium + Rhodium	Metal	Monolith			
<b>Mfr After Treatment Device (ATD) Comments</b>	--						
<b>Direct Ozone Reduction (DOR) Device</b>	Not Equipped						
<b>Mfr Emission Control Device Comments</b>	--						

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46				<b>Evaporative/Refueling Family</b>			DVWXR0125D46			
<b>Engine Configuration Number 1</b>											
<b>Engine Displacement (liters)</b>	3.6				<b>Engine Rated Horsepower</b>			280			
<b>Number of Inlet Valves Per Cylinder</b>	2				<b>Number of Exhaust Valves Per Cylinder</b>			2			
<b>Air Aspiration Method</b>	Naturally Aspirated				<b>Number of Air Aspiration Devices</b>			0			
<b>Air Aspiration Device Configuration</b>	--				<b>Charge Air Cooler Type</b>			N/A			
<b>Cylinder Deactivation Description</b>	N/A										
<b>Variable Valve Timing System Description</b>	position of intake/exhaust camshaft electronically controlled and hydraulically adjusted				<b>Variable Valve Lift System</b>			N/A			
<b>Number of Knock Sensors</b>	2										
<b>Air/Fuel Sensor # 1 Type</b>	Heated oxygen				<b>Air/Fuel Sensor # 1 Description</b>			N/A			
<b>Air/Fuel Sensor # 2 Type</b>	Heated oxygen				<b>Air/Fuel Sensor # 2 Description</b>			N/A			
<b>Air/Fuel Sensor # 3 Type</b>	Heated oxygen				<b>Air/Fuel Sensor # 3 Description</b>			N/A			
<b>Air/Fuel Sensor # 4 Type</b>	Heated oxygen				<b>Air/Fuel Sensor # 4 Description</b>			N/A			
<b>Mfr Air/Fuel Sensor Comments</b>	--										
<b>Exhaust Gas Recirculation</b>	Yes				<b>EGR Type</b>			Variable Valve Timing Control			
<b>Cooled Exhaust Gas Recirculation</b>	No										
<b>Closed Loop Air Injection System</b>	No				<b>Air Injection Type</b>			--			
<b>Mfr Engine Configuration Comments</b>	--										
<b>Official Test Numbers</b>											
<b>Test Group</b>	<b>Fuel</b>	<b>FTP</b>	<b>US06</b>	<b>SC03</b>	<b>Cold CO</b>	<b>Highway</b>	<b>EPA City Litmus Value</b>	<b>EPA City Litmus Threshold</b>	<b>EPA Highway Litmus Value</b>	<b>EPA Highway Litmus Threshold</b>	<b>CREE Weighting Factor</b>
Gasoline	9VWX01087097	9VWX01087096	9VWX01087099	9VWX01087100	9VWX01087100	9VWX01087095	16.9	15.8	25.2	22.9	N/A



## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46						
<b>Emission Data Vehicle Information</b>									
<b>Vehicle ID / Configuration</b>	461-60137/06 / 0								
<b>Vehicle Model</b>									
<b>Represented Test Vehicle Make</b>	VOLKSWAGEN	<b>Represented Test Vehicle Model</b>	PASSAT WAGON 4MOTION						
<b>Drive Sources and Fuel System Details</b>									
	<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>Combustion Engine</td> <td>Gasoline</td> </tr> </tbody> </table>			Drive Source and Fuel#	Drive Source	Fuel	1	Combustion Engine	Gasoline
Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
<b>Hybrid Indicator</b>	N	<b>Multiple Fuel Combustion</b>	--						
<b>Multiple Fuel Storage</b>	--	<b>Rechargeable Energy Storage System Indicator</b>	N						
<b>Fuel Cell Indicator</b>	N	<b>Rechargeable Energy Storage System, if 'Other'</b>	--						
<b>Rechargeable Energy Storage System</b>	--								
<b>Off-board charge Capable Indicator</b>	--								
<b>Transmission Type</b>	Automatic	<b># of Transmission Gears</b>	6						
<b>Engine Code</b>	BLV	<b>Axle Ratio</b>	3.46						
<b>Displacement (liters)</b>	3.596	<b>Rated Horsepower</b>	280						
<b>Equivalent Test Weight (pounds)</b>	4250	<b>Air Aspiration Method</b>	Naturally Aspirated						
<b>Drive Mode While Testing</b>	2-Wheel Drive, Front	<b>SIL Usage</b>	Not equipped						
<b>Aged Emission Components</b>	4,000 (mi)								
<b>Dynamometer Coefficients:</b>									
	<b>Target Coefficients</b>			<b>Set Coefficients</b>			<b>EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients</b>		
<b>Coefficient Category</b>	<b>A (lbf)</b>	<b>B (lbf/mph)</b>	<b>C (lbf/mph**2)</b>	<b>A (lbf)</b>	<b>B (lbf/mph)</b>	<b>C (lbf/mph**2)</b>			
<b>City/Highway/Evap</b>	42	0.47	0.017	7	0.38	0.0172	--		
<b>Manufacturer Test Vehicle Comments</b>	-99 = DIRECT FUEL INJECTION MY 2006 PASSAT WAGON 4MOTION L6 - ETW 4250 - EDV - TESTED AS A FWD								

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46					
<b>Test #</b>	<b>8VWX01065489</b>	<b>Test Procedure</b>	<b>23 - 2-day evap</b>					
<b>Exhaust Test # for this Evap Test</b>	8VWX01065487	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline					
<b>Test Date</b>	06/29/2005	<b>Fuel</b>	Gasoline					
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined					
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1							
<b>Test Results</b>								
<b>Test Result Name</b>		<b>Unrounded Test Result</b>	<b>Verify Calculated FE MPG Equivalent Value</b>					
<b>Total Hydrocarbon</b>		0.245	--					
<b>Manufacturer Test Comments</b> 4K MILE - 2DAY EVAP - PASSAT WAGON 4MOTION - ETW 4250								
<b>Certification Region</b>	<b>Useful Life</b>	<b>Standard Level</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Add DF</b>	<b>Certification Level</b>	<b>Standard</b>	<b>Pass/Fail</b>
Fed	120,000 miles	Federal LEV-II Evap	HC-TOTAL	0.245	0	0.24	0.65	Pass
CA	150,000 miles	California LEV-II Evap	HC-TOTAL	0.245	0	0.24	0.65	Pass
<b>Test #</b>	<b>8VWX01065514</b>	<b>Test Procedure</b>	<b>34 - Federal fuel 3-day evap</b>					
<b>Exhaust Test # for this Evap Test</b>	8VWX01065484	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline					
<b>Test Date</b>	04/27/2005	<b>Fuel</b>	Gasoline					
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined					
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1							
<b>Test Results</b>								
<b>Test Result Name</b>		<b>Unrounded Test Result</b>	<b>Verify Calculated FE MPG Equivalent Value</b>					
<b>Total Hydrocarbon</b>		0.283	--					
<b>Manufacturer Test Comments</b> 4K MILE - 3DAY EVAP - PASSAT WAGON 4MOTION - ETW 4250								
<b>Certification Region</b>	<b>Useful Life</b>	<b>Standard Level</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Add DF</b>	<b>Certification Level</b>	<b>Standard</b>	<b>Pass/Fail</b>
Fed	120,000 miles	Federal LEV-II Evap	HC-TOTAL	0.28	0	0.3	0.5	Pass
CA	150,000 miles	California LEV-II Evap	HC-TOTAL	0.28	0	0.3	0.5	Pass

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Test #</b>	<b>8VWX01065488</b>	<b>Test Procedure</b>	<b>24 - Federal fuel refueling test (ORVR)</b>
<b>Exhaust Test # for this Evap Test</b>	8VWX01065485	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	05/31/2005	<b>Fuel</b>	Gasoline
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
Hydrocarbon for Running Loss and ORVR	0	--

**Manufacturer Test Comments** 4K MILE - ORVR - PASSAT WAGON 4MOTION - ETW 4250

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal LEV-II Evap	HC	0.00	0.003	0.0	0.2	Pass
CA	150,000 miles	California LEV-II Evap	HC	0.00	0.003	0.0	0.2	Pass

<b>Test #</b>	<b>8VWX10002331</b>	<b>Test Procedure</b>	<b>32 - Federal Fuel Running Loss</b>
<b>Exhaust Test # for this Evap Test</b>	8VWX01065484	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	04/27/2005	<b>Fuel</b>	Gasoline
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
Hydrocarbon for Running Loss and ORVR	0	--

**Manufacturer Test Comments** 4K MILE - RUNNING LOSS TEST - PASSAT WAGON 4MOTION - ETW 4250

Certification Region	Useful Life	Standard Level	Emission Name	Rounded Result	Add DF	Certification Level	Standard	Pass/Fail
Fed	120,000 miles	Federal LEV-II Evap	HC	0.000	0	0.00	0.05	Pass
CA	150,000 miles	California LEV-II Evap	HC	0.000	0	0.00	0.05	Pass

