2/3

HS#
637142

REPORT NUMBER 124L-GTL-04-002

SAFETY COMPLIANCE TESTING FOR FMVSS 124L ACCELERATOR CONTROL SYSTEMS

DAIMLERCHRYSLER CORPORATION
2004 CHRYSLER PACIFICA, MPV
NHTSA NO. C40301

GENERAL TESTING LABORATORIES, INC.
1623 LEEDSTOWN ROAD
COLONIAL BEACH, VIRGINIA 22443

MAY 14, 2004

FINAL REPORT

PREPARED FOR

U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
400 SEVENTH STREET, SW
ROOM 6115 (NVS-220)
WASHINGTON, D.C. 20590

Prepared By: Debbie Messick

Approved By: [signature]

Approval Date: 5/14/04

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: [signature]

Acceptance Date: 5/17/04

Technical Report Documentation Page

1. Report No. 124L-GTL-04-002	2. Government Accession No.	3. Recipient's Catalog No.
4. Title and Subtitle Final Report of FMVSS 124 Compliance Testing of 2004 CHRYSLER PACIFICA, MPV NHTSA No. C40301		5. Report Date May 14, 2004 6. Performing Organ. Code GTL
7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager		8. Performing Organ. Rep# GTL-DOT-04-124L-002
9. Performing Organization Name and Address General Testing Laboratories, Inc. 1623 Leedstown Road Colonial Beach, Va 22443		10. Work Unit No. (TRAIS) 11. Contract or Grant No. DTNH22-01-C-11025
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Admin. Enforcement Office of Vehicle Safety Compliance (NVS-220) 400 7th Street, S.W., Room 6115 Washington, DC 20590		13. Type of Report and Period Covered Final Test Report May 4, 2004 14. Sponsoring Agency Code NSA-30
15. Supplementary Notes		
16. Abstract Compliance tests were conducted on the subject 2004 Chrysler Pacifica MPV in accordance with the specifications of the Office of Vehicle Safety Compliance Test Procedure No. TP-124-06 for the determination of FMVSS 124 compliance. Test failures identified were as follows:		
17. Key Words Compliance Testing Safety Engineering FMVSS 124	18. Distribution Statement Copies of this report are available from NHTSA NHTSA Technical Reference Div., Rm. 5108 (NAD-52) 400 7th St., S.W. Washington, DC 20590 Telephone No. (202) 366-4946	
19. Security Classif. (of this report) UNCLASSIFIED	21. No. of Pages 54	22. Price
20. Security Classif. (of this page) UNCLASSIFIED		

Form DOT F 1700.7 (8-72)

TABLE OF CONTENTS

SECTION 1
PURPOSE OF COMPLIANCE TEST

FMVSS 124 specifies requirements for the return of a vehicle's throttle to the idle position when the driver removes the actuating force from the accelerator control, or in the event of a severance or disconnection in the accelerator control system. The purpose of FMVSS 124 is to reduce deaths and injuries resulting from engine overspeed caused by malfunctions in the accelerator control system. This standard applies to passenger cars, multipurpose passenger vehicles (MPV's), trucks and buses.

SECTION 2
TEST PROCEDURES AND DISCUSSION OF RESULTS

Compliance testing was conducted on a 2004 CHRYSLER PACIFICA, MPV, NHTSA No. C40301 in accordance with the National Highway Traffic Safety Administration (NHTSA) Laboratory Procedure TP-124-06.

Output from the vehicle throttle position sensor on the air throttle plate shaft was used to measure throttle position and data was recorded at 1000 HZ with GTL' s data acquisition system. Testing was conducted to simulate the normal removal of the driver's foot from the accelerator pedal. Testing was performed with the vehicle in park and the engine running. Return to idle times were determined for four throttle plate positions with the accelerator control system complete and with each of the two throttle return springs on the throttle plate shaft independently disconnected. The severed linkage test was also performed by disconnecting the throttle cable from the throttle body. As the air throttle plate was mechanically linked to the accelerator pedal, no electrical disconnections were required.

This testing was to be performed at low ambient temperature of -40° C (-0 +5° C) in accordance with the NHTSA Test Procedure TP-124-06, however due to the vehicle not starting at -40° C the ambient temperature was raised approximately 5°/HR until the engine started and the normal condition test was performed at –31.6° C. (-25°F). After turning off the engine to remove throttle springs the engine would not restart and the remainder of the tests were performed along with a second normal condition test, with the engine not running. The ambient temperature was then raised at 5°/HR and the engine was cranked every 5° but the engine did not restart up to and including 80° F.

SECTION 3
COMPLIANCE TEST DATA

Test data for this test can be found on the following pages. Photographs are found in Section 5 and Test Plots are found in Section 6.

DATA SHEET 1
VEHICLE DESCRIPTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2004 CHRYSLER PACIFICA MPV
VEHICLE NHTSA NO.: C40301
VEHICLE VIN: 2C4GM68404R539386
DATE OF TEST: MAY 4, 2004
TEST LAB: GENERAL TESTING LABORATORIES
VEHICLE ENGINE TYPE: V6 GVWR: 2586 KG
VEHICLE ENGINE SIZE: 3.5 L
VEHICLE ACCEL. CONTROL SYSTEM (ACS) (Air or Fuel Throttled): AIR
MAX. BHP ENGINE SPEED: UNK.
MFR. IDLE RPM: COMPUTER CONTROLLED (730)
FUEL METERING DEVICE (Carburetor, fuel injection, etc): FUEL INJECTION

REMARKS:

RECORDED BY: [signature] DATE: 05/04/04

APPROVED BY: [signature]

DATA SHEET 2
NORMAL OPERATION TEST
(fully operational system)

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2004 CHRYSLER PACIFICA, MPV
VEHICLE NHTSA NO.: C40301
DATE OF TEST: MAY 4, 2004

Check one:

Mid Temp. Test:___ Low Temp. Test: X High Temp. Test:_____

SYSTEM CONDITION: COMPLETE (no modifications) Normal Operation

ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)	THROTTLE POSITION SENSOR READING	RPM	TEMPERATURE (°F)		THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)	RETURN TIME TO IDLE (Msec)	PASS/ FAIL
			ENGINE COOLANT	AMBIENT			
25%	25	4100	-22	-25	2%	30	P
50%	50	4000	-21	-25	2%	32	P
75%	75	3600	-10	-25	2%	37	P
100%	100	3600	-7	-25	2%	43	P

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL _____

REMARKS: AFTER COLD SOAK PERIOD AT -40° THE VEHICLE WOULD NOT START. AMBIENT TEMPERATURE WAS RAISED UNTIL VEHICLE STARTED WHICH WAS -25°. AFTER THE NORMAL TEST WAS PERFORMED THE VEHICLE WOULD NOT RE-START. REMAINDER OF TESTS WERE PERFORMED WITHOUT THE ENGINE RUNNING DUE TO THE NON-START CONDITION.

RECORDED BY: _____ DATE: 05/04/04

APPROVED BY: _____

DATA SHEET 2 CONT.
NORMAL OPERATION TEST
(fully operational system)

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2004 CHRYSLER PACIFICA, MPV
VEHICLE NHTSA NO.: C40301
DATE OF TEST: MAY 4, 2004

Check one:

Mid Temp. Test:___ Low Temp. Test: X High Temp. Test:_____

SYSTEM CONDITION: COMPLETE (no modifications) Normal Operation Engine Off

ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)	THROTTLE POSITION SENSOR READING	RPM	TEMPERATURE (°F)		THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)	RETURN TIME TO IDLE (Msec)	PASS/ FAIL
			ENGINE COOLANT	AMBIENT			
25%	25	0	-32	-20	2%	35	P
50%	50	0	-32	-20	2%	36	P
75%	75	0	-32	-20	2%	45	P
100%	100	0	-32	-20	2%	47	P

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL _____

REMARKS: THIS TEST WAS RUN WITH ENGINE OFF DUE TO THE VEHICLE NOT STARTING AT THIS TEMPERATURE.

RECORDED BY: _____ DATE: 05/04/04

APPROVED BY: _____

DATA SHEET 3 (1 of 2)
FAIL-SAFE OPERATION DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2004 CHRYSLER PACIFICA, MPV
VEHICLE NHTSA NO.: C40301
DATE OF TEST: MAY 4, 2004

Check one:

Mid Temp. Test:___ Low Temp. Test: X High Temp. Test:_____

SYSTEM CONDITION: #1 SPRING DISCONNECTED							
ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)	THROTTLE POSITION SENSOR READING	RPM	TEMPERATURE (°F)		THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)	RETURN TIME TO IDLE (Msec)	PASS/ FAIL
			ENGINE COOLANT	AMBIENT			
25%	25	0	-4	-20	2%	43	P
50%	50	0	-4	-20	2%	46	P
75%	75	0	-4	-20	2%	47	P
100%	100	0	-4	-20	2%	46	P

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL _____

REMARKS: TEST WAS PERFORMED WITHOUT ENGINE RUNNING.

RECORDED BY: T. Tamaki DATE: 05/04/04

APPROVED BY: D. Mesick

DATA SHEET 3 (2 of 2)
FAIL-SAFE OPERATION DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2004 CHRYSLER PACIFICA, MPV
VEHICLE NHTSA NO.: C40301
DATE OF TEST: MAY 4, 2004

Check one:

Mid Temp. Test:___ Low Temp. Test: X High Temp. Test:_____

SYSTEM CONDITION: #2 SPRING DISCONNECTED

ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)	THROTTLE POSITION SENSOR READING	RPM	TEMPERATURE (°F)		THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)	RETURN TIME TO IDLE (Msec)	PASS/ FAIL
			ENGINE COOLANT	AMBIENT			
25%	25	0	-3	-20	2%	44	P
50%	50	0	-3	-20	2%	52	P
75%	75	0	-3	-20	2%	51	P
100%	100	0	-3	-20	2%	50	P

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL _____

REMARKS: TEST WAS PERFORMED WITHOUT ENGINE RUNNING.

RECORDED BY: _____ DATE: 05/04/04

APPROVED BY: _____

DATA SHEET 4
FAIL-SAFE OPERATION SEVERED

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2004 CHRYSLER PACIFICA, MPV
VEHICLE NHTSA NO.: C40301
DATE OF TEST: MAY 4, 2004

Check one:

Mid Temp. Test:___ Low Temp. Test: X High Temp. Test:_____

SYSTEM CONDITION: SEVERANCE

ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)	THROTTLE POSITION SENSOR READING	RPM	TEMPERATURE (°F)		THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)	RETURN TIME TO IDLE (Msec)	PASS/ FAIL
			ENGINE COOLANT	AMBIENT			
25%	25	0	-4	-20	2%	8	P
50%	50	0	-4	-20	2%	11	P
75%	75	0	-4	-20	2%	14	P
100%	100	0	-4	-20	2%	10	P

RETURN TIME REQUIREMENTS:

1 second (1000 ms) for vehicles less than 4536 kg.
2 seconds (2000 ms) for vehicles more than 4536 kg.
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL _____

REMARKS: TEST WAS PERFORMED WITHOUT ENGINE RUNNING.

