



AUTOMOTIVE TESTING AND DEVELOPMENT SERVICES, INC.

October 29, 2009

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Mr. David Stumpo
TranCert Marketing, Inc.
2295 Berry Lane, Suite 888
Point Roberts, WA 98281

Re: Final Report on Testing Performed for a California Automotive After Market Executive Order for TranCert Marketing

Dear Mr. Stumpo,

Automotive Testing and Development Services, Inc. (ATDS) is pleased to provide this Final report on the testing conducted on the TranCert Marketing InterCharger device for all 1963-2009 MY passenger cars/trucks with gasoline engines and 1998-2009 MY passenger cars/light/medium duty trucks with diesel engines and a closed crank case system in support of your application for a California Automotive After Market Executive Order. This testing was conducted in strict accordance with 40 CFR 86 and California Title 13 and in compliance with the requirements of California Air Resources Board (A-2009-152). ATDS' QA representative has subjected all tests to a rigorous quality audit. Based upon the results of this testing, ATDS believes the TranCert Marketing InterCharger device meet the requirements for exemption from the provisions of the California Vehicle Code, section 27156 (VC27156).

This report has been formatted as follows:

- Project Overview
- Vehicle Information
- Test Device Information
- Test Sequence and Chronology
- Test Results
- Data Review and Conclusions
- Test Data (in Appendix)

The test vehicle(s) have been returned to TranCert Marketing. Per our discussions, CARB has up to 30 days to request the vehicle(s) be provided to them for the conduct of a confirmatory emissions test. The vehicle(s) should be maintained in their current condition until TranCert Marketing is notified that such a test will not be required.



Test Report for TranCert Marketing of CARB Exemption Order Testing of
the TranCert Marketing InterCharger device

10/29/09

Project Overview

This testing was conducted on behalf of TranCert Marketing in conjunction with their application to the California Air Resources Board for an Executive Order exempting the TranCert Marketing InterCharger device for all 1963-2009 MY passenger cars/trucks with gasoline engines and 1998-2009 MY passenger cars/light/medium duty trucks with diesel engines and a closed crank case system from the prohibitions of the California Vehicle Code, Section 27156. The project consisted of the following: one FTP-75 emissions test and a US-06 emissions test, against the standards to which the vehicle was certified, along with an OBD-II system evaluation for two gasoline vehicles: a 2007 Honda Civic, a 2007 Chevrolet Corvette and a 2008 Dodge RAM3500 Diesel powered Pickup (FTP-75 emissions test only with Particulate Matter (PM) measurement). Work commenced on 6/10/2009 and was completed on 10/29/2009; the extended time frame was required to locate a suitable Dodge RAM3500 Diesel pickup for testing.

There were no unusual conditions noted on any of the vehicles during testing. ATDS accumulated at least 50 miles on each test vehicle using a representative transient driving cycle during the OBD-II evaluation in order to exercise the OBD System Monitors.



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Vehicle Information

The following vehicle(s) were used as test vehicles for this project:

ATDS Vehicle ID:	1590-1	1590-2	1590-3
VIN	1HGFA16517L114485	1G1YY26U175109378	3D7ML48A18G171799
Vehicle Make	Honda	Chevrolet	Dodge
Vehicle Model	Civic	Corvette	RAM3500 2WD
Model Year	2007	2007	2008
Test Group	7HNXV01.8MKR	7GMXV06.0081	8CEXK06.7UXW
Odometer	38,876	11,124	45,908

Test Device Information

The following device(s) were installed on the above vehicle(s):

Device Maker	TranCert Marketing
Device Model	NA
Device Serial No.	NA



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1590-1 Honda Civic Testing

Test Sequence and Chronology

The following test sequence and chronology were used in this program.