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46						
<b>Emission Data Vehicle Information</b>									
<b>Vehicle ID / Configuration</b>	VW461 90122/09 / 0								
<b>Vehicle Model</b>									
<b>Represented Test Vehicle Make</b>	VOLKSWAGEN	<b>Represented Test Vehicle Model</b>	PASSAT CC 4MOTION						
<b>Drive Sources and Fuel System Details</b>									
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Drive Source and Fuel#	Drive Source	Fuel							
1	Combustion Engine	Gasoline							
<b>Hybrid Indicator</b>	N	<b>Multiple Fuel Combustion</b>	--						
<b>Multiple Fuel Storage</b>	--	<b>Rechargeable Energy Storage System Indicator</b>	N						
<b>Fuel Cell Indicator</b>	N	<b>Rechargeable Energy Storage System, if 'Other'</b>	--						
<b>Rechargeable Energy Storage System</b>	--								
<b>Off-board charge Capable Indicator</b>	--								
<b>Transmission Type</b>	Automatic	<b># of Transmission Gears</b>	6						
<b>Engine Code</b>	BLV	<b>Axle Ratio</b>	3.45						
<b>Displacement (liters)</b>	3.596	<b>Rated Horsepower</b>	280						
<b>Equivalent Test Weight (pounds)</b>	4250	<b>Air Aspiration Method</b>	Naturally Aspirated						
<b>Drive Mode While Testing</b>	2-Wheel Drive, Front	<b>SIL Usage</b>	Not equipped						
<b>Aged Emission Components</b>	4,000 (mi)								
<b>Dynamometer Coefficients:</b>									
	<b>Target Coefficients</b>			<b>Set Coefficients</b>			<b>EPA Calculated Total Road Load Horse Power for City/Highway/Evap Coefficients</b>		
<b>Coefficient Category</b>	<b>A (lbf)</b>	<b>B (lbf/mph)</b>	<b>C (lbf/mph**2)</b>	<b>A (lbf)</b>	<b>B (lbf/mph)</b>	<b>C (lbf/mph**2)</b>			
<b>City/Highway/Evap</b>	42	0.47	0.017	0	0.38	0.017	--		
<b>Cold CO</b>	46	0.52	0.0187	11	0.19	0.0218	N/A		
<b>US06</b>	42	0.47	0.017	0	0.38	0.017	N/A		
<b>Manufacturer Test Vehicle Comments</b>	MY 2009 VW PASSAT CC 4MOTION - 3.6L V6 FSI W/L6 TRANS.- EDV - ETW 4250 - TESTED AS FWD -- 99 = DIRECT FUEL INJECTION								

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Test #</b>	<b>9VWX01087097</b>	<b>Test Procedure</b>	<b>21 - Federal fuel 2-day exhaust (w/can load)</b>
<b>Exhaust Test # for this Evap Test</b>	N/A	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	02/12/2008	<b>Fuel</b>	Gasoline
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
Bag 1 Fuel Economy	20.7	20.7
Bag 2 Fuel Economy	19.1	19.1
Bag 3 Fuel Economy	23.4	23.4
CH4 - Methane	0.0041	--
Carbon Monoxide	0.29	--
Manufacturer Fuel Economy	20.5	20.5
Nitrogen Oxide	0.029	--
Nitrous Oxide	0.01	--
Non-methane Hydrocarbon	0.0299	--
Non-methane organic gas (California)	0.0311	--
Total Hydrocarbon	0.0338	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	435	435
Optional Carbon-Related Exhaust Emissions	438	438

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	434	435

**Manufacturer Test Comments**

4K MILE 2-DAY FED FTP W/CAN.LOAD - ETW 4250

## Certification Summary Information Report

Test Group		DVWXV03.6U46			Evaporative/Refueling Family					DVWXR0125D46		
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	Federal Tier 2 Bin 5	CO	0.290	--	--	--	0.03	--	0.32	3.40	Pass
Fed	50,000 miles	Federal Tier 2 Bin 5	NMOG	0.03110	1	1.04	--	0.0039	--	0.0350	0.0750	Pass
Fed	50,000 miles	Federal Tier 2 Bin 5	NOX	0.0290	--	--	--	0	--	0.029	0.050	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	CO	0.290	--	--	--	0.06	--	0.35	4.20	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	CREE	435	--	--	--	0.1	--	435	--	--
Fed	120,000 miles	Federal Tier 2 Bin 5	HC-NM+NOX-COMP	0.0598	--	--	--	--	--	0.060	0.650	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	METHANE	0.0041	--	--	--	0.009	--	0.013	0.030	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	NMOG	0.03110	1	1.04	--	0.0094	--	0.0405	0.0900	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	NOX	0.0290	--	--	--	0	--	0.029	0.070	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	OPT-CREE	438	--	--	--	0.1	--	438	--	--
CA	50,000 miles	California LEV-II ULEV	CO	0.290	--	--	--	0.03	--	0.32	1.70	Pass
CA	50,000 miles	California LEV-II ULEV	NMOG	0.03110	1	1.04	--	0.0039	--	0.0350	0.0400	Pass
CA	50,000 miles	California LEV-II ULEV	NOX	0.0290	--	--	--	0	--	0.029	0.050	Pass
CA	120,000 miles	California LEV-II ULEV	CO	0.290	--	--	--	0.06	--	0.35	2.10	Pass
CA	120,000 miles	California LEV-II ULEV	NMOG	0.03110	1	1.04	--	0.0094	--	0.0405	0.0550	Pass
CA	120,000 miles	California LEV-II ULEV	NOX	0.0290	--	--	--	0	--	0.029	0.070	Pass

**NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.**

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Test #</b>	<b>9VWX01087098</b>	<b>Test Procedure</b>	<b>52 - Fed. fuel 50 F exh.</b>
<b>Exhaust Test # for this Evap Test</b>	N/A	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	02/14/2008	<b>Fuel</b>	N/A
<b>Vehicle Class</b>	N/A	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
Carbon Monoxide	0.35	--
Nitrogen Oxide	0.021	--
Non-methane organic gas (California)	0.0387	--
Total Hydrocarbon	0.0432	--

**Manufacturer Test Comments**

4K MILE FED 50'F FTP - ETW 4250

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Test #</b>	<b>9VWX01087100</b>	<b>Test Procedure</b>	<b>11 - Cold CO</b>
<b>Exhaust Test # for this Evap Test</b>	N/A	<b>Test Fuel Type</b>	27 - Cold CO Premium (Tier 2)
<b>Test Date</b>	02/19/2008	<b>Fuel</b>	Gasoline
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
Bag 1 Fuel Economy	16.5	--
Bag 2 Fuel Economy	18.2	--
Bag 3 Fuel Economy	22.4	--
Carbon Monoxide	1.49	--
Nitrogen Oxide	0.065	--
Non-methane Hydrocarbon	0.37	--
Total Hydrocarbon	0.3884	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	473	--

**Manufacturer Test Comments**

4K MILE COLD CO - ETW 4250, EPA FE Calc Rel8

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	Federal Tier 2 Bin 5	CO	1.490	--	--	--	0.03	--	1.52	10.00	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	HC-NM	0.370	--	--	--	0.0039	--	0.37	0.40	Pass
CA	50,000 miles	California LEV-II ULEV	CO	1.490	--	--	--	0.03	--	1.52	10.00	Pass



## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Test #</b>	<b>9VWX01087095</b>	<b>Test Procedure</b>	<b>3 - HWFE</b>
<b>Exhaust Test # for this Evap Test</b>	N/A	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	02/06/2008	<b>Fuel</b>	Gasoline
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
CH4 - Methane	0.0002	--
Carbon Monoxide	0.13	--
Manufacturer Fuel Economy	33.5	33.5
Nitrogen Oxide	0.009	--
Nitrous Oxide	0.01	--
Non-methane Hydrocarbon	0.0014	--
Non-methane organic gas (California)	0.0015	--
Total Hydrocarbon	0.0016	--

Test Result Name	Unrounded Test Result	Verify Calculated CREE/OPT-CREE
Carbon-Related Exhaust Emissions	265	265
Optional Carbon-Related Exhaust Emissions	268	268

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	265	265

**Manufacturer Test Comments** 4K MILE HFET - ETW 4250

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	Federal Tier 2 Bin 5	NOX	0.0090	--	--	--	0	--	0.009	0.070	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	CREE	265	--	--	--	0.1	--	265	--	--
Fed	120,000 miles	Federal Tier 2 Bin 5	NOX	0.0090	--	--	--	0	--	0.009	0.090	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	OPT-CREE	268	--	--	--	0.1	--	268	--	--
CA	50,000 miles	California LEV-II ULEV	NOX	0.0090	--	--	--	0	--	0.009	0.070	Pass
CA	120,000 miles	California LEV-II ULEV	NOX	0.0090	--	--	--	0	--	0.009	0.090	Pass

**NOTE: For Non-charge depleting tests, the Rounded Result for CREE/OPT-CREE Emission names are Verify-calculated values.**

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Test #</b>	<b>9VWX01087096</b>	<b>Test Procedure</b>	<b>90 - US06</b>
<b>Exhaust Test # for this Evap Test</b>	N/A	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	02/06/2008	<b>Fuel</b>	Gasoline
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

**Test Results**

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
Bag 1 Fuel Economy	14.9	--
Bag 2 Fuel Economy	27.4	--
Carbon Monoxide	1.06	--
Manufacturer Fuel Economy	23.2	--
Nitrogen Oxide	0.029	--
Non-methane Hydrocarbon	0.054	--
SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	0.083	--
Total Hydrocarbon	0.0644	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	382	--

**Manufacturer Test Comments**

4K MILE US06 - ETW 4250, EPA FE Calc Rel8

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 5	CO	1.060	--	--	--	--	--	1.06	8.00	Pass
Fed	4,000 miles	Federal Tier 2 Bin 5	HC-NM+NOX	0.0830	--	--	--	--	--	0.083	0.140	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	CO	1.060	--	--	--	0.06	--	1.12	11.10	Pass
CA	4,000 miles	California LEV-II ULEV	CO	1.060	--	--	--	--	--	1.06	8.00	Pass
CA	4,000 miles	California LEV-II ULEV	HC-NM+NOX	0.0830	--	--	--	--	--	0.083	0.140	Pass