RECORDED BY: _____ DATE: 05/04/04

APPROVED BY: _____

SECTION 4
TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
CONTINUOUS RECORDER	OMEGA	55662	03/04	03/05
ENGINE RECORDING	FLUKE	7471026	03/04	03/05
ENGINE RECORDING	MONARCH	1444664	01/04	07/05
SOFTWARE	GTL	N/A	BEFORE USE	BEFORE USE
CHAMBER	GTL	N/A	N/A	N/A
EXHAUST DUCT	GTL	N/A	N/A	N/A

SECTION 5
PHOTOGRAPHS

YSLER PACIFICA
O. C40301
O. 124L

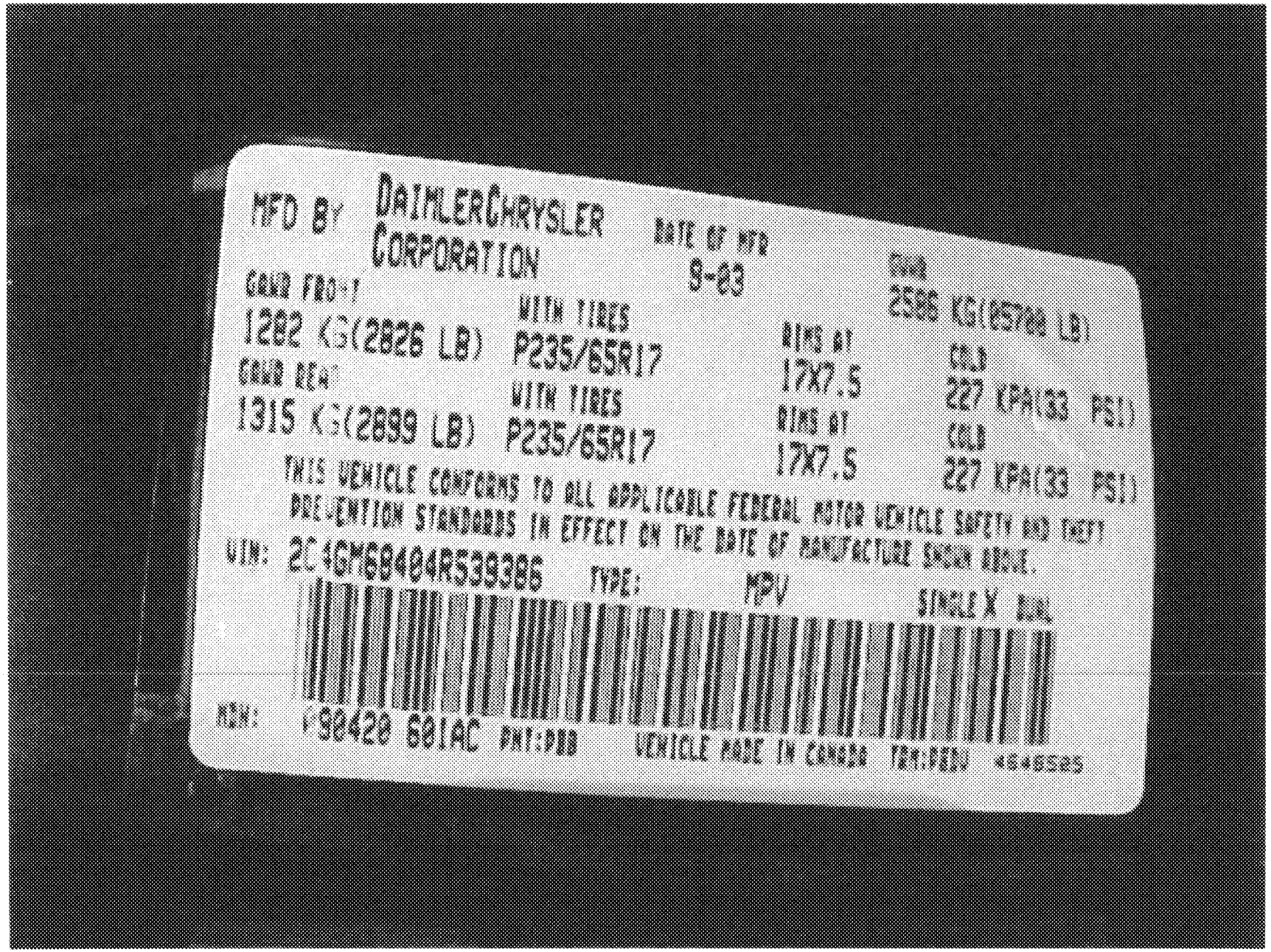
FIGURE 5.1
FRONT VIEW OF VEHICLE

2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.2
LEFT SIDE VIEW OF VEHICLE

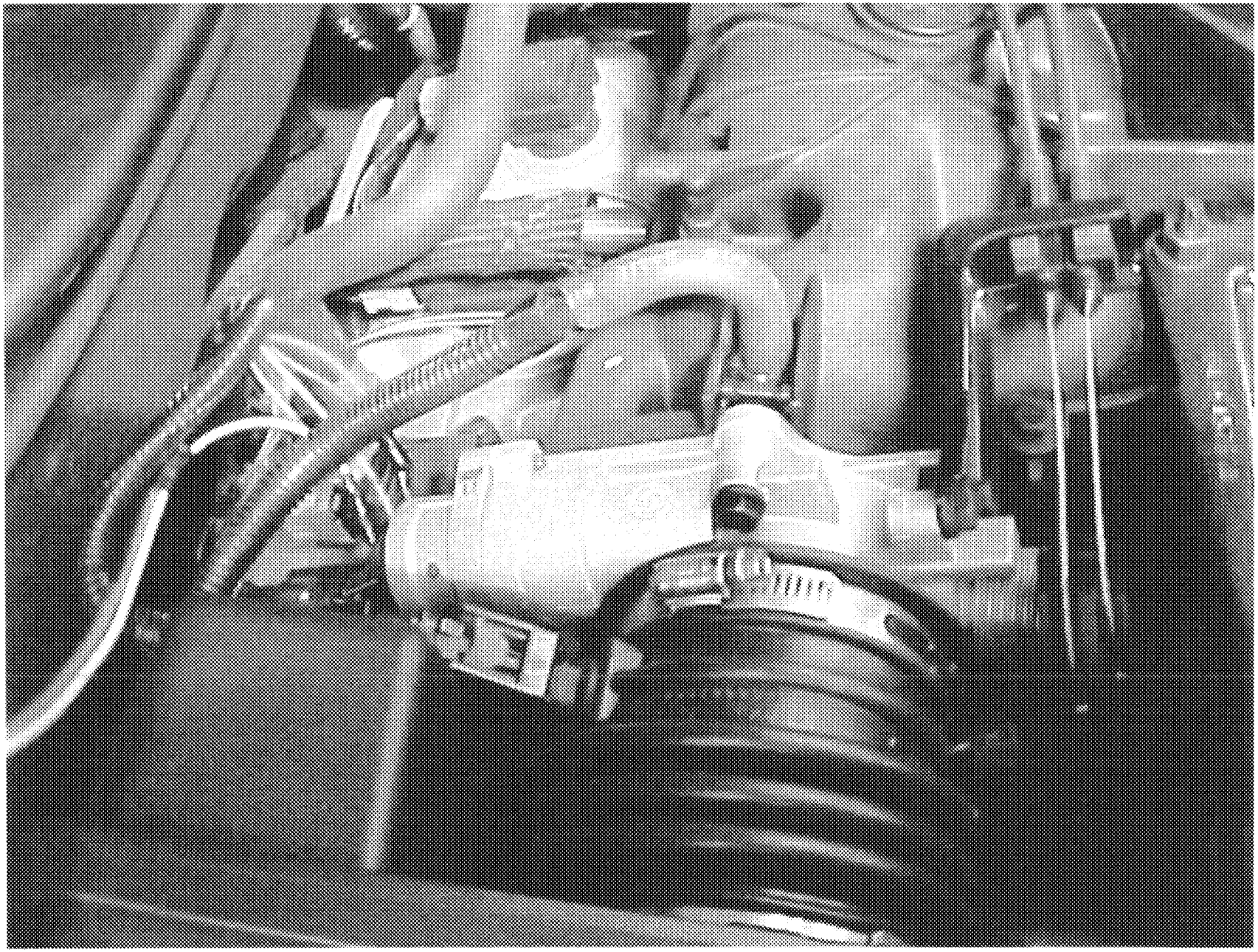
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.3
RIGHT SIDE VIEW OF VEHICLE



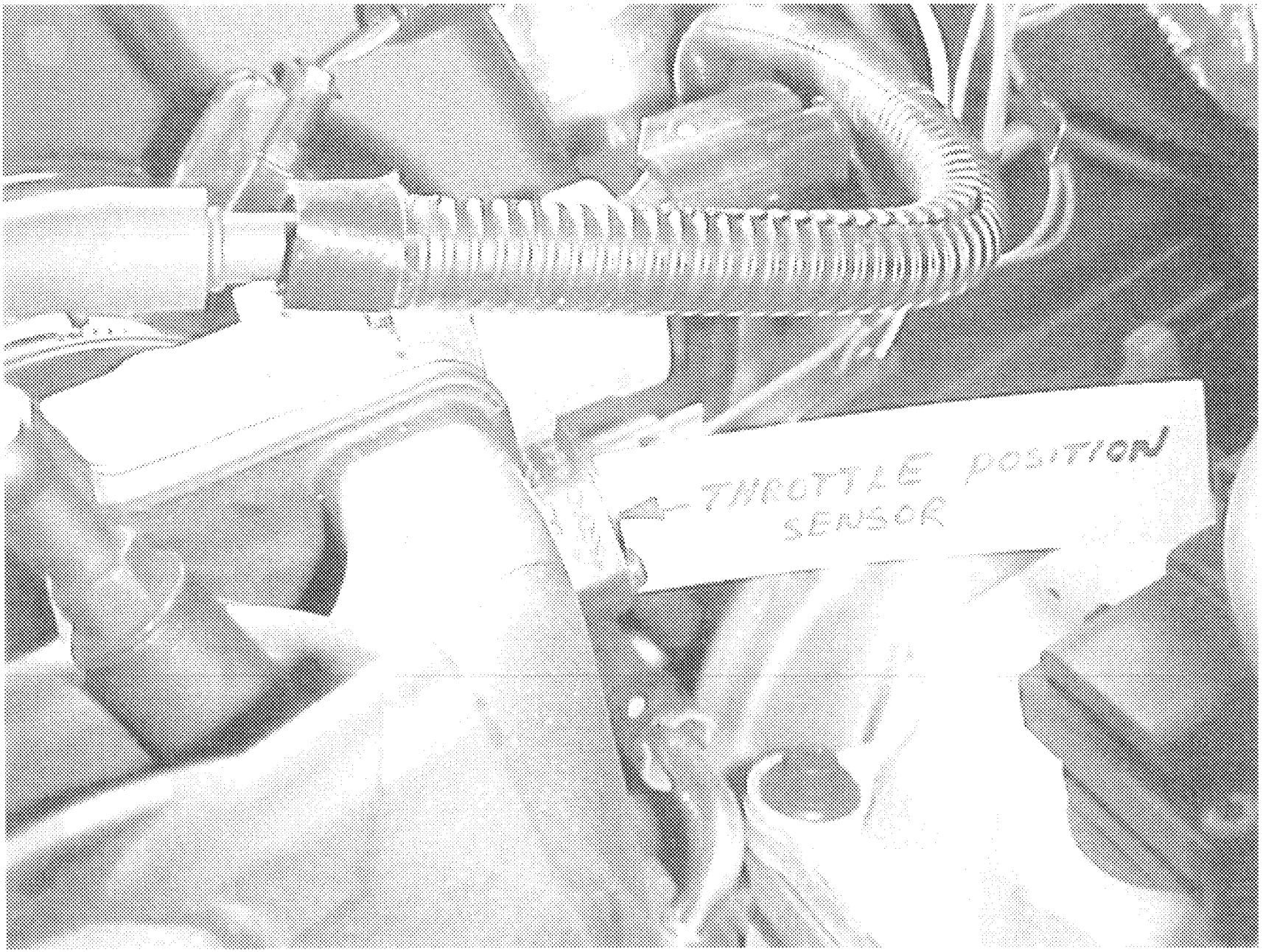
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.4
CLOSE-UP VIEW OF VEHICLE'S CERTIFICATION AND TIRE INFORMATION LABEL