- **6/11/2009** Vehicle received from TranCert Marketing. Vehicle checked for readiness to test and safety. OBD-II system checked: All Readiness bits SET, no active or historical DTC in memory. Re-set Readiness bits with scan tool. Drove 50 miles from a cold start using a representative transient driving cycle. Checked OBD-II system: All Readiness bits SET except EVAP, no active or historical DTC in memory. Recorded Fuel Trim. Conducted Dynamometer Matching for 48" Electric Dynamometer.
- **6/11/2009** Conducted prep for FTP-75 per 40CFR86 and "California Evaporative Emissions Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles."
- **6/12/2009** Conducted Cold Start FTP-75 emissions tests with NMHC using ATDS' BMD sampling system.
- **6/16/2009** Conducted US-06 emissions tests with NMHC using ATDS' BMD sampling system. Checked OBD-II system: All Readiness bits SET with the exception of EVAP, no active or historical DTC in memory.
- **6/23/2009** OBD-II system checked by dealership: All Readiness bits SET, no active or historical DTC in memory.



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Test Results Veh 1590-1 2007 Honda Civic

Test Parameters:

ATDS Test ID:	Test Type	Test Date:	ETW:	A: Target/ Set	B: Target/ Set	C: Target/ Set
ONT16971	FTP-75 w/NMHC - BMD	6/12/2009	3,125	25.71 / 4.67	0.2759 / 0.174	0.01645 / 0.01685
ONT17001	US-06 w/NMHC - BMD	6/16/2009	Same	Same	Same	Same

Test Comments: Vehicle drove well on all cycles.

The following 50K FTP-75 test results were recorded for the Honda Civic

	NMOG	CO	NOx	HCHO
Test Results	0.023	0.4	0.02	0.000
Standards	0.040	1.7	0.05	0.008
	Note 1			
PASS/FAIL	PASS	PASS	PASS	PASS

The following 120K FTP-75 test results were recorded for the Honda Civic

	NMOG	CO	NOx	HCHO
Test Results	0.031	0.4	0.03	0.000
Standards	0.055	2.1	0.07	0.011
	Note 1			
PASS/FAIL	PASS	PASS	PASS	PASS

Note 1: A conversion factor of 1.04 for calculating NMOG was provided for this test..



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The following US-06 Test Results were recorded for the Honda Civic:

	NMHC + NOx	CO
Test Results	0.02	4.4
Standards	0.14	8.0
PASS/FAIL	PASS	PASS



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1590-2 Chevrolet Corvette Testing

Test Sequence and Chronology

The following test sequence and chronology were used in this program.

- **6/16/2009** Vehicle received from TranCert Marketing. Vehicle checked for readiness to test and safety. OBD-II system checked: All Readiness bits SET, no active or historical DTC in memory. Re-set Readiness bits with scan tool. Drove 50 miles from a cold start using a representative transient driving cycle. Checked OBD-II system: All Readiness bits SET except EVAP, no active or historical DTC in memory. Recorded Fuel Trim. Conducted Dynamometer Matching for 48" Electric Dynamometer. Conducted prep for FTP-75 per 40CFR86 and "California Evaporative Emissions Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles."
- **6/17/2009** Conducted Cold Start FTP-75 and US-06 emissions tests with NMHC using ATDS' BMD sampling system.
- **6/18/2009** Checked OBD-II system: All Readiness bits SET with the exception of EVAP, no active or historical DTC in memory. Conducted additional driving cycle to exercise OBD Evap Monitor.
- **6/22/2008** Checked OBD-II system: All Readiness bits SET, no active or historical DTC in memory.

Test Results Veh 1590-2 Chevrolet Corvette

Test Parameters:

ATDS Test ID:	Test Type	Test Date:	ETW:	A: Target/ Set	B: Target/ Set	C: Target/ Set
ONT17021	FTP-75 w/NMHC - BMD	6/17/2009	3,625	28.80 / 10.93	0.7469 / 0.4871	0.01279 / 0.01448
ONT17021	US-06 w/NMHC - BMD	6/17/2009	Same	Same	Same	Same

Test Comments: Vehicle drove well on all cycles.