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46	<b>Evaporative/Refueling Family</b>	DVWXR0125D46
<b>Test #</b>	<b>9VWX01087099</b>	<b>Test Procedure</b>	<b>95 - SC03</b>
<b>Exhaust Test # for this Evap Test</b>	N/A	<b>Test Fuel Type</b>	61 - Tier 2 Cert Gasoline
<b>Test Date</b>	02/15/2008	<b>Fuel</b>	Gasoline
<b>Vehicle Class</b>	LDV/Passenger Car	<b>DF Type</b>	Mfr. Determined
<b>Verify Test Lab ID</b>	Volkswagen AG, Dept EASZ/1		

## Test Results

Test Result Name	Unrounded Test Result	Verify Calculated FE MPG Equivalent Value
Carbon Monoxide	0.2	--
Manufacturer Fuel Economy	18.5	18.5
Nitrogen Oxide	0.009	--
Non-methane Hydrocarbon	0.0087	--
SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	0.018	--
Total Hydrocarbon	0.014	--

Test Result Name	Unrounded Test Result	Verify Calculated CO2
Carbon dioxide	481	--

## Manufacturer Test Comments

4K MILE SC03 - ETW 4250, EPA FE Calc Rel8

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 5	CO	0.200	--	--	--	--	--	0.20	2.70	Pass
Fed	4,000 miles	Federal Tier 2 Bin 5	HC-NM+NOX	0.0180	--	--	--	--	--	0.018	0.200	Pass
Fed	120,000 miles	Federal Tier 2 Bin 5	CO	0.200	--	--	--	0.06	--	0.26	3.70	Pass
CA	4,000 miles	California LEV-II ULEV	CO	0.200	--	--	--	--	--	0.20	2.70	Pass
CA	4,000 miles	California LEV-II ULEV	HC-NM+NOX	0.0180	--	--	--	--	--	0.018	0.200	Pass

## Certification Summary Information Report

Test Group		DVWXV03.6U46			Evaporative/Refueling Family			DVWXR0125D46		
Consolidated List of Standards										
Exhaust Standards										
<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Both		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-II ULEV		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			Federal fuel 2-day exhaust (w/can load)		
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	--	--	--	--	--	--	0.03	1.70	
50,000 miles	HCHO	--	--	--	--	--	--	0	0.0080	
50,000 miles	NMOG	--	1	1.04	--	--	--	0.0039	0.0400	
50,000 miles	NOX	--	--	--	--	--	--	0	0.050	
120,000 miles	CO	--	--	--	--	--	--	0.06	2.10	
120,000 miles	HCHO	--	--	--	--	--	--	0	0.0110	
120,000 miles	NMOG	--	1	1.04	--	--	--	0.0094	0.0550	
120,000 miles	NOX	--	--	--	--	--	--	0	0.070	
120,000 miles	PM	--	--	--	--	--	--	0	0.010	
<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Both		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-II ULEV		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			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	CO	--	--	--	--	--	--	--	1.70	
4,000 miles	HCHO	--	--	--	--	--	--	--	0.0160	
4,000 miles	NMOG	--	1	1.04	--	--	--	--	0.0800	
4,000 miles	NOX	--	--	--	--	--	--	--	0.050	
<b>Cert Region</b>		California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Both		
<b>Vehicle Class</b>		LDV/Passenger Car			<b>Standard Level</b>			California LEV-II ULEV		
<b>Fuel</b>		Gasoline			<b>Test Procedure</b>			HWFE		
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	NOX	--	--	--	--	--	--	0	0.070	
120,000 miles	NOX	--	--	--	--	--	--	0	0.090	

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46				<b>Evaporative/Refueling Family</b>			DVWXR0125D46		
<b>Cert Region</b>	Federal				<b>Cert/In-Use Code</b>			Both		
<b>Vehicle Class</b>	LDV/Passenger Car				<b>Standard Level</b>			Federal Tier 2 Bin 5		
<b>Fuel</b>	Gasoline				<b>Test Procedure</b>			SC03		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
4,000 miles	CO	--	--	--	--	--	--	--	2.70	
4,000 miles	HC-NM+NOX	--	--	--	--	--	--	--	0.200	
120,000 miles	CO	--	--	--	--	--	--	0.06	3.70	

<b>Cert Region</b>	Federal				<b>Cert/In-Use Code</b>			Both		
<b>Vehicle Class</b>	LDV/Passenger Car				<b>Standard Level</b>			Federal Tier 2 Bin 5		
<b>Fuel</b>	Gasoline				<b>Test Procedure</b>			Federal fuel 2-day exhaust (w/can load)		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>	
50,000 miles	CO	--	--	--	--	--	--	0.03	3.40	
50,000 miles	HCHO	--	--	--	--	--	--	0	0.0150	
50,000 miles	NMOG	--	1	1.04	--	--	--	0.0039	0.0750	
50,000 miles	NOX	--	--	--	--	--	--	0	0.050	
50,000 miles	PM	--	--	--	--	--	--	0	0.010	
120,000 miles	CO	--	--	--	--	--	--	0.06	4.20	
120,000 miles	CREE	--	--	--	--	--	--	0.1	999.9999	
120,000 miles	HC-NM+NOX-COMP	--	--	--	--	--	--	--	0.650	
120,000 miles	HCHO	--	--	--	--	--	--	0	0.0180	
120,000 miles	METHANE	--	--	--	--	--	--	0.009	0.030	
120,000 miles	N2O	--	--	--	--	--	--	--	0.010	
120,000 miles	NMOG	--	1	1.04	--	--	--	0.0094	0.0900	
120,000 miles	NOX	--	--	--	--	--	--	0	0.070	
120,000 miles	OPT-CREE	--	--	--	--	--	--	0.1	999.9999	
120,000 miles	PM	--	--	--	--	--	--	0	0.010	

## Certification Summary Information Report

Test Group		DVWXV03.6U46			Evaporative/Refueling Family			DVWXR0125D46		
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-II ULEV		
Fuel		Gasoline			Test Procedure			SC03		
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	CO	--	--	--	--	--	--	--	2.70	
4,000 miles	HC-NM+NOX	--	--	--	--	--	--	--	0.200	
Cert Region		California + CAA Section 177 states			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			California LEV-II ULEV		
Fuel		Gasoline			Test Procedure			US06		
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	CO	--	--	--	--	--	--	--	8.00	
4,000 miles	HC-NM+NOX	--	--	--	--	--	--	--	0.140	
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 2 Bin 5		
Fuel		Gasoline			Test Procedure			HWFE		
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	NOX	--	--	--	--	--	--	0	0.070	
120,000 miles	CREE	--	--	--	--	--	--	0.1	999.9999	
120,000 miles	NOX	--	--	--	--	--	--	0	0.090	
120,000 miles	OPT-CREE	--	--	--	--	--	--	0.1	999.9999	
Cert Region		Federal			Cert/In-Use Code			Both		
Vehicle Class		LDV/Passenger Car			Standard Level			Federal Tier 2 Bin 5		
Fuel		Gasoline			Test Procedure			Cold 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	--	--	--	--	--	--	0.03	10.00	
120,000 miles	HC-NM	--	--	--	--	--	--	0.0039	0.40	

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46			<b>Evaporative/Refueling Family</b>			DVWXR0125D46		
<b>Cert Region</b>	Federal			<b>Cert/In-Use Code</b>			Both		
<b>Vehicle Class</b>	LDV/Passenger Car			<b>Standard Level</b>			Federal Tier 2 Bin 5		
<b>Fuel</b>	Gasoline			<b>Test Procedure</b>			US06		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>
4,000 miles	CO	--	--	--	--	--	--	--	8.00
4,000 miles	HC-NM+NOX	--	--	--	--	--	--	--	0.140
120,000 miles	CO	--	--	--	--	--	--	0.06	11.10

<b>Cert Region</b>	California + CAA Section 177 states			<b>Cert/In-Use Code</b>			Both		
<b>Vehicle Class</b>	LDV/Passenger Car			<b>Standard Level</b>			California LEV-II ULEV		
<b>Fuel</b>	Gasoline			<b>Test Procedure</b>			Cold CO		
<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>RAF</b>	<b>NMOG / NMHC</b>	<b>Upward Diesel Adjustment Factor</b>	<b>Downward Diesel Adjustment Factor</b>	<b>Mult DF</b>	<b>Add DF</b>	<b>Std</b>
50,000 miles	CO	--	--	--	--	--	--	0.03	10.00

**Evaporative/Refueling Standards**

<b>Evaporative/Refueling Family</b>	DVWXR0125D46			<b>Cert Region</b>			California + CAA Section 177 states		
<b>Cert/In-Use Code</b>	Both			<b>Standard Level</b>			California LEV-II Evap		
<b>Test Procedure</b>	Federal fuel refueling test (ORVR)								
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>				
Gasoline	150,000 miles	HC	--	0.2	0.003				

<b>Evaporative/Refueling Family</b>	DVWXR0125D46			<b>Cert Region</b>			California + CAA Section 177 states		
<b>Cert/In-Use Code</b>	Both			<b>Standard Level</b>			California LEV-II Evap		
<b>Test Procedure</b>	2-day evap								
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>				
Gasoline	150,000 miles	HC-TOTAL	--	0.65	0				

<b>Evaporative/Refueling Family</b>	DVWXR0125D46			<b>Cert Region</b>			Federal		
<b>Cert/In-Use Code</b>	Both			<b>Standard Level</b>			Federal LEV-II Evap		
<b>Test Procedure</b>	Federal fuel 3-day evap								
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>				
Gasoline	120,000 miles	HC-TOTAL	--	0.5	0				