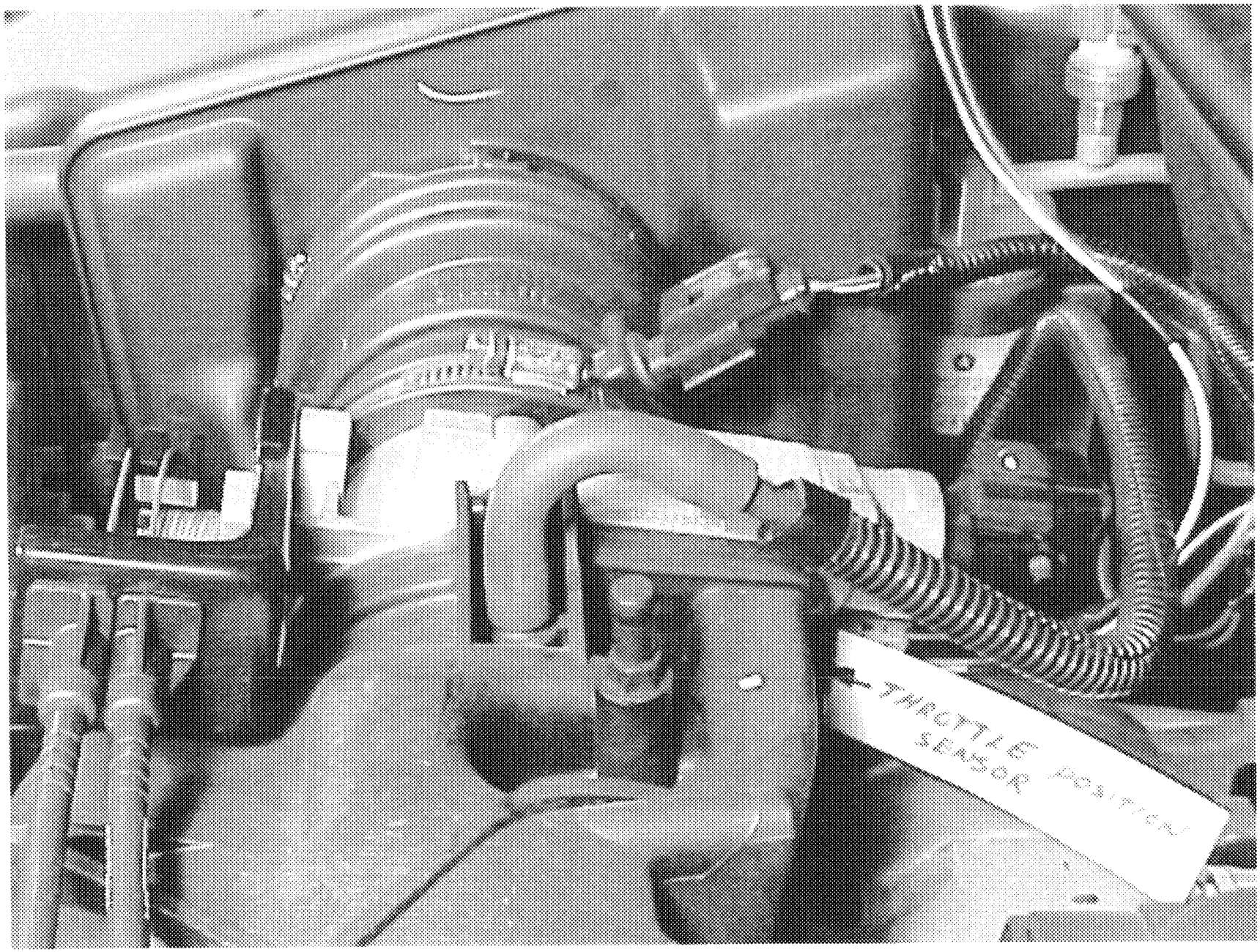
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.5
VIEW OF THROTTLE BODY



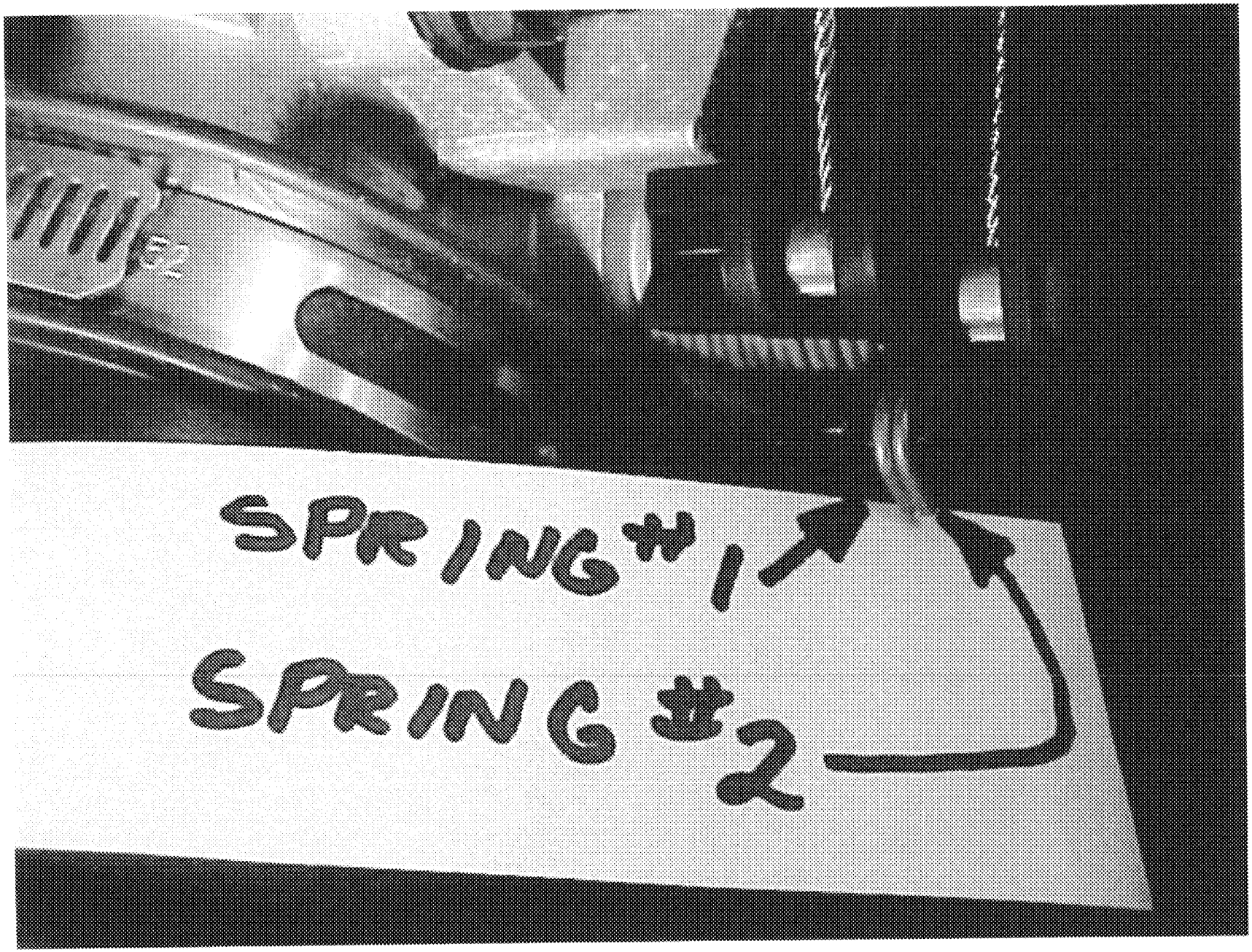
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.6
THROTTLE POSITION SENSOR CLOSE-UP



2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 6.7
THROTTLE POSITION SENSOR LOCATION

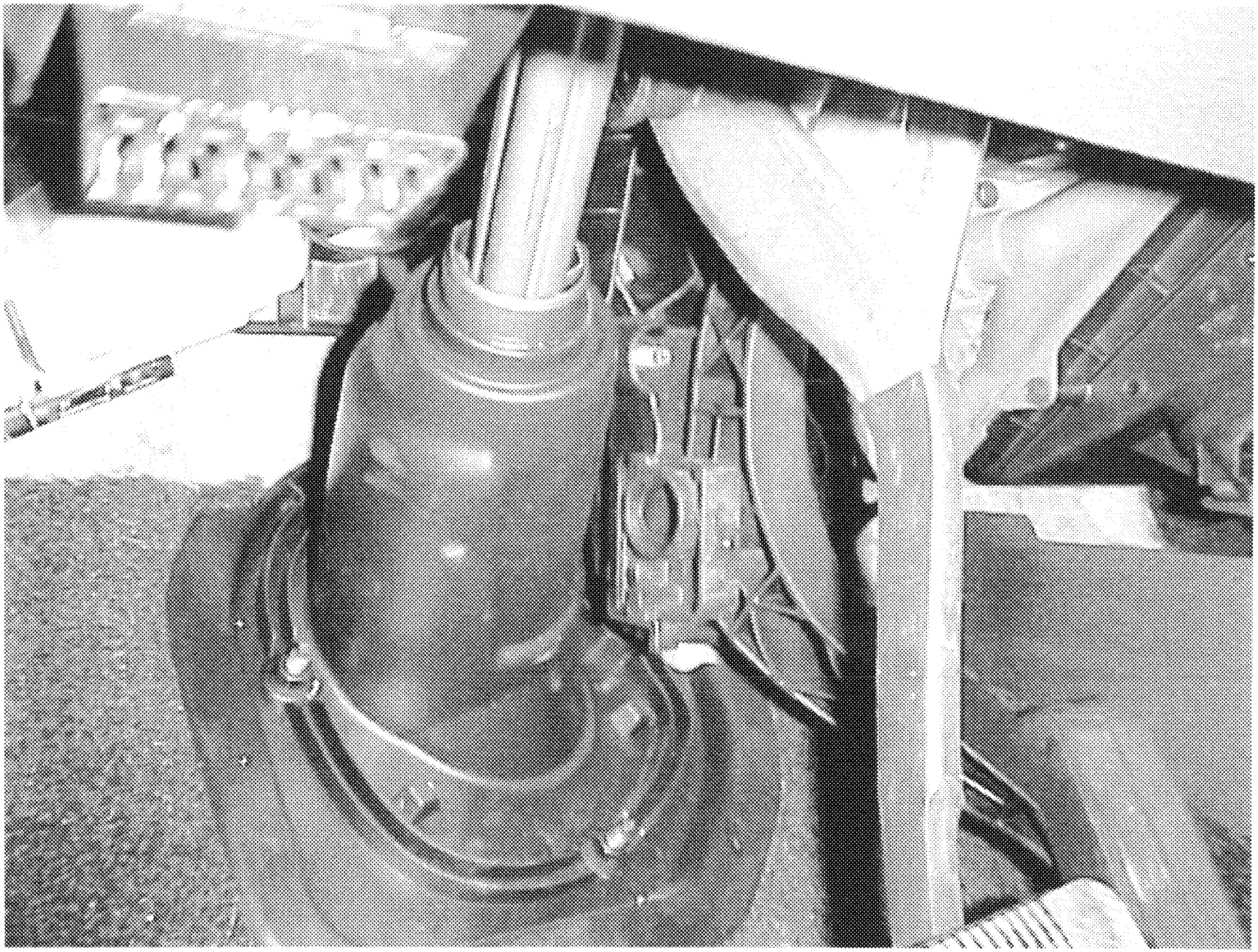


2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.8
THROTTLE RETURN SPRINGS #1 & #2 CLOSE-UP