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The following 50K FTP-75 test results were recorded for the Chevrolet Corvette

	NMOG	CO	NOx	HCHO
Test Results	0.036	1.3	0.04	0.000
Standards	0.075	3.4	0.05	0.015
	Note 1			
PASS/FAIL	PASS	PASS	PASS	PASS

The following 120K FTP-75 test results were recorded for the Chevrolet Corvette

	NMOG	CO	NOx	HCHO
Test Results	0.036	1.3	0.04	0.000
Standards	0.090	4.2	0.07	0.018
	Note 1			
PASS/FAIL	PASS	PASS	PASS	PASS

Note 1: A conversion factor of 1.04 for calculating NMOG was provided for this test..

The following US-06 Test Results were recorded for the Chevrolet Corvette:

	NMHC + NOx	CO
Test Results	0.14	0.4
Standards	0.14	8.0
PASS/FAIL	PASS	PASS



Test Report for TranCert Marketing of CARB Exemption Order Testing of
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1590-3 Dodge RAM3500 2WD Diesel Pickup Testing

Test Sequence and Chronology

The following test sequence and chronology were used in this program.

- **8/12/2009** Vehicle received from TranCert Marketing. Vehicle checked for readiness to test and safety. OBD-II system checked: All Readiness bits SET, no active or historical DTC in memory. Re-set Readiness bits with scan tool. Drove 50 miles from a cold start using a representative transient driving cycle. Checked OBD-II system: All Readiness bits SET except O2 Sensor, no active or historical DTC in memory. Recorded Fuel Trim.
- **8/22/2009** Conducted Dynamometer Matching for 48" Electric Dynamometer. Conducted prep for FTP-75 per 40CFR86 and "California Evaporative Emissions Standards and Test Procedures for 2001 and Subsequent Model Motor Vehicles."
- **8/23/2009** Conducted Cold Start FTP-75 emissions test with NMHC and PM using ATDS' Diesel sampling system. Checked OBD-II system: All Readiness bits SET, no active or historical DTC in memory. Recorded Fuel Trim.

Test Results

Test Parameters:

ATDS Test ID:	Test Type	Test Date:	ETW:	A: Target/ Set	B: Target/ Set	C: Target/ Set
ONT17403	FTP-75 w/NMHC & PM- Diesel	10/23/2009	10,000 lbs	42.93 / 12.19	-0.0164 / -1.697	0.05647 / 0.07478

Test Comments: Vehicle drove well on all cycles.



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The following 120K FTP-75 test results were recorded for the Dodge RAM:

	NMHC	CO	NOx	PM
Test Results	0.152	0.2	0.2	0.000
Standards	0.230	7.3	0.4	0.02
PASS/FAIL	PASS	PASS	PASS	PASS

All tests were conducted in strict accordance with the provisions of 40 CFR 86 and/or California Title 13 and have been reviewed by ATDS' in-house Quality Auditor. Detailed test results are in the Appendix attached to this report.

Data Review and Conclusions

Based upon ATDS' review of the test data above, the TranCert Marketing InterCharger device as installed on a 2007 Honda Civic, a 2007 Chevrolet Corvette and a 2008 Dodge RAM3500 Diesel Pickup appears to meet the requirements for an Executive Order as defined in CARB letter A-2009-152. This conclusion is based upon the finding that exhaust emissions with TranCert Marketing InterCharger device as installed on a 2007 Honda Civic, a 2007 Chevrolet Corvette and a 2008 Dodge RAM3500 Diesel Pickup did not exceed applicable standards and that no failures of the vehicle OBD-II system were caused by the device.

If there is any additional information that you require, please do not hesitate to call me at the numbers below. It has been a pleasure working with TranCert Marketing on this project and we look forward to future efforts.

Sincerely,

Linwood E. Farmer Jr.
Vice-President

	QUALITY ASSURANCE
INSP: <u>DK</u>	ON: <u>11/04/09</u>
COMMENTS: <u>OK</u>	