## Certification Summary Information Report

<b>Test Group</b>	DVWXV03.6U46		<b>Evaporative/Refueling Family</b>	DVWXR0125D46	
<b>Evaporative/Refueling Family</b>	DVWXR0125D46		<b>Cert Region</b>	California + CAA Section 177 states	
<b>Cert/In-Use Code</b>	Both		<b>Standard Level</b>	California LEV-II Evap	
<b>Test Procedure</b>	Federal Fuel Running Loss				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC	--	0.05	0
<b>Evaporative/Refueling Family</b>	DVWXR0125D46		<b>Cert Region</b>	Federal	
<b>Cert/In-Use Code</b>	Both		<b>Standard Level</b>	Federal LEV-II Evap	
<b>Test Procedure</b>	2-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	120,000 miles	HC-TOTAL	--	0.65	0
<b>Evaporative/Refueling Family</b>	DVWXR0125D46		<b>Cert Region</b>	Federal	
<b>Cert/In-Use Code</b>	Both		<b>Standard Level</b>	Federal LEV-II Evap	
<b>Test Procedure</b>	Federal Fuel Running Loss				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	120,000 miles	HC	--	0.05	0
<b>Evaporative/Refueling Family</b>	DVWXR0125D46		<b>Cert Region</b>	Federal	
<b>Cert/In-Use Code</b>	Both		<b>Standard Level</b>	Federal LEV-II Evap	
<b>Test Procedure</b>	Federal fuel refueling test (ORVR)				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	120,000 miles	HC	--	0.2	0.003
<b>Evaporative/Refueling Family</b>	DVWXR0125D46		<b>Cert Region</b>	California + CAA Section 177 states	
<b>Cert/In-Use Code</b>	Both		<b>Standard Level</b>	California LEV-II Evap	
<b>Test Procedure</b>	Federal fuel 3-day evap				
<b>Fuel</b>	<b>Useful Life</b>	<b>Emission Name</b>	<b>Rounded Result</b>	<b>Std</b>	<b>Add DF</b>
Gasoline	150,000 miles	HC-TOTAL	--	0.5	0



## Certification Summary Information Report

Test Group	DVWXV03.6U46	Evaporative/Refueling Family	DVWXR0125D46
<b>Glossary</b>			
<b>Useful Life</b>			
4	4,000 miles	120	120,000 miles
50	50,000 miles	150	150,000 miles
100	100,000 miles		
<b>Emission Name</b>			
HC-TOTAL	Total Hydrocarbon	FE BAG 2	Bag 2 Fuel Economy
CO	Carbon Monoxide	FE BAG 3	Bag 3 Fuel Economy
CO2	Carbon dioxide	FE BAG 4	Bag 4 Fuel Economy
CREE	Carbon-Related Exhaust Emissions	MFR FE	Manufacturer Fuel Economy
OPT-CREE	Optional Carbon-Related Exhaust Emissions	HC	Hydrocarbon for Running Loss and ORVR
NOX	Nitrogen Oxide	METHANE	CH4 - Methane
PM	Particulate Matter	METHANOL	CH3OH - Methanol
PM-COMP	SFTP Composite Particulate Matter	N2O	Nitrous Oxide
HC-NM	Non-methane Hydrocarbon	SPITBACK	Spitback Hydrocarbon in grams
OMHCE	Organic material Hydrocarbon Equivalent	AMP-HRS	Integrated Amp-hours
OMNMHCE	Organic material non-methane HC equivalent	START-SOC	System Start State of Charge Watt-hours
NMOG	Non-methane organic gas (California)	END-SOC	System End State of Charge Watt-hours
HCHO	Formaldehyde	ACT-DISTANCE	Actual Distance Driven (miles)
H3C2HO	Acetaldehyde	AS-VOLT	Average System Voltage
HC-NM+NOX	SFTP Non-methane Hydrocarbon + Nitrogen Oxides for US06 or SC03	CO2 BAG 1	Bag 1 Carbon Dioxide
HC-NM+NOX-COMP	SFTP Composite Non-methane Hydrocarbon + Nitrogen Oxides	CO2 BAG 2	Bag 2 Carbon Dioxide
CO-COMP	SFTP Composite Carbon Monoxide	CO2 BAG 3	Bag 3 Carbon Dioxide
ETHANOL	C2H5OH - Ethanol	CO2 BAG 4	Bag 4 Carbon Dioxide
FE BAG 1	Bag 1 Fuel Economy		
<b>Certification Region</b>			
CA	California + CAA Section 177 states	FA	Federal
<b>Exhaust Emission Standard Level</b>			
B1	Federal Tier 2 Bin 1	HDV1	HDV1 (Federal HD chassis Class 2b GVW 8501-10000)
B2	Federal Tier 2 Bin 2	HDV2	HDV2 (Federal HD chassis Class 3 GVW 10001-14000)
B3	Federal Tier 2 Bin 3	L2	California LEV-II LEV
B4	Federal Tier 2 Bin 4	L2OP	California LEV-II LEV Optional
B5	Federal Tier 2 Bin 5	U2	California LEV-II ULEV
B6	Federal Tier 2 Bin 6	S2	California LEV-II SULEV
B7	Federal Tier 2 Bin 7	ZEV	California ZEV
B8	Federal Tier 2 Bin 8	OT	Other
B9	Federal Tier 2 Bin 9	T1	Federal Tier 1
B10	Federal Tier 2 Bin 10	PZEV	California PZEV
B11	Federal Tier 2 Bin 11		

## Certification Summary Information Report

Test Group	DVWXV03.6U46	Evaporative/Refueling Family	DVWXR0125D46
<b>Transmission Type Code</b>			
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)
<b>Drive System Code</b>			
4	4-Wheel Drive	P	Part-time 4-Wheel Drive
F	2-Wheel Drive, Front	A	All Wheel Drive
R	2-Wheel Drive, Rear		
<b>Additional Terms and Acronyms</b>			
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

<b>Section 8</b>	<b>Pg. 1</b>	<b>Emission Testing Waiver</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		

**8. Emission Testing Waiver Statements**

Please refer to Section 8 of the Common Sections Binder for the complete text of the following statements.

High Altitude Exhaust Emissions  
High Altitude EVAP/Refueling Emissions  
Spitback  
Particulate Matter  
Certification Short Test  
OBD Compliance  
Leak Free Exhaust System  
Formaldehyde Compliance

<b>Section 9</b>	<b>Pg. 1</b>	<b>OBD System</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		

**9.0**            **OBD System Description**

**9.1**            **General Description**

Please refer to Common Section

**9.2**            **Summary Table**

Please refer to Confidential Section

**9.3**            **California Air Resources Board OBD System Approval Letter.**

Please refer to Confidential Section

Section 11	Pg. 1	AECD Description	Engine Code:	R.CH-No.:	Revision Date:
Part 1	Test Group:	DVWXV03.6U46	all		

11.

**Auxiliary Emission Control Devices (AECD) Descriptions**

Control Device Configuration	Parameters Sensed	Parameters Controlled	Justification
cooling water thermostat	coolant temperature	coolant temperature	A
temperature sensor	coolant temperature	actuation of enrichment characteristic coolant temperature cooling fan	A
pressure regulator	primary fuel pressure	primary fuel pressure	A
pressure sensor	primary fuel pressure low fuel injection pressure high	primary fuel pressure secondary high fuel injection pressure	A
altitude sensor within ECM	ambient air pressure	fuel injection, ignition timing, throttle valve angle at start,	A
throttle valve position sensor	angel of throttle valve position	actuation of idle speed control, coasting fuel shut off, engine rpm limiting and full-load enrichment, cruise control	A
knock sensor	engine knocking	ignition timing	A

Justification:

A: under all normal driving condition

B:

C:

Section 12	Pg. 1	Vehicles Covered by Certificate	Engine Code	R.CH-No.:	Revision Date:
Part 1	Test Group: DVWXV03.6U46		All		

## List of Certified Vehicles

<b>Durability Group :</b>	DVWXGPGNNU46	<b>Engine Displacement :</b>	3.6 liters
<b>Test Group :</b>	DVWXV03.6U46	<b>Valve / Cylinder :</b>	4
<b>Evap Family :</b>	DVWXR0125D46	<b>Sales Area :</b>	50 states
<b>Emission Control System *:</b>	DFI/2WU-TWC/2TWC/ 2HO2S(2)/ORVR	<b>Motor management System<sup>1)</sup> :</b>	MED 17.1.6

Model	Carline	Transmission Type / OD #	Engine Code	Transmission Code	SIL	Curb Wgt. [lbs]	ETW [lbs]	Fuel Tank Capacity [l]	Canister working capacity [g]	Tire size
CC	CC	L6 / 2	CNNA	AQ450-6F	n.a.	3638	4000	70	125	235/45 R17
CC 4motion	CC 4motion	L6 / 2	CNNA	AQ450-6A	n.a.	3854	4250	68	125	235/45 R17

\*) Use J1930 Abbreviations

#) OD = Overdrive, 1 = final gear ratio >1 ; 2 = final gear ratio < 1

Section 12	Pg. 2	Vehicles Covered by Certificate	Engine Code	R.CH-No.:	Revision Date:
Part 1	Test Group: DVWXV03.6U46		All		

Engine Code	Engine Code Characteristic						
	Cat Code		Compression ratio	TC index	Idle	Power	Torque
	WU-CAT	CAT	[1]	[1]	[rpm]	HP @ RPM	[Nm] @ RPM
<b>CNNA</b>	MLKX6	MLKX6	12.0 +/- 0.25	n.a.	650 ± 50	<b>280 @ 6,200</b>	<b>360 @ 2,800</b>

Transmission Code	Transmission Code Characteristic												
	Basic drivetrain layout	Transmission Type / OD #	Lock-Up rpm		Gearbox Ratios								
			Gear	min/max	Axle	Gear 1	Gear 2	Gear 3	Gear 4	Gear 5	Gear 6	N/V Ratio	Tire Size
<b>AQ450-6F</b>	2WD	L6/ 2	1 / 2 3 4 5 6	unlocked 650/3100 650/2300 650/1675 locked	3.813 3,453*	3.949	2.303	1.556	1.164	0.860	0.688	32.4	235/45 R17
<b>AQ450-6A</b>	4WD	L6/ 2	1 / 2 3 4 5 6	unlocked 650/3100 650/2300 650/1675 locked	3.813 3,453*  3.813 ##	3.949	2.303	1.556	1.164	0.860	0.688	32.4	235/45 R17

#) OD = Overdrive, 1 = final gear ratio > 1 ; 2 = final gear ratio < 1 \*) ratio axle x pre stage ##) axle ratio front and rear axle

<b>Section 13</b>	<b>Pg. 1</b>	<b>Projected Sales/Compl. Plans</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		

**13.01 Test Group Projected Sales**

Please Refer to Section 16 Confidential Information for this test group.