2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.9
THROTTLE RETURN SPRINGS #1 & #2
LOCATION

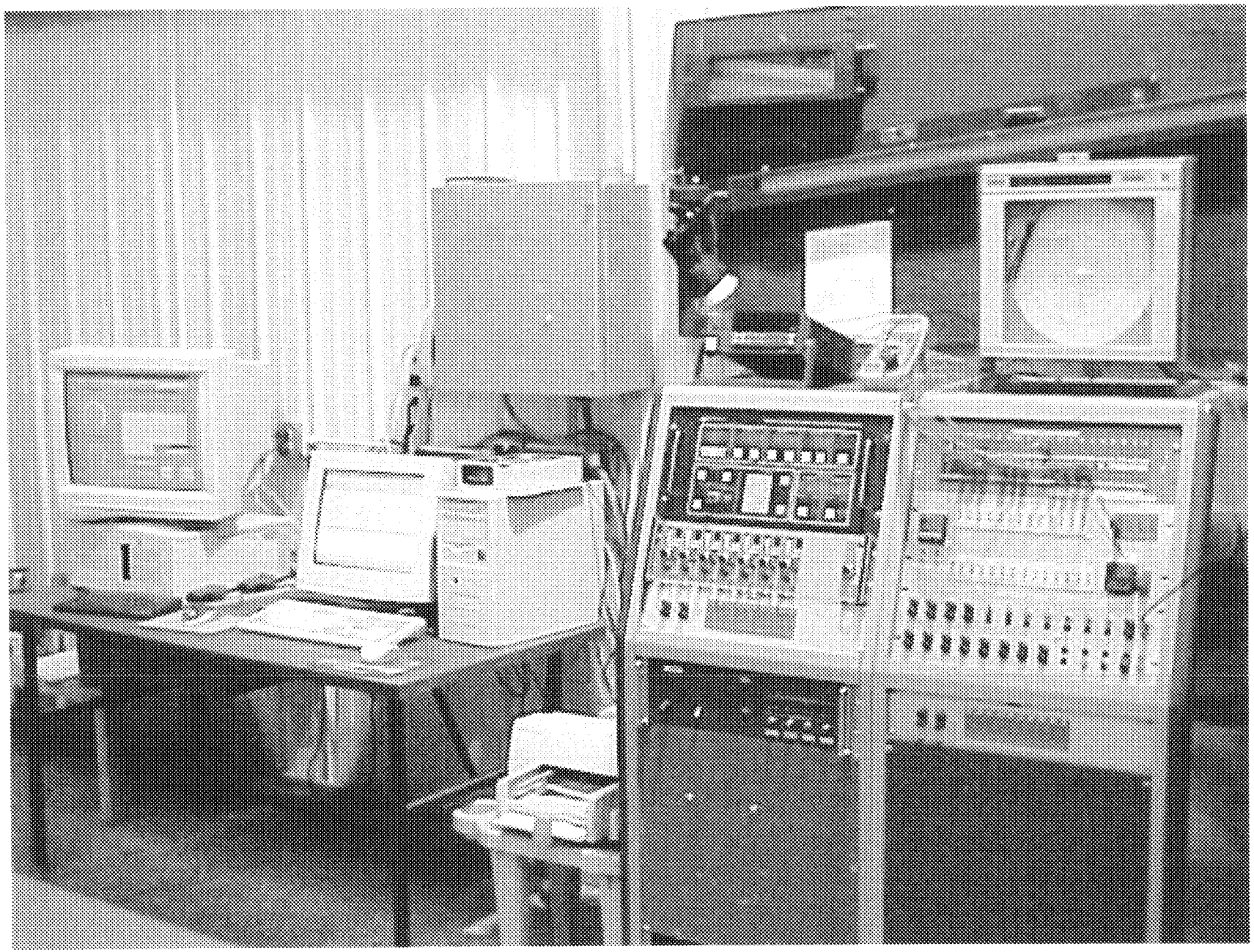


2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.10
ACCELERATOR PEDAL

2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

FIGURE 5.11
VEHICLE IN TEST CHAMBER



2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124L

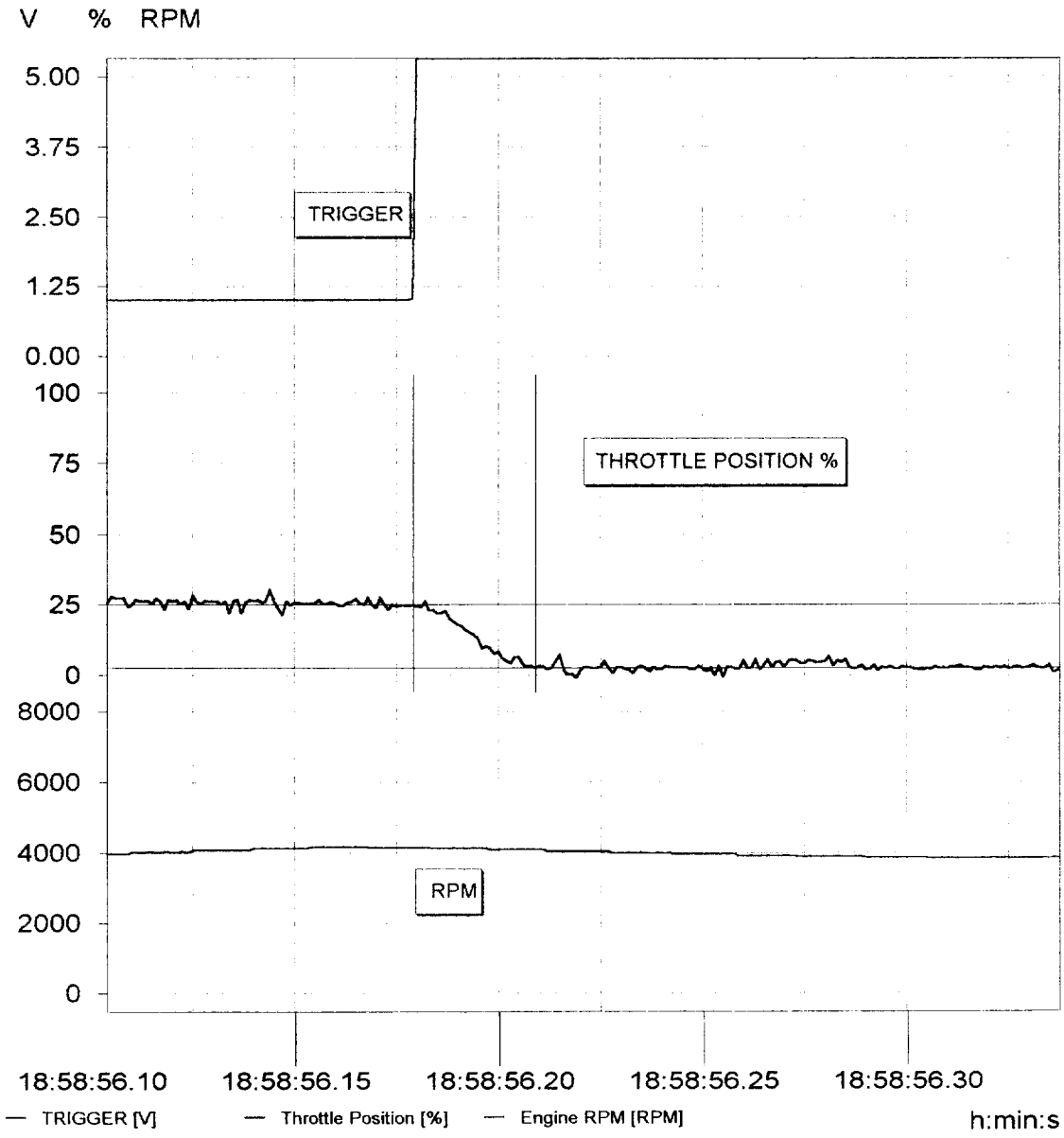
FIGURE 5.12
124 TEST INSTRUMENTATION SET-UP

SECTION 6
PLOTS

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ NORMAL/ 25% WOT 7:01:40 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



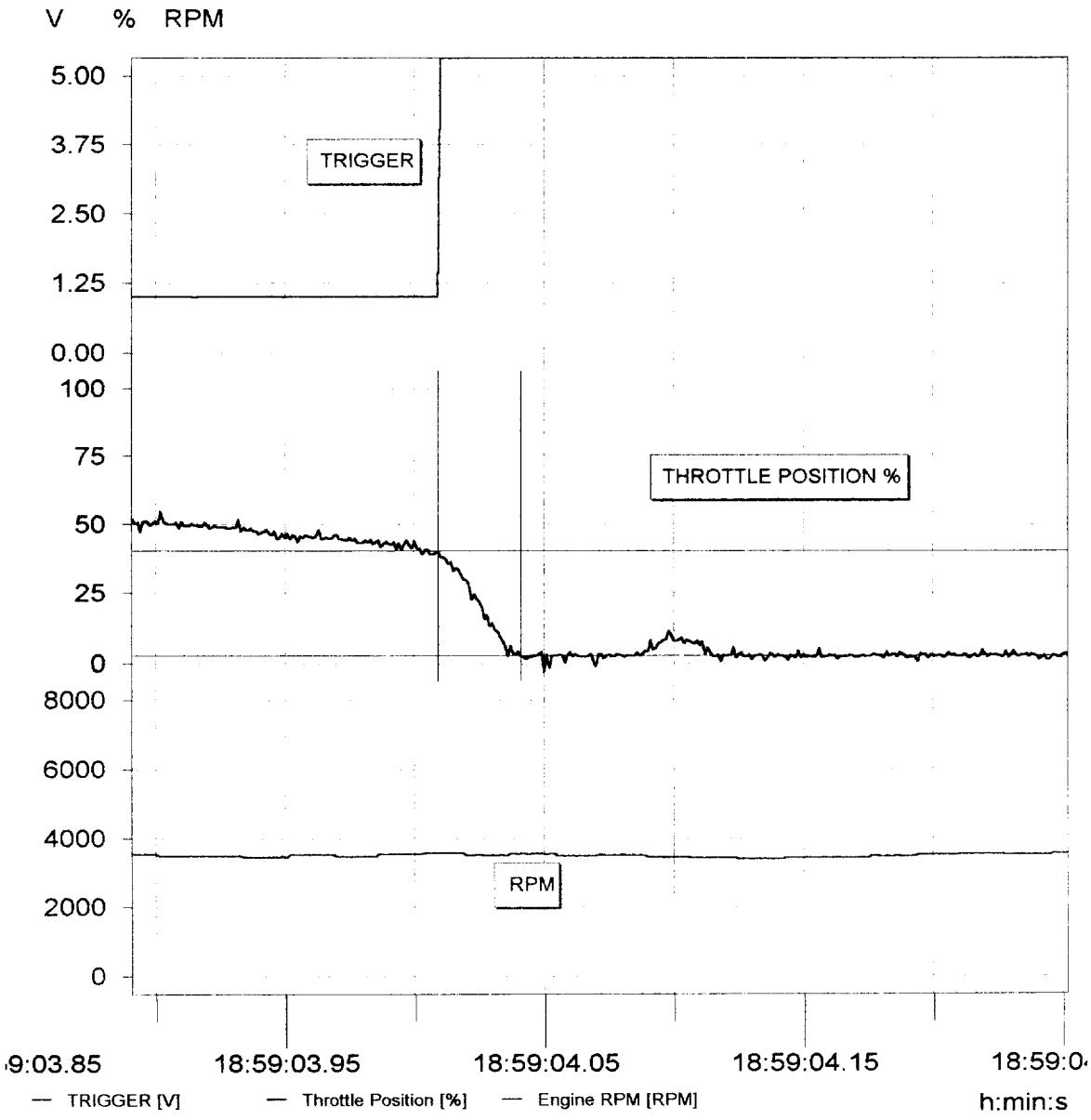
Channel:Throttle Position

Y1:	25.005 %	Y2:	2.546 %
t1:	-32820.317 ms	t2:	-32790.317 ms
dt:	0.030 s	f:	33.333 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ NORMAL/ 50% WOT 7:04:19 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



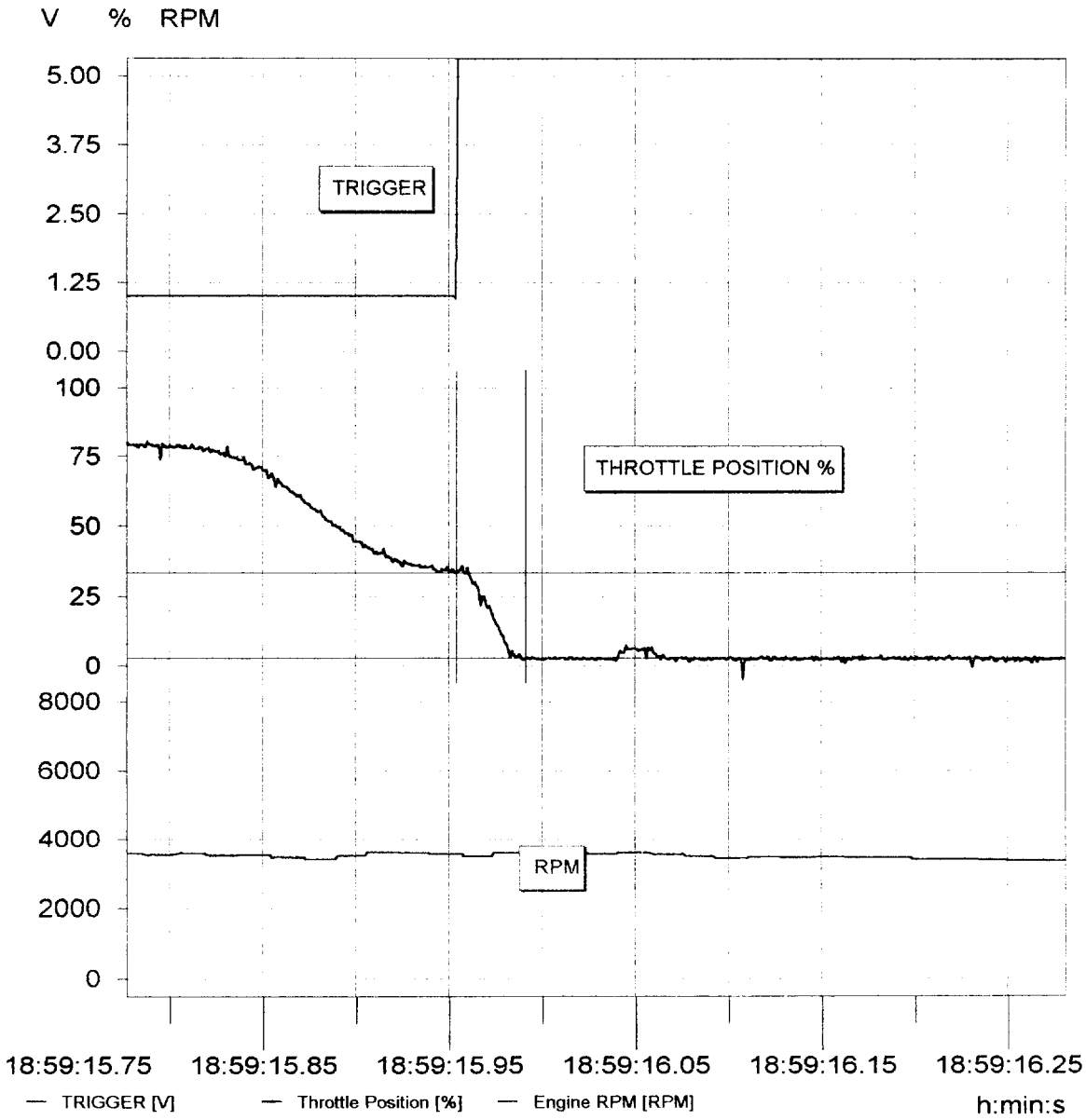
Channel:Throttle Position

Y1:	40.259 %	Y2:	2.704 %
t1:	-24990.317 ms	t2:	-24958.317 ms
dt:	0.032 s	f:	31.250 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ NORMAL/ 75% WOT 7:06:15 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



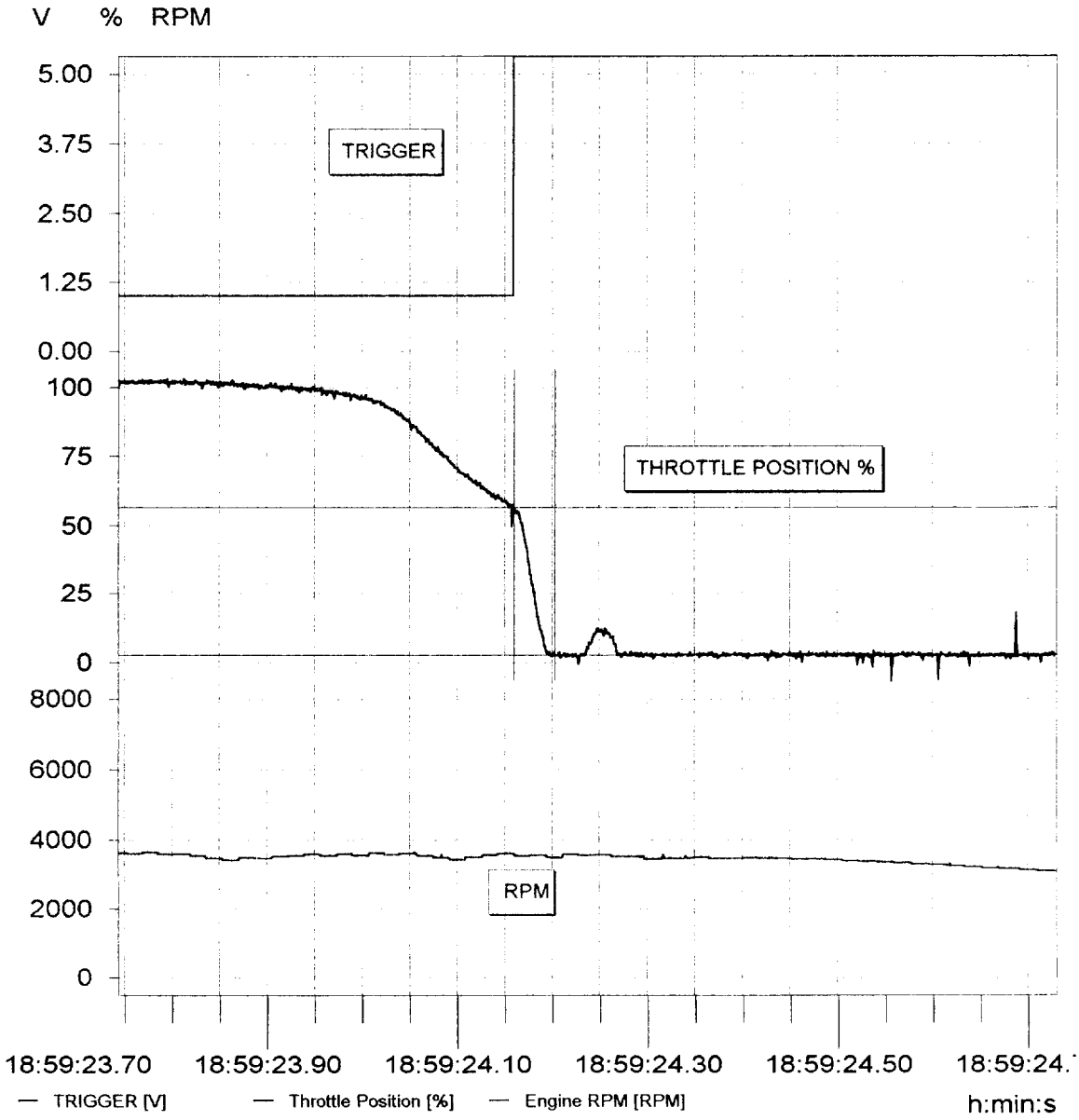
Channel:Throttle Position

Y1:	33.538 %	Y2:	2.823 %
t1:	-13045.317 ms	t2:	-13008.317 ms
dt:	0.037 s	f:	27.027 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ NORMAL/ 100% WOT 7:09:48 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