**13.02 Compliance Plans**

Refer to Section 16 Confidential Information of the common sections binder.



<b>Section 14</b>	<b>Pg. 1</b>	<b>Request for Certificate</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		

**14. Request for Certificate**

**14.01. Statement of Compliance**

The Volkswagen Group states that any element of design system or emission control device installed on or incorporated in the Volkswagen Group's new motor vehicles or new motor vehicle engines for the purpose of complying with standards prescribed under section 202 of the Clean Air Act will not to the best of the Volkswagen Group's information and belief cause the emission into the ambient air of pollutants in the operation of its motor vehicles or motor vehicle engines which cause or contribute to an unreasonable risk to public health or welfare except as specifically permitted by the standards prescribed under section 202 of the Clean Air Act. The Volkswagen Group further states that any element of design system or emission control device installed or incorporated in the Volkswagen Group's new motor vehicles or new motor vehicle engines for the purpose of complying with standards prescribed under section 202 of the Clean Air Act will not to the best of the Volkswagen Group's information and belief cause or contribute to an unreasonable risk to public safety.

The term pollutant means:

- a. Diesel particulates
- b. Nickel
- c. MMT combustion products
- d. Ammonia
- e. Sulfates
- f. Hydrogen sulfide
- g. Hydrogen cyanide
- h. Ruthenium combustion products
- i. Nitrosamines

or any other pollutant which VW/AUDI has identified which can reasonably be expected to be emitted from these vehicles.

All vehicles have been tested in accordance with good engineering practice to ascertain that such test vehicles meet the requirement of this section for the useful life of the vehicle.

<b>Section 14</b>	<b>Pg. 2</b>	<b>Request for Certificate</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		

The test vehicles with respect to which data are submitted are in all material respects as described in the application for certification have been tested in accordance with the applicable test procedures utilizing the fuels and equipment described in the application for certification they meet the requirement of such tests and on the basis of such tests they conform to the requirements of the regulations in 40 CFR. Part 86. Subpart S.

The vehicles for which certification is requested conform to the requirements in 86.1810-01 (a) and the description of tests performed to ascertain compliance with the general standards in 86.1810-01 (a) and the data derived from such tests are available.

The testing described under 86.1824-01 has been designed and conducted in accordance with good engineering practice to assure that the vehicles covered by a certificate issued under 86.1848-01 will meet the evaporative emission standards in 86.1811-01 for the useful life of the vehicle.

#### 14.02. Durability Statement

Based on the Volkswagen Group's good engineering judgment, all the vehicles described in this Application for Certification comply with all applicable intermediate and full useful life standards.

<b>Section 15</b>	<b>Pg. 1</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>RC / FF - No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		<b>11-13-2012</b>

**15.                    Other Information**

**15.01                Revision Index**

Revision Index for Test Group Only

Part 1

Sect. No.	Page No.	Date	Comment	R/C No.
5,6,7	1	<b>11-13-2012</b>	Updated certificate numbers, Sec. 7 CSI	-
17	7	<b>11-13-2012</b>	Added high cost parts list	-
				-
				-
				-

Part 2

Sect. No.	Page No.	Date	Comment	R/C No.
21	3-8	<b>11-13-2012</b>	Updated emissions parts lists	-
22	All	<b>11-13-2012</b>	Added section 22	-

<b>Section 15</b>	<b>Pg. 2</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		

**15.            Other Information**

**15.02            Running Change (RC) / Field Fix (FF) Log**

Running Change / Field Fix Log for test group only.

Model Year:                    2013  
Test Group:                     DVWXV03.6U46  
Evaporative Family:         DVWXR0125D46

<b>RC / FF No.</b>	<b>Description of Change / Reason</b>	<b>Date</b>

**Impact on emissions**

# VOLKSWAGEN

GROUP OF AMERICA

Mr. Jim Snyder  
Compliance and Innovative Strategies Division  
Office of Mobile Sources  
U. S. Environmental Protection Agency  
2000 Traverwood Drive  
Ann Arbor, MI 48105

Leonard W. Kata Name  
Manager Title  
EEO Department  
248-754-4204 Phone  
248-754-4207 Fax  
leonard.kata@vw.com E-Mail

December 13, 2011 Date

Subject: MY 2013 Volkswagen Light Duty Vehicle Initial Application for Emissions Certification for Test Group DVWXV03.6U46 with Evaporative Family DVWXR0125D46

Dear Mr. Snyder,

We submit, with this letter, the model year 2013 Part 1 Application for Emissions Certification for the following Test Group:

VOLKSWAGEN GROUP OF AMERICA, INC.  
3800 HAMLIN ROAD  
AUBURN HILLS, MI 48326  
PHONE +1 248 754 5000  
FAX +1 248 754 4207

<u>Test Group</u>	<u>Standards</u>	<u>Sales Area</u>
DVWXV03.6U46	Tier 2 BIN 5 LEV-II ULEV	Federal California

Copies of the Certification Fee filing form and OBD approval letter are contained in sections 15 and 16 of the included electronic application.

All vehicles within this test group comply with all applicable regulations contained in 40 CFR Part 86 and the compliance statements contained in sections 8 and 14.

This submission constitutes our final application and the request for issuance of a Certificate of Conformity.

If you have any questions with regard to this information please contact our office in Auburn Hills at (248) 754-4224 or (248) 754-4219.

Sincerely,



Leonard W. Kata  
Volkswagen Group of America, Inc.

Engineering and Environmental Office

Enclosure(s)

Section 15	Pg. 3	Other Information	Engine Code:	R.CH-No.:	Revision Date:
Part 1	Test Group:	DVWXV03.6U46	all		

15. Other Information

**ORVR Safety Application for Carry-over ORVR Systems**

The information provided below is in accordance with EPA Dear Manufacturer Letter CCD-05-03 - Attachment A.

Name of current ORVR/Evaporative Family: **DVWXR0125D46**

- 1.) Name of most recent previously certified ORVR/Evaporative Family from which the current family is being carried over:

CVWXR0125246

- 2.) Statement of No Substantial Changes:

There have been no substantial changes made from the previously certified ORVR system.

- 3.) List of changes that have been implemented:

a) None

- 4.) Statement of No In-Use Problems:

Volkswagen has issued no defect reports, service notifications, emissions or safety recalls, campaigns, instructions or bulletins to dealers or field personnel and there are no changes in production procedure or components related to the ORVR system except as listed below.

a) None



U.S. ENVIRONMENTAL PROTECTION AGENCY  
MOTOR VEHICLE AND ENGINE COMPLIANCE PROGRAM

ON-HIGHWAY FEE FILING FORM

FOR CERTIFICATION APPLICATIONS RECEIVED IN CALENDAR YEAR 2011

Manufacturer Name VOLKSWAGEN Group of America, Inc.

Address 3800 Hamlin Road

City/State/Zip Code/Country Auburn Hills, MI 48309

On-Highway Certification Request Type (check one)

- LDV/LDT/MDPV/HDV (Chassis cert) FEDERAL (\$33,974)       HDV EVAP-ONLY (\$511)
- LDV/LDT/MDPV/HDV (Chassis cert) CAL-ONLY (\$17,255)       HDE CALIF-ONLY (\$511)
- HDE (Engine Dyno cert) FEDERAL (\$34,452)       MOTORCYCLE (\$1,210)
- LD/MDPV/HDV ICI (\$55,252)

EPA standard engine family or test group or HDV Evaporative family name:

D V W X V 0 3 . 6 U 4 6

Amount paid (U.S. Funds Only):

\$ 33,974.00

Enter the check number, or the statement "EFT/WIRE" or "EFT/ACH":

EFT

Reduced Fee Section (40 CFR §1027.120)

Reduced fee calculation (minimum initial payment \$750): Total number of vehicles/engines covered: \_\_\_\_\_  
Aggregate retail sales price of the vehicles/engines: \$ \_\_\_\_\_ x 1% = \$ \_\_\_\_\_  
Check box if an Independent Commercial Importer:  List the VIN of imported vehicles/engines below:


Company Representative: Richard E. Thomas

Signature: *Richard E. Thomas*

Title: Emission Cert Strategist Phone/Fax: 248 754 4213 / 248 754 4207 Date: 11/11/2011

E-mail Address: Richard.Thomas@VW.com

Submission of payments and forms:

- (1) Online: Forms may be found and submitted with or without payments online at [www.Pay.gov](http://www.Pay.gov).
- (2) Send checks and this form to:

Environmental Protection Agency  
Motor Vehicle and Engine Compliance Program  
P.O. Box 979032  
St. Louis, MO 63197-9000

- (3) Transmit offline EFT/Wire payments to the New York Federal Reserve Bank. (See Instructions, p.2)
- (4) Transmit offline EFT/ACH payments to the Federal Reserve Bank of Cleveland. (Instructions, p.2)
- (5) Forms not submitted under (1) and (2) above can be sent as email attachments to Fees@epa.gov. Forms and payments sent in ways other than the above may be delayed or ineffective. See the Instructions for sending checks and forms by private mail service (e.g., Federal Express).