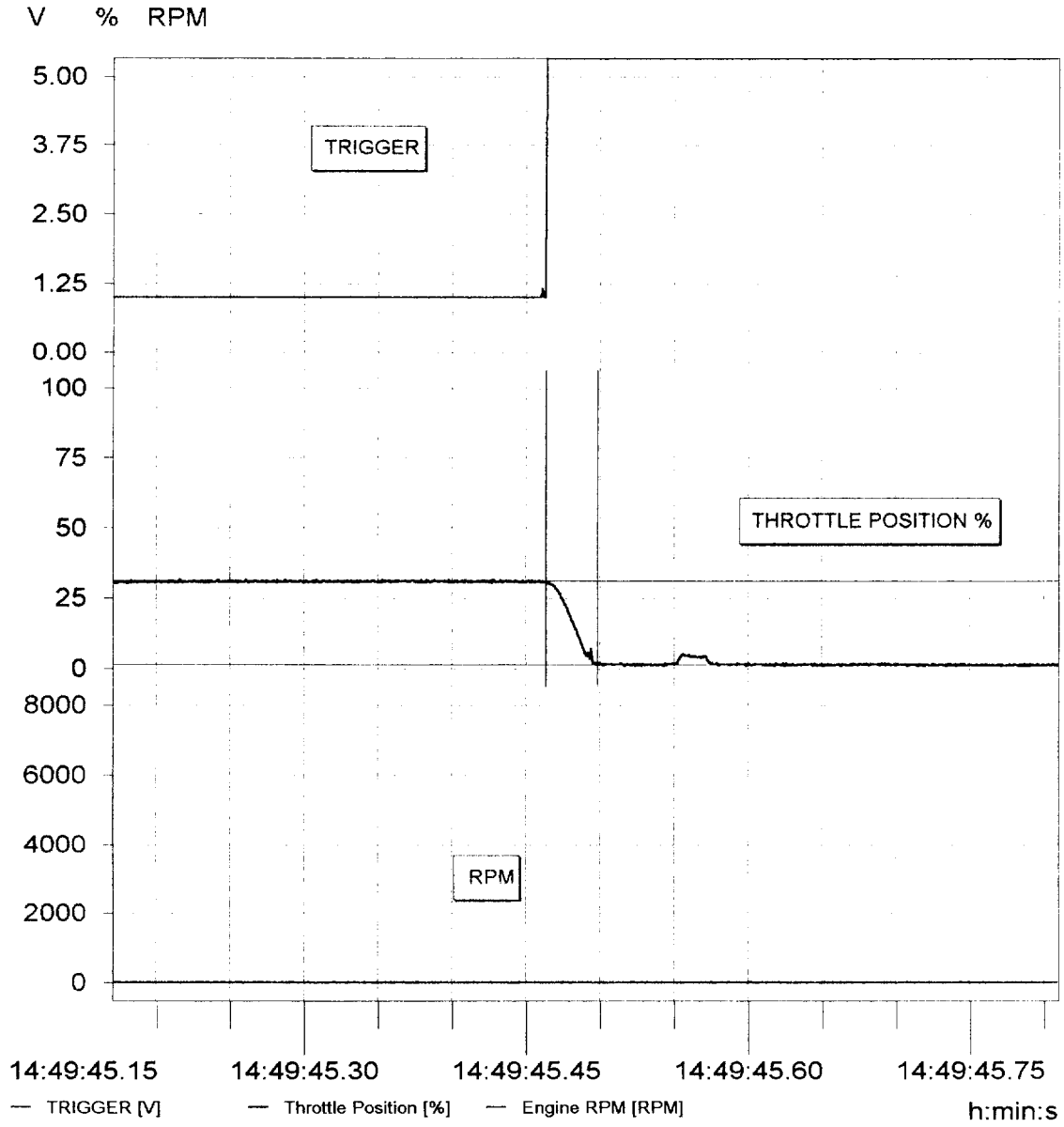
Channel:Throttle Position

Y1:	56.495 %	Y2:	2.546 %
t1:	-4839.317 ms	t2:	-4796.317 ms
dt:	0.043 s	f:	23.256 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ ENGINE OFF/ 25% WOT 2:59:54 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



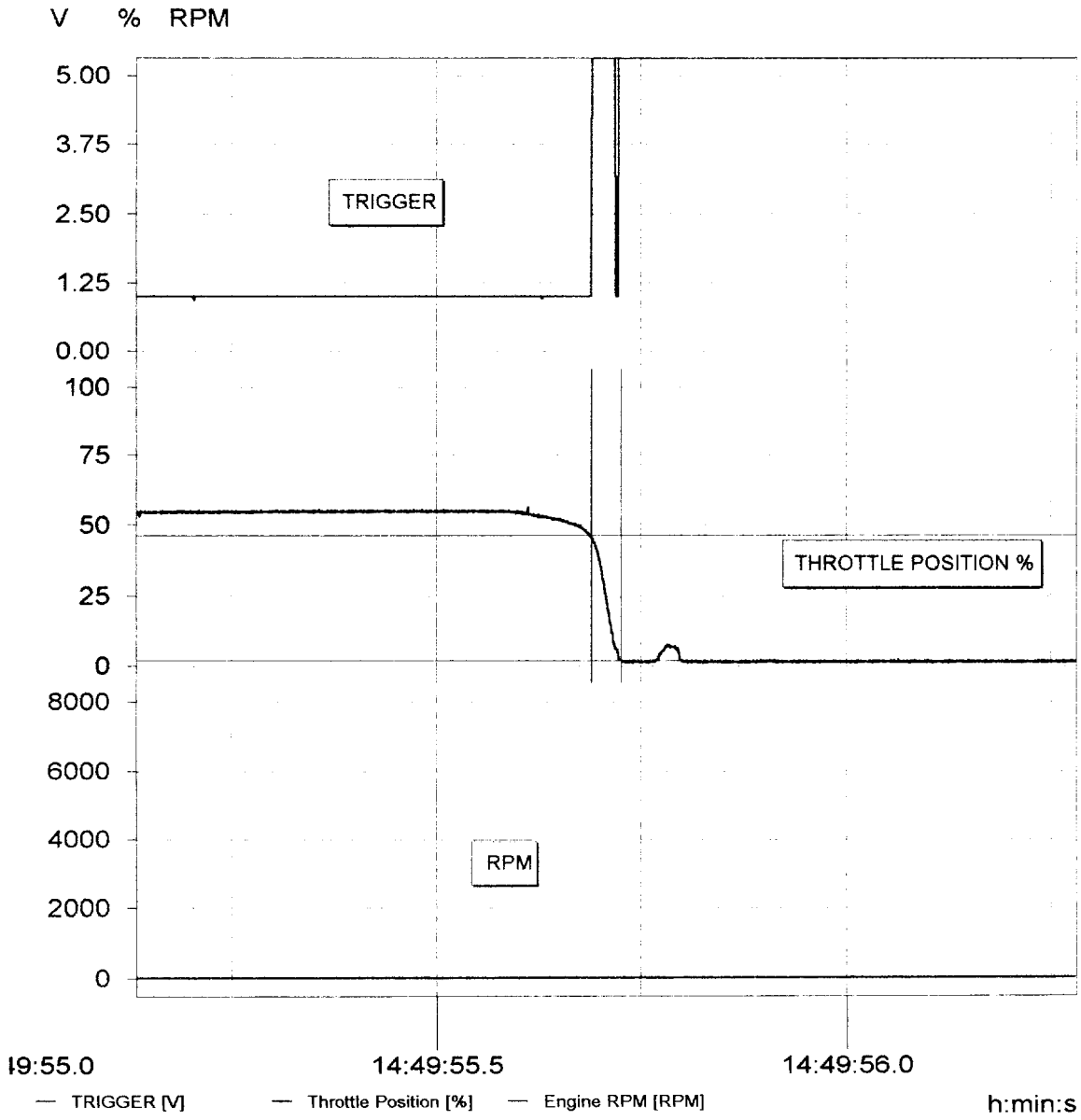
Channel: Throttle Position

Y1:	31.128 %	Y2:	1.499 %
t1:	-35584.874 ms	t2:	-35549.874 ms
dt:	0.035 s	f:	28.571 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ ENGINE OFF/ 50% WOT 3:05:23 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



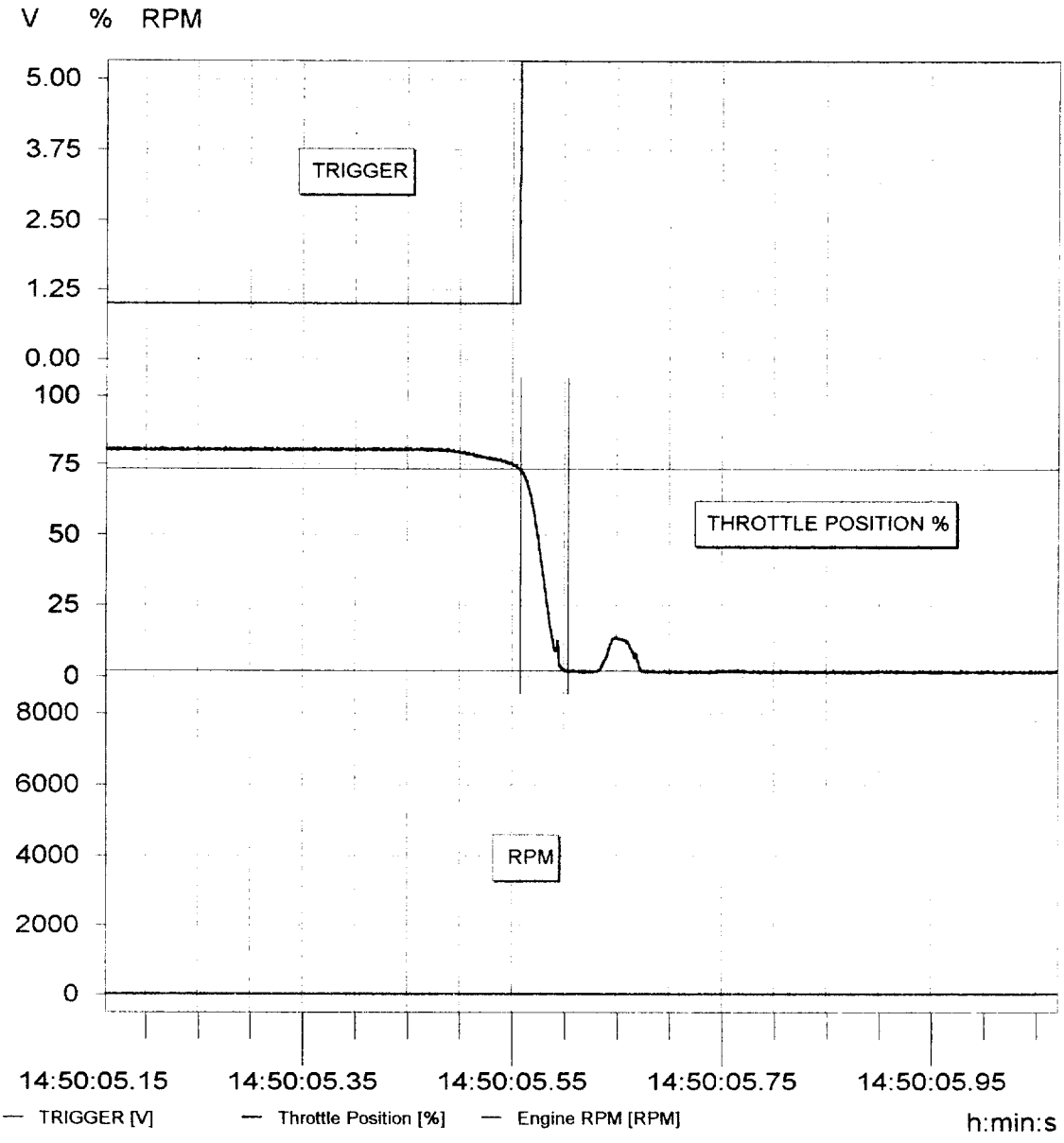
Channel: Throttle Position

Y1:	46.016 %	Y2:	1.894 %
t1:	-25358.874 ms	t2:	-25322.874 ms
dt:	0.036 s	f:	27.778 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ ENGINE OFF/ 75% WOT 3:06:56 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



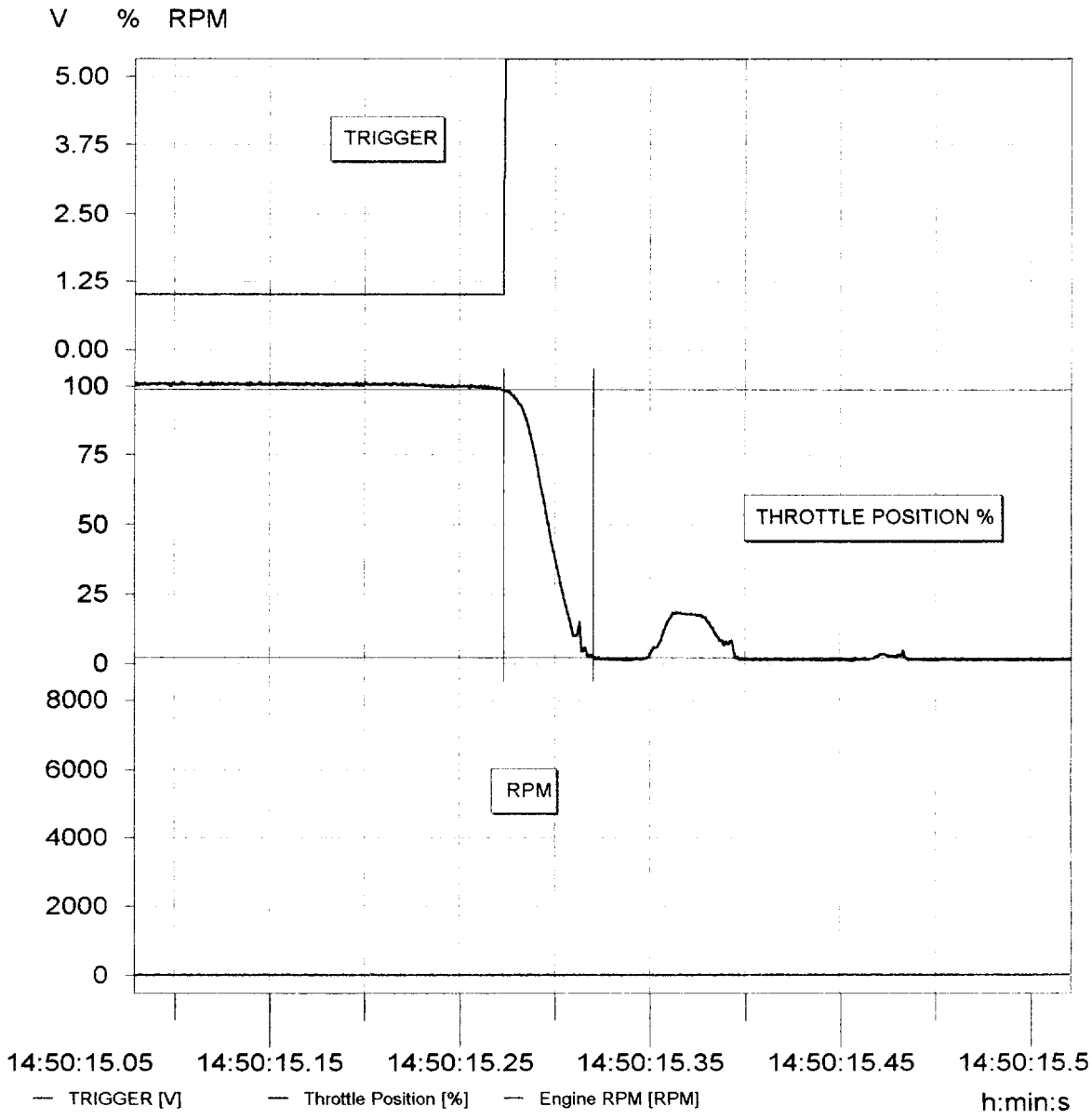
Channel:Throttle Position

Y1:	73.206 %	Y2:	1.771 %
t1:	-15489.874 ms	t2:	-15444.874 ms
dt:	0.045 s	f:	22.222 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ ENGINE OFF/ 100% WOT 3:09:05 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



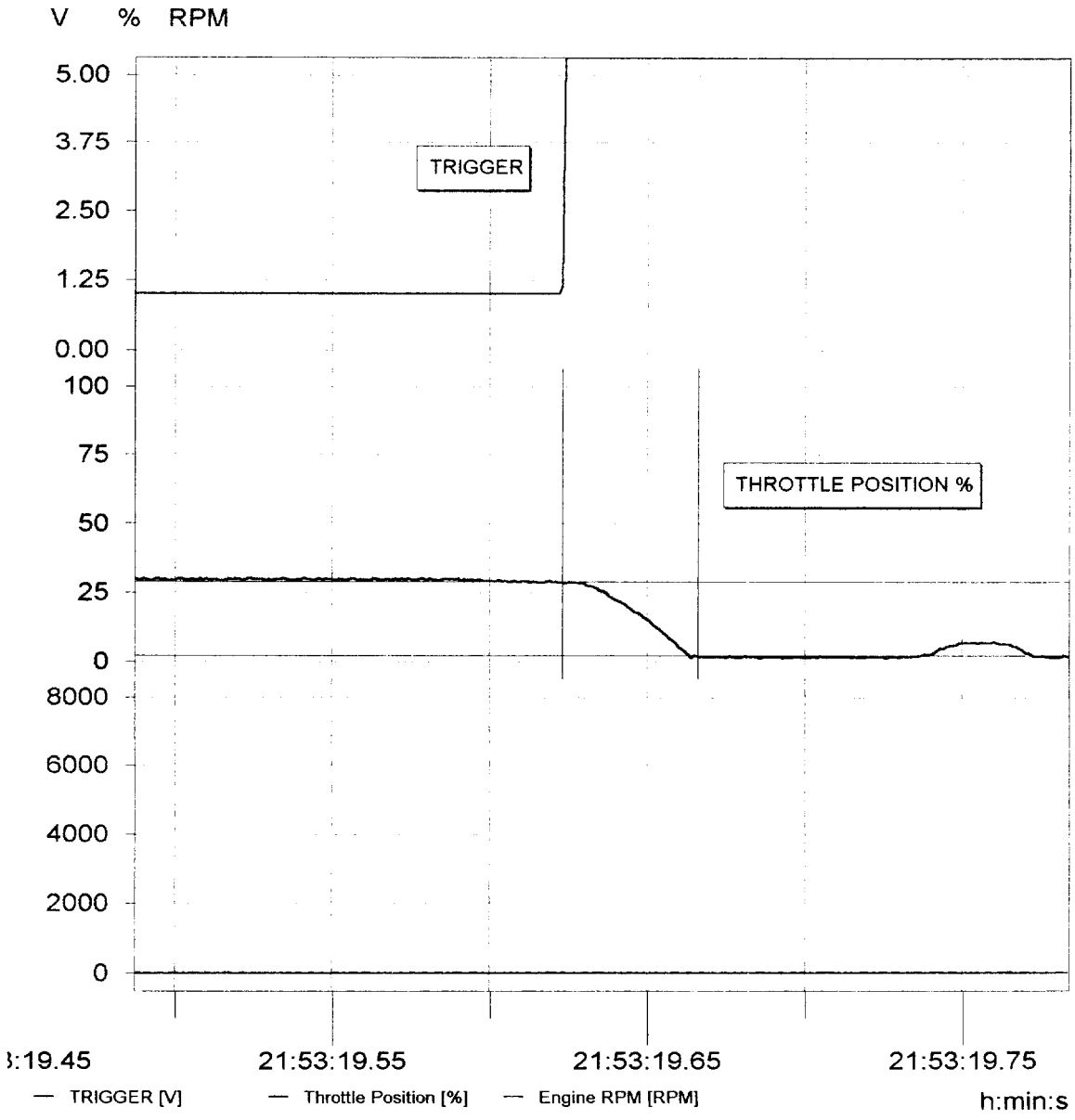
Channel: Throttle Position

Y1:	98.731 %	Y2:	2.112 %
t1:	-5774.874 ms	t2:	-5727.874 ms
dt:	0.047 s	f:	21.277 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 1/ 25% WOT 9:55:37 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



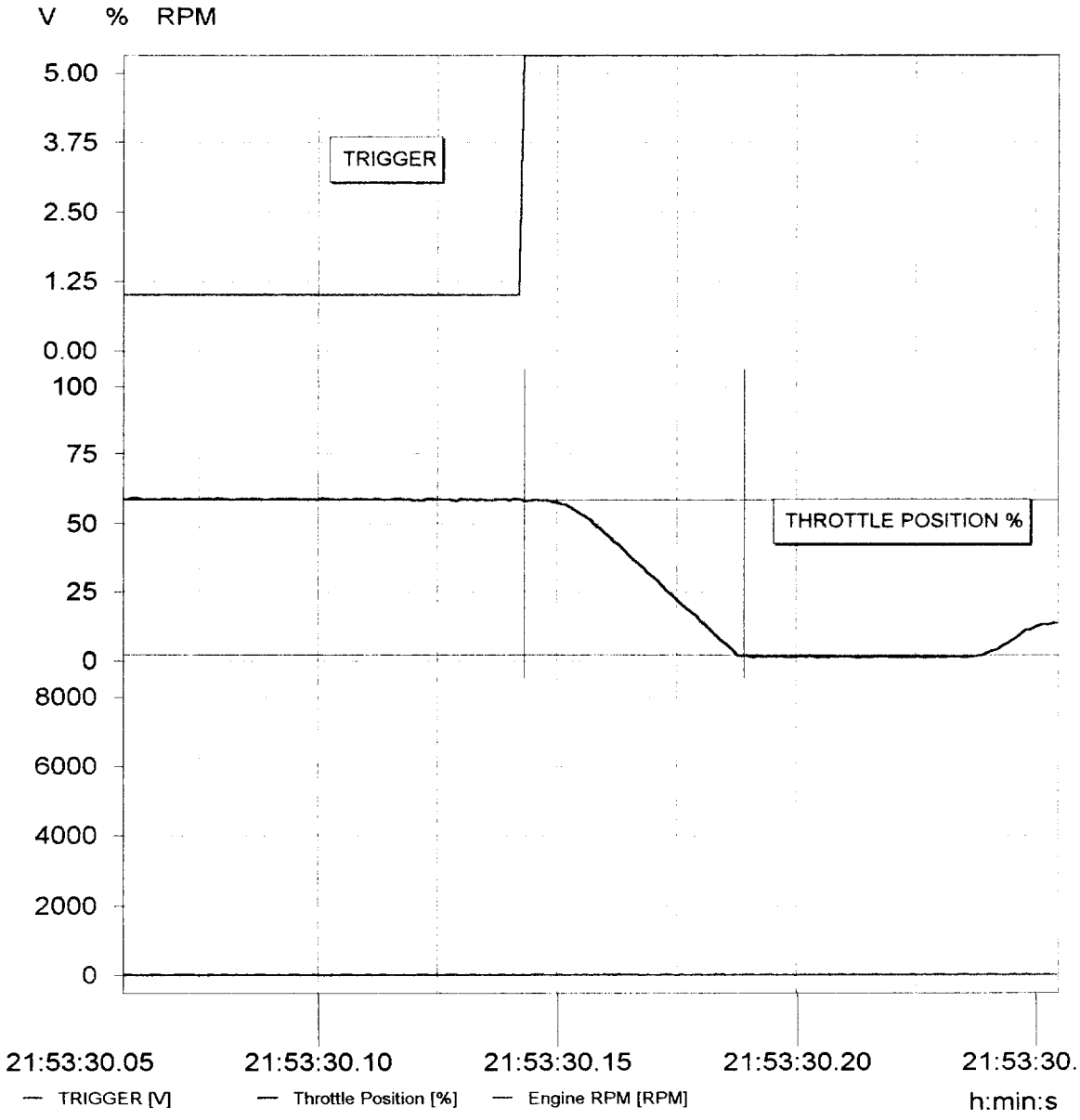
Channel:Throttle Position

Y1:	28.763 %	Y2:	2.018 %
t1:	-35381.658 ms	t2:	-35338.658 ms
dt:	0.043 s	f:	23.256 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 1/ 50% WOT 9:57:48 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