The public reporting and recordkeeping burden for this collection of information is estimated to average 18 minutes per response. Send comments on EPA's need for this information, the accuracy of the provided burden estimate, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques, to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed Form 3520-29 to this address.

This form expires: 1/1/2012



Matthew Rodriguez  
Secretary for  
Environmental Protection

# Air Resources Board

Mary D. Nichols, Chairman  
9480 Telstar Avenue, Suite 4  
El Monte, California 91731 www.arb.ca.gov



Edmund G. Brown Jr.  
Governor

November 17, 2011

Reference No. E-11-222

Dr. Christoph Kohnen  
General Manager  
Engineering and Environmental Office  
Volkswagen Group of America, Inc.  
3800 Hamlin Road  
Auburn Hills, MI 48326

Post-It® Fax Note	7671	Date	11/17/11	# of pages	1
To	VW	From	ARB		
Co./Dept.		Co.			
Phone #		Phone #			
Fax #	248-754-4207	Fax #	626-575-7012		

SUBJECT: Approval of Volkswagen's (VW) On-Board Diagnostics II (OBD II) System  
for 2013 Model Year Test Group DVWXV03.6U46

Dear Dr. Kohnen,

The Air Resources Board's (ARB) Engineering Studies Branch has received the OBD II system description submitted by VW for the 2013 model year test group listed above. Representations made in the application indicate that the system is compliant with the OBD II regulation. Therefore, ARB approves the 2013 model year system with no deficiencies.

Should you have questions or comments regarding this letter, please have your staff contact Peter Ho at (626) 459-4392.

Sincerely,

*Steve Albu*

Steve Albu  
Assistant Chief  
Mobile Source Control Division

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption.  
For a list of simple ways you can reduce demand and cut your energy costs, see our website: <http://www.arb.ca.gov>.

California Environmental Protection Agency



# VOLKSWAGEN

GROUP OF AMERICA

Ms. Annette Hebert, Division Chief  
Mobile Source Operations Division  
State of California  
Air Resources Board Laboratory  
9528 Telstar Avenue  
El Monte, CA 91731

Leonard W. Kata Name  
Manager – Emis. Cert. Title  
EEO Department  
248-754-4204 Phone  
248-754-4207 Fax  
leonard.kata@vw.com E-Mail

December 13, 2011 Date

Subject: MY 2013 Volkswagen Light Duty Vehicle Initial Application for Emissions  
Certification for Test Group DVWXV03,6U46 with Evaporative Family  
DVWXR0125D46

Dear Ms. Hebert,

We submit, with this letter, the model year 2013 Part 1 Application for Emissions Certification for the following Test Group:

<u>Test Group</u>	<u>Standards</u>	<u>Sales Area</u>
DVWXV03.6U46	Tier 2 BIN 5 LEV-II ULEV	Federal California

VOLKSWAGEN GROUP OF AMERICA, INC.  
3800 HAMLIN ROAD  
AUBURN HILLS, MI 48326  
PHONE +1 248 754 5000  
FAX +1 248 754 4207

The EPA Certificate of Conformity for the test group was uploaded to the Document Management System with the application.

This submission constitutes our final application and the request for issuance of the Executive Order.

If you have any questions with regard to this information please contact our office in Auburn Hills at (248) 754-4224 or (248) 754-4219.

Sincerely,



Leonard W. Kata  
Volkswagen Group of America, Inc.

Engineering and Environmental Office

Enclosure(s)

<b>Section 17</b>	<b>Pg. 1</b>	<b>California ARB Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		

**17.01**            **California ARB Information**

Please refer to the Common Section for the following information

Production Vehicle same as Test Vehicle Statement

Labeling Durability Statement

Drivability Statement

ASM Compliance Statement

HCHO Compliance Statement

**17.02**            **Fill Pipe Specifications**

Please refer to common section.

**17.03**            **Evaporative Emission Deterioration Program**

Please refer to common section.

Section 17	Pg. 2	California ARB Information	Engine Code:	R.CH-No.:	Revision Date:
Part 1	Test Group: DVWXV03.6U46		all		

17.04 I/M Test Data

I/M Test Data (VIN: 461 90122/09)

Date	odometer	HIGH RPM TEST				IDLE RPM TEST			
	mi	Oil Temp.	actual RPM	HC C6H14	CO	Oil Temp.	actual RPM	HC C6H14	CO
	System Miles	oF	1/min	ppm	% by vol.	oF	1/min	ppm	% by vol.
02-12-2008	<u>4164</u> <b>4106</b>	187	2500	4	0.00	189	650	5	0.00
Standards:					220	1.2	100 1.0		

<b>Section 17</b>	<b>Pg. 3</b>	<b>California ARB Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		

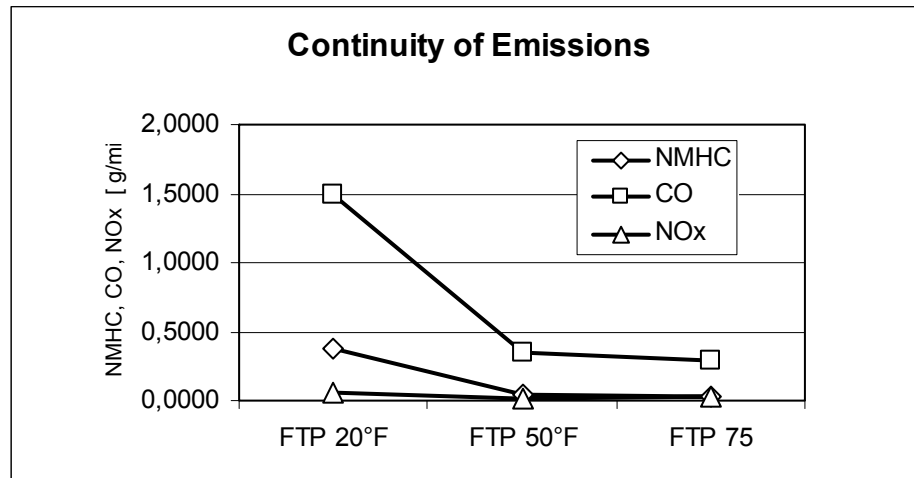
**17.05. Assembly line NMOG/NMHC Factor**

**F<sub>NMOG</sub>: 1.04** (no RAF applied)  
According to ARB regulations

**F<sub>HCHO</sub>: 0.03** (indolene fuel)

Section 17	Pg. 4	California ARB Information	Engine Code:	R.CH-No.:	Revision Date:
Part 1	Test Group: DVWXV03.6U46		all		

17.06 Continuity of Emissions



<b>Section 17</b>	<b>Pg. 5</b>	<b>California ARB Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 1</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		

E.O.# \_\_\_\_\_

**2013 AIR RESOURCES BOARD SUPPLEMENTAL CERTIFICATION SUMMARY SHEET** Page 1 of 2  
**PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDUM-DUTY VEHICLES**

Manufacturer: VOLKSWAGEN Durability Group: DVWXGPGNNU46 Test Group: DVWXV03.6U46  
 Evap Fam: 1) DVWXR0125D46 2) \_\_\_\_\_ 3) \_\_\_\_\_  
 Evaporative Emission T.P.: CA \_\_\_\_\_ Fed. X R/L Test Proc: SHED \_\_\_\_\_ Pt Source X  
 Zero-Evap NMOG Credit: Yes \_\_\_\_\_ No X  
 Exh Std: CA Tier-1 \_\_\_\_\_ TLEV \_\_\_\_\_ LEV \_\_\_\_\_ ULEV X SULEV \_\_\_\_\_ ; US EPA: Tier2 BIN5  
 DDV Basis: 100K \_\_\_\_\_ 120K X 150K \_\_\_\_\_ SFTP: Yes X No \_\_\_\_\_  
 Veh Type: LEV1: PC \_\_\_\_\_ LDT1 \_\_\_\_\_ LDT2 \_\_\_\_\_ MDV1 \_\_\_\_\_ MDV2 \_\_\_\_\_ MDV3 \_\_\_\_\_ MDV4 \_\_\_\_\_  
 LEV2: PC/LDT X MDV GVWR <= 10K \_\_\_\_\_ MDV GVWR > 10K \_\_\_\_\_  
 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 X CBG \_\_\_\_\_ CNG \_\_\_\_\_ LPG \_\_\_\_\_ M85 \_\_\_\_\_ Other (specify) \_\_\_\_\_  
 Diesel: 13 CCR 2282 \_\_\_\_\_ 40 CFR 86.113-90 \_\_\_\_\_ 40 CFR 86.113-94 \_\_\_\_\_  
 Durability Service Accum: Whole Veh Full Mi \_\_\_\_\_ Whole Veh Accel Mi X Bench \_\_\_\_\_ Other \_\_\_\_\_  
 EDV Std Compliance: DF X Aged Parts \_\_\_\_\_ Other \_\_\_\_\_  
 Exh ECS (use abbreviations per SAE J1930): ECS 1) DFI/2WU-TWC/2TWC/2HO2S (2)/OBDII  
 ECS 2) \_\_\_\_\_  
 EGR Type: n.a. AIR Type: electric  
 Displ. (L): 3.6 Engine Config. 6, V in line Valves per Cylinder: 4  
 Rated HP: 1) 280 @ 6200 RPM  
 Engine: Front X Mid. \_\_\_\_\_ Rear \_\_\_\_\_ Drive: FWD X RWD \_\_\_\_\_ 4WD-FT X 4WD-PT \_\_\_\_\_  
 All Eng Codes in Test Group: **CA** \_\_\_\_\_ **49S** \_\_\_\_\_ **50S** X \_\_\_\_\_  
 NMOG Test Procedure: Std \_\_\_\_\_ Equip X RAF: NMOG n.a. CH4 n.a.  
 Mfr's NMOG Fleet Avg (g/mi): \_\_\_\_\_ Ratio (NMOG w/o RAF): NMOG/NMHC 1.04 HCHO/NMHC 0.03  
 OBD2 Compliance: Full X Partial \_\_\_\_\_ Partial w/0 fines \_\_\_\_\_  
 Test Veh.: \_\_\_\_\_ DDV \_\_\_\_\_ EDV \_\_\_\_\_  
 MY ID MY ID  
2009 461 90115/09 2009 461 90122/09

Evap Fam #)	ECS #)	Displ. (Liters)	Engine Code (also list CA/49ST/50ST)	Vehicle Make / Models	Trans. (M5, A4, etc.)
1	1	3.6	CNNA 50 ST	VW CC VW CC 4motion	L6/S6

Date Issued: 11-10-2011

Revisions: \_\_\_\_\_

Section 17	Pg. 6	California ARB Information	Engine Code:	R.CH-No.:	Revision Date:
Part 1	Test Group:	DVWXV03.6U46	all		

2013 MODEL-YEAR CERTIFICATION REVIEW SHEET  
EXHAUST/EVAPORATIVE SYSTEM & CALIFORNIA REQUIREMENTS  
PASSENGER CARS, LIGHT-DUTY TRUCKS AND MEDIUM-DUTY VEHICLES

E.O.# \_\_\_\_\_  
Page 2 of 2

Manufacturer: VOLKSWAGEN Test Group: DVWXV03.6U46 Evaporative Family: DVWXR0125D46

**PROJECTED EMISSIONS**

(g/mi, except mg/mi for HCHO, g/test for evap., g/gal Refuel.) (1), (2)

Data Vehicle ID Test version	Engine Code (Displ)	Test Loc.	Trans	(Check One)		MPG City/Hwy	(Check One)		NOx	HCHO	20°F CO	PM	Hwy NOx	City CO2	EVAPORATIVE			
				X ETW	X RLHP		X NMHC	CO							3-day D+HS	R/L	2-day D+HS	ORVR
461 90122/09 0	BLV 219.4	Mfr.	L6	4,250	***	20.5 / 33.5 @ 120K	0.0350 0.0405	0.32 0.35	0.029 0.029	0.0008 0.0008	1.52	-	0.009 0.009	436.8	0.283	0,000	0.245	0.003

(1) The EDV (s) above comply with standards of (@ 50K): 0.0400 1.70 0.050 0.0080 10.00 0.070 n.a. n.a. n.a. n.a. n.a.  
(@ 120K for PC,LDT, MDV;@150K for EVAP): 0.0550 2.10 0.070 0.0110 n.a. 0.090 n.a. 0.500 0.050 0.650 0.200

The NMOG values include Reactivity Adjustment Factor(s) (RAF) of: Not Applicable X NMOG      Methane (CNG or LNG only)     

Emission values include deterioration factors (DF's)  
with RAF deterioration, (if applicable) of (50K): 0.0039 0.03 0.000 0.000 0.03 n.a. 0.000 n.a. n.a. n.a. n.a. n.a.  
(120K for PC,LDT and MDV): 0.0094 0.06 0.000 0.000 n.a. n.a. 0.000 n.a. 0.000 0.000 0.000 0.003

LEV/ULEV/SULEV 50°F emissions (without RAF and DFs): 0.0387 0.35 0.021 0.0011      Exempted     

LEV/ULEV/SULEV 50°F standards: 0.080 1.7 0.05 0.016      Exempted     

(2) Evaporative DF is the average of: **3-day D+HS:** Vehicle DF 0.000 and **3-day D+HS** Bench DF 0.000 ; **R/L** Vehicle DF 0.000 and **R/L** Bench DF 0.000  
**2-day D+HS:** Vehicle DF 0.000 and **2-day D+HS** Bench DF 0.000 ; **ORVR** Bench DF 0.003

(3) List configuration with highest projected sales first

Remarks :

\*\* HCHO compliance by statement, See Common Section 8

\*\*\* Vehicles tested using Electric Dyno Procedures, See Common Section 12 for Coefficients

All NMOG values are calculated from NMHC using a factor of 1.04. All HCHO values are calculated from NMHC using a factor of 0.03  
Used for certification and assembly line testing.

US06/SC03 testing with indolene fuel, Results: US06: NMHC + NOx = 0.083 CO = 1.06; SC03: NMHC + NOx = 0.018 CO = 0.20

US06 standards: NMHC + NOx = 0.14 CO = 8.0; SC03 standards: NMHC + NOx = 0.20 CO = 2.7

**CO2 values:** HFET - 06/10/2009: 265 g/mi // US06 - 06/10/2009: 382 g/mi // SC03 - 06/10/2009: 481 g/mi

Application

Processed by: \_\_\_\_\_ Date: \_\_\_\_\_ Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Date Issued: 11-10-2011 Revised: \_\_\_\_\_

<b>Section 17</b>	<b>Pg. 7</b>	<b>California ARB Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		<b>11-13-2012</b>

2013 MODEL-YEAR ARB High-Cost Emission Repairs List

Manufacturer: Volkswagen Test Group: DVWXV03.6U46

	<b>Passat CC VR6</b>	<b>Part Cost</b>	<b>Labor Time</b>	<b>Labor Cost at \$135 / hour</b>	<b>Total Cost</b>	<b>7-Year/70,000 MI Warranty</b>
Intake Manifold	03H 133 201 N	\$ 582.00	2.5	\$ 337.50	\$ 919.50	Covered
Camshaft Adjuster intake	03H 109 087 D	\$ 625.00	3.1	\$ 418.50	\$ 1,043.50	Covered
Camshaft Adjuster exhaust	03H 109 088 D	\$ 625.00	3.1	\$ 418.50	\$ 1,043.50	Covered
Camshaft Adjuster control housing	03H 109 210 B	\$ 950.00	3.1	\$ 418.50	\$ 1,368.50	Covered
Crankcase Ventilation Valve (assembly)	022 103 515 A 03H 103 429 D	\$ 356.00	1.5	\$ 202.50	\$ 558.50	Not Covered
*Catalytic Converter 2x	3C0 131 701 M 3C0 254 506 CX	\$ 1,200.00	2.8	\$ 378.00	\$ 1,578.00	Covered
Fuel Tank	3C0 201 021 GM 3C0 201 021 HE	\$ 925.00	1.9	\$ 256.50	\$ 1,181.50	Covered
Intake Manifold	03H 133 201 N	\$ 582.00	2.5	\$ 337.50	\$ 919.50	Covered
Exhaust Manifold	03H 253 031 C	\$ 337.00	2.5	\$ 337.50	\$ 674.50	Covered
*instrument cluster USA	3C0 920 972 E 3C0 201 055 AB 03H 253 032 C	\$ 582.00				Covered
*Engine Control Module	03H 906 032 FP	\$ 1,295.00				Covered
Transmission Control Module						
FWD	09D 927 750 KQ 09G 927 750 GP	\$ 474.00	0.5	\$ 67.50	\$ 541.50	Not Covered
4WD	09G 927 750 GP	\$ 474.00	0.5	\$ 67.50	\$ 541.50	Not Covered

\*Note: Engine ECM, Catalytic Converter and OBD Device (MIL) covered 8-years/80,000 miles





Volkswagen AG, a member of the Volkswagen Group

## Application for Emissions Certification Part 1

### 2013 Model Year

**Durability Group:** DVWXGPGNNU46

**Evap. Family:** DVWXR0125D46

**Test Group:** DVWXV03.6U46

**Certificate Number:** DVWXV03.6U46-001

**Durability Group Description:** Four Stroke, Otto Cycle, Gasoline Fueled,  
Direct Fuel Injection, Catalyst Code: MLKX6

**Test group Description:** 3.6 Liter V6 - LDV

**Applicable Standards:** 50-State: Federal: TIER 2 BIN 5  
CA: LEV-II ULEV

**Carlines Covered:** CC / CC 4motion

#### Vehicles Tested:

VID	Config.	Test Type / #	Test Type / #
VW461 90122/09	0	FTP / 9VWX01087097	HFET / 9VWX01087095
VW461 90122/09	0	US06 / 9VWX01087096	SC03 / 9VWX01087099
VW461 90122/09	0	Cold CO / 9VWX01087100	50° FTP / 9VWX01087098
461-60137/06	0	2-Day / 8VWX01065489	ORVR / 8VWX01065488
461-60137/06	0	3-Day / 8VWX01065514	Running Loss / 8VWX10002331

Issue Date: 12-13-2011

Update: 11-13-2012

**For Questions, Contact:**

Michael Giles, (248) 754-4229  
William Rodgers, (248) 754-4219


## Table of Contents Part 2

Section 21 -	Vehicle Emission Control Information Label, Vacuum-Hose Routing Label Production Engines Parameters –Parts List-	see test group sections
Section 22 -	Calibration Information	see test group sections
Section 23 -	Vehicle Description	see test group sections
Section 24 -	Final US Sales	please refer to sec. 16.24
Section 25 -	Service Manuals, Service Bulletins	information provided directly at the time of distribution to the dealers.
	Owners Manuals and Warranty Booklets	provided under separate cover.

<b>Section 21</b>	<b>Pg. 1</b>	<b>Label / Parts Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group: DVWXV03.6U46</b>		<b>All</b>		

**21.00 Label Information**

**21.01 Tune-Up Label**

 <b>VOLKSWAGEN</b> <b>VEHICLE EMISSION CONTROL INFORMATION</b>		Conforms to regulations:		2013 MY
		U.S. EPA:	T2B5 LDV	OBD: CA II
California:	ULEV II PC	OBD: CA II	Fuel: Gasoline	
No adjustments needed.		DFI/2WU-TWC/2TWC/2HO2S(2)		
Group: DVWXV03.6U46				
Evap: DVWXR0125D46				

03H 010 826 F

Part number see section 21 page 6

**21.02 Vacuum-Hose Routing Label / Unterdruckleitung-Verlegung Schild**

Not applicable

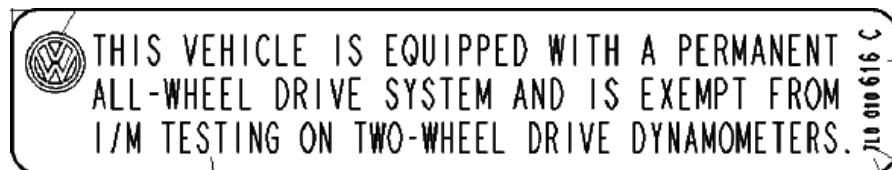
<b>Section 21</b>	<b>Pg. 2</b>	<b>Label / Parts Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>All</b>		

**21.00**            **Label Information**

**21.03**            **I/M Exemption Label / Ausnahme Schild Inspektion (nur 4motion)**

4 wheel drive only

**Volkswagen**



part number see section 21 page 6

<b>Section 21</b>	<b>Pg. 3</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		<b>11-13-2012</b>

## 21.03 Production Engine Parameters

### Parts List

<b>I. Air Induction System</b>	
intake air cleaner (assembly)	3AA 129 601 C
intake manifold	03H 133 201 N
<b>II. Fuel Metering System</b>	
engine temperature sensor ntc	06A 919 501 A
engine thermostat	03H 121 113 A / 113 B
mass air flow sensor (intake air sens. ncl.)	03H 906 461 A
fuel pump (within tank) fwd	3AA 919 051 C
fuel pump (within tank) awd	3AA 919 951 E
fuel pressure sensor (low pressure)	03C 906 051 A integr. in fuel line 561 133 986 A
fuel pump high pressure	03H 127 025 E / G
fuel pressure sensor (high pressure)	06J 906 051 C
injection valves	3x 03H 906 036
injection valves	3x 03H 906 036 A

<b>Section 21</b>	<b>Pg. 4</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>all</b>		<b>11-13-2012</b>

**21.03 Production Engine Parameters**

**Parts List (contd.)**

<b>III. Ignition System</b>	
ignition coil (pencil coil)	022 905 715 A
	S3
knock sensor	022 905 377 B
	030 905 377 C
engine rpm sensor	03H 906 433
camshaft position sensor	030 907 601 E
camshaft adjuster intake	03H 109 087 D
camshaft adjuster exhaust	03H 109 088 D / E
camshaft adjuster control housing	03H 109 210 B / C
<b>IV. Exhaust Gas Recirculation(EGR) System</b>	
	n.a.
<b>V. Positive Crankcase VentilationSystem— PCV</b>	
crankcase Ventilation Valve (assembly)	022 103 515 A
<b>VI. Fuel Evaporative Control (EVAP) System</b>	
EVAP Purge Valve	06D 133 517 B in assembly 3C0 133 366 G
EVAP Carbon Canister	3C0 201 797 D
EVAP Leak Detection Pump	3C0 906 201 A

<b>Section 21</b>	<b>Pg. 5</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		<b>11-13-2012</b>

**21.03 Production Engine Parameters**

**Parts List (contd.)**

<b>VII. Secondary Air Injection System</b>	<b>n.a.</b>
<b>VIII. Exhaust</b>	
warm up Catalytic Converter 2x	3C0 131 690 AG
catalytic Converter 2x	3C0 131 701 M
<b>IX. Engine Emission Control System Sensors</b>	
front wide range oxygen sensors left/right	022 906 262 AM LU09 right 022 906 262 AN LU09 left
rear oxygen sensors left / right	022 906 262 AP LF07 right 022 906 262 AQ LF07 left
<b>XII. Labels</b>	
engine tune-up label (my 2013)	<b>03H 010 826 F</b>
I/M exemption label (4 wheel drive only)	7L0 010 616 C

<b>Section 21</b>	<b>Pg. 6</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		<b>11-13-2012</b>

## 21.02 Production Engine Parameters

### Parts List (contd.)

<b>XIII. Others</b>	
fuel tank (FWD)	3C0 201 021 HS / 3C8 201 021
fuel tank (AWD)	3C0 201 021 JB / 3C8 201 021 B
intake manifold	03H 133 201 N
crankcase ventilation pipe heating	03H 103 202 D
exhaust manifold	03H 253 031 A / 03H 253 032 A
exhaust pipe (pre catalyst/trap)	see Catalyst assembly
instrument cluster USA	3C8 920 971 B
instrument cluster USA	3C8 920 980 T / 981 B
instrument cluster CANADA	3C8 920 870 M
instrument cluster CANADA	3C8 920 880 K / M



<b>Section 21</b>	<b>Pg. 7</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		<b>11-13-2012</b>

**21.02 Production Engine Parameters**

**Parts List (contd.)**

**Engine Control Module**

**Engine Control Module**

CARLINE	ENGINE CODE	Cal-ID		CVN	REMARKS
		PART NUMBER	SOFTWARE LEVEL		
CC FWD	CNNA	03H 906 023 BE	3908	80CFC469	
CC 4motion 4WD	CNNA	03H 906 023 BD	3907	76478B14	

<b>Section 21</b>	<b>Pg. 8</b>	<b>Other Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		<b>11-13-2012</b>

**21.02 Production Engine Parameters**

**Parts List (contd.)**

**Automatic Transmission Control Module**

**Transmission Control Module**

<b>CARLINE / DRIVE</b>	<b>TRANSM. CODE</b>	<b>Cal-ID</b>		<b>CVN</b>	<b>REMARKS</b>
		<b>PART NUMBER</b>	<b>SOFTWARE LEVEL</b>		
<b>CC FWD</b>	<b>AQ450-6F</b>	<b>09G 927 750 MH</b>	<b>2195</b>		
<b>CC 4motion 4WD</b>	<b>AQ450-6A</b>	<b>09G 927 750 MH</b>	<b>2195</b>		

<b>Section 22</b>	<b>Pg. 9</b>	<b>Calibration Information</b>	<b>Engine Code:</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group: DVWXV03.6U46</b>		<b>all</b>		

## 22. Calibration Information

Engine code: CNNA

<b>Emission Component</b>	<b>Parameter</b>	<b>Calibration</b>
<b>fuel system</b> <i>Kraftstoffsystem</i>		refer to part 2 section 22 page 2
fuel pressure regulator at fuel pump	fuel pressure (low)	2.0 to 6.0 ± 0.08 bar
fuel pressure limiting valve at fuel distribution rail	fuel pressure (high)	open > 120 bar
<b>ignition system</b> <i>Zündung</i>		refer to part 2 section 22 page 2
Nominal Idle	idle rpm	650 ± 50
tune up specifications		no check applicable
spark plugs	Type	ILZKR7A
	electrode diameter	0.6 ± 0.05 mm
	Gap	0.9 - 0.1 mm
<b>EVAP system</b> <i>Verdunstungskontrollsystem</i>		refer to part 2 section 22 page 2
<b>Miscellaneous</b>		
Coolant thermostat	starts to open	80 +2 / -1°C
	fully open by	94°C

<b>Section 22</b>	<b>Pg. 10</b>	<b>Calibration Information</b>	<b>Engine Code</b>	<b>R.CH-No.:</b>	<b>Revision Date:</b>
<b>Part 2</b>	<b>Test Group:</b>	<b>DVWXV03.6U46</b>	<b>All</b>		

**22.01 Calibration Information fuel system**

The motor management systems controls lambda as a function of engine speed, engine load and various other informations which serve as input signals to the ECM (please refer to sect. 16.09).  
The basic calibrations are related to CAL ID and CVN of ECM  
Please refer to part 2 section 21 page 5

**22.02 Calibration Information ignition system**

The motor management systems determines the ignition timing as a function of engine speed, engine load and various other informations which serve as input signals to the ECM  
The basic calibrations are related to CAL ID and CVN of ECM  
Please refer to part 2 section 21 page 5

**22.03 Calibration Information AIR system**

**not applicable**

**22.04 Calibration Information EGR system**

not applicable

**22.05 Calibration Information EVAP system**

The motor management systems calculates the actual purge rate as a function of engine speed, engine load, intake manifold pressure, ambient pressure and canister loading value.  
The basic calibrations are related to CAL ID and CVN of ECM  
Please refer to part 2 section 21 page 5