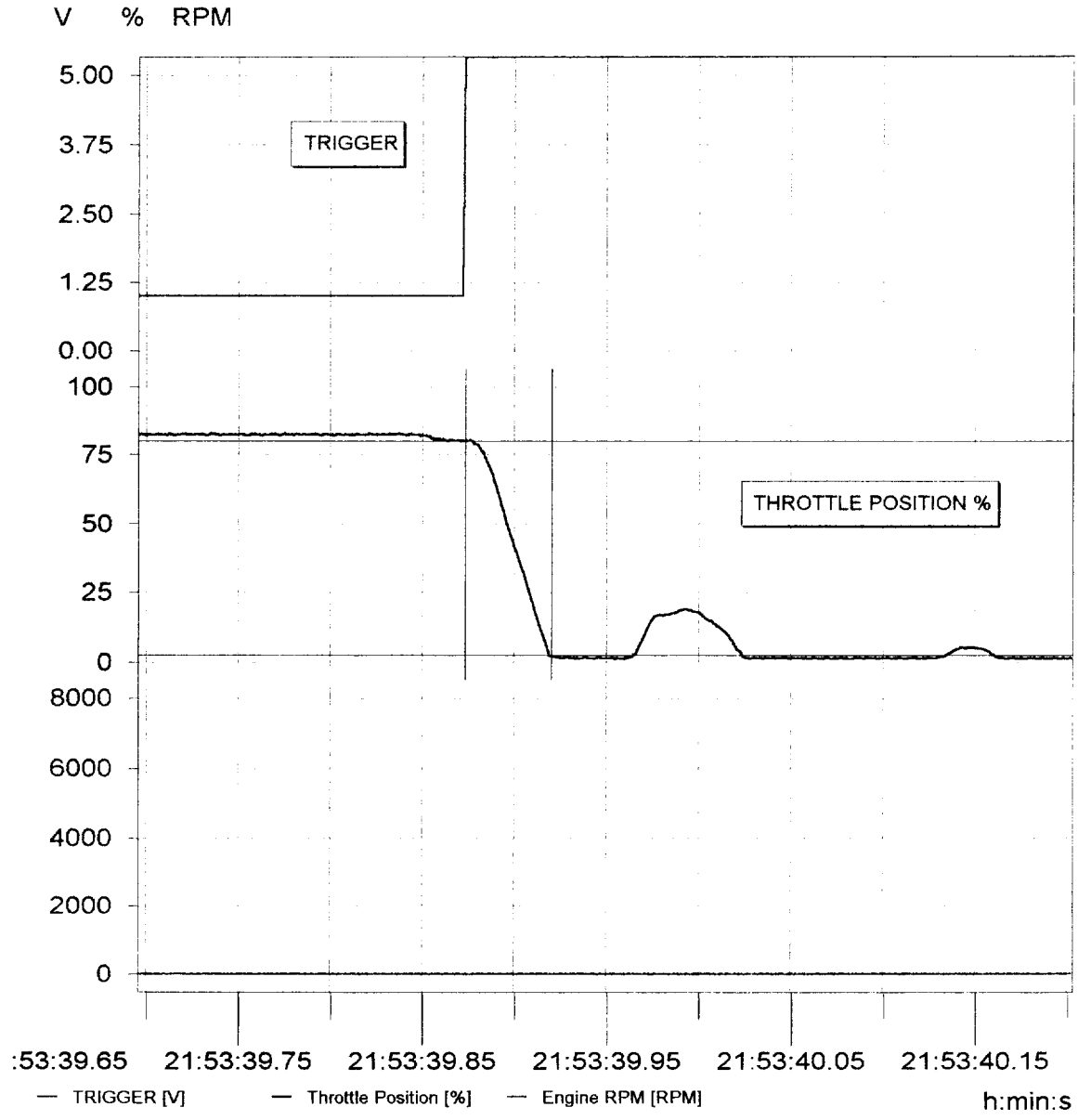
Channel: Throttle Position

Y1:	58.540 %	Y2:	2.062 %
t1:	-24861.658 ms	t2:	-24815.658 ms
dt:	0.046 s	f:	21.739 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 1/ 75% WOT 9:59:09 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



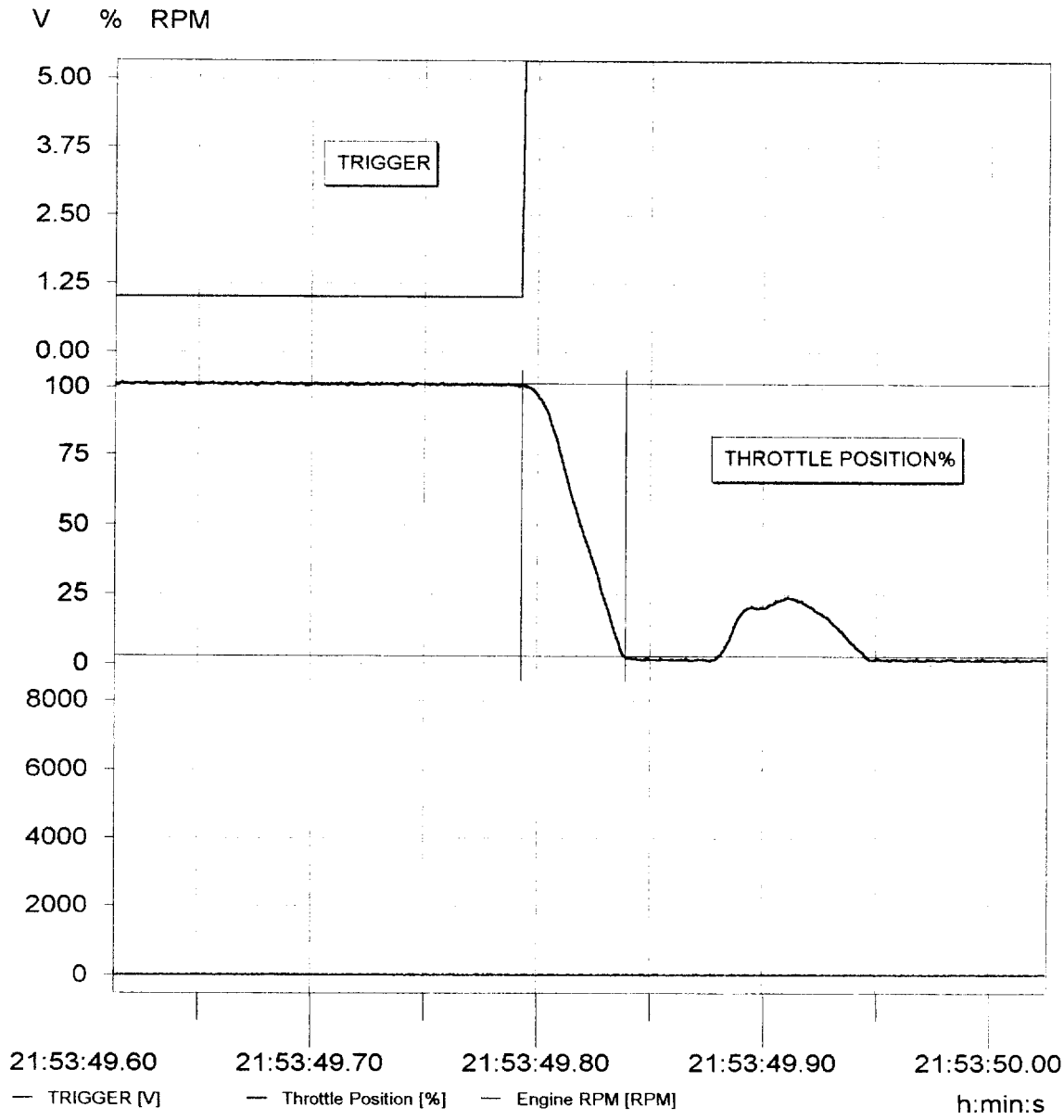
Channel:Throttle Position

Y1:	79.931 %	Y2:	2.522 %
t1:	-15131.658 ms	t2:	-15084.658 ms
dt:	0.047 s	f:	21.277 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 1/ 100% WOT 10:00:12 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



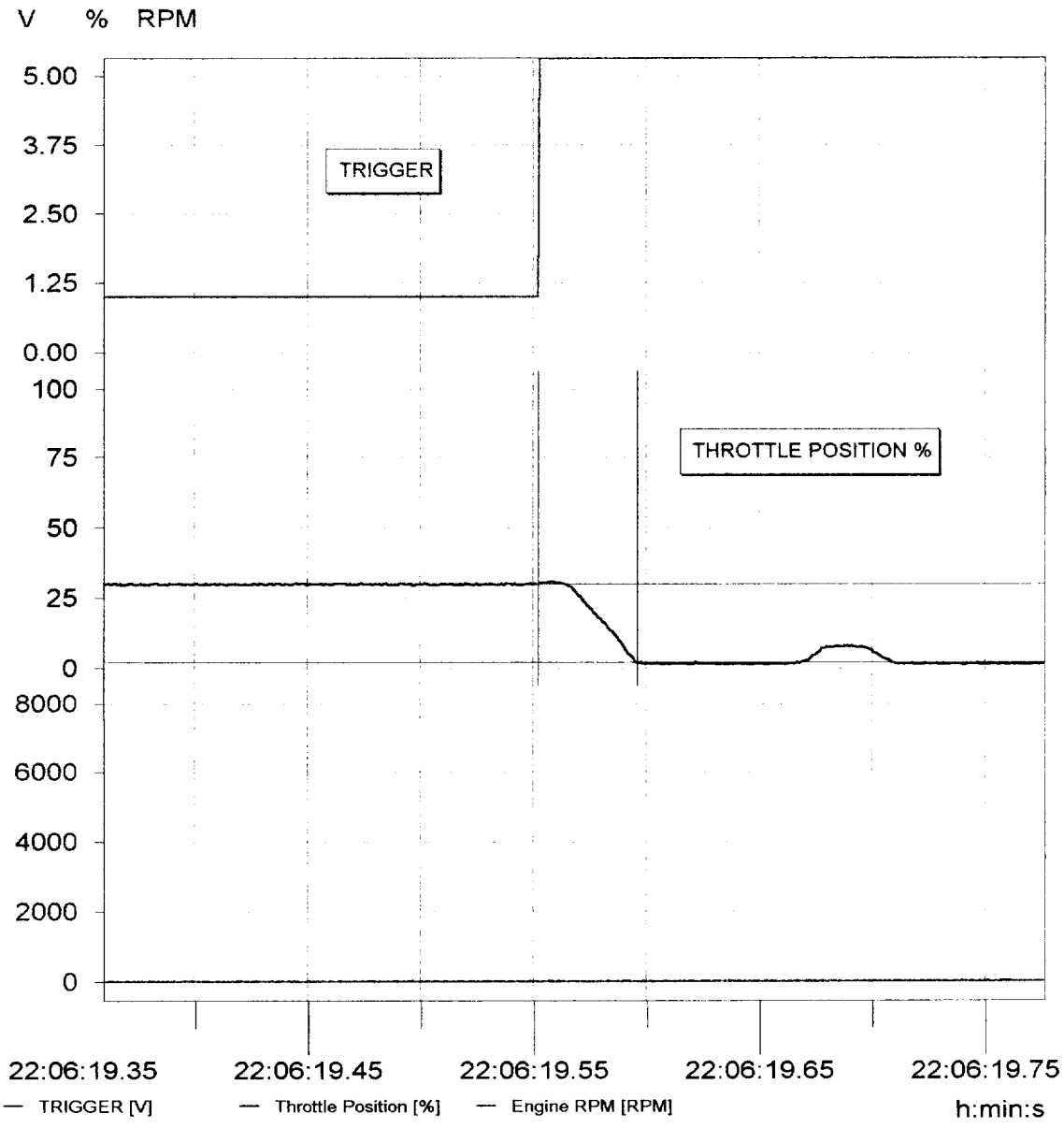
Channel:Throttle Position

Y1:	101.427 %	Y2:	2.670 %
t1:	-5211.658 ms	t2:	-5165.658 ms
dt:	0.046 s	f:	21.739 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 2/ 25% WOT 10:08:43 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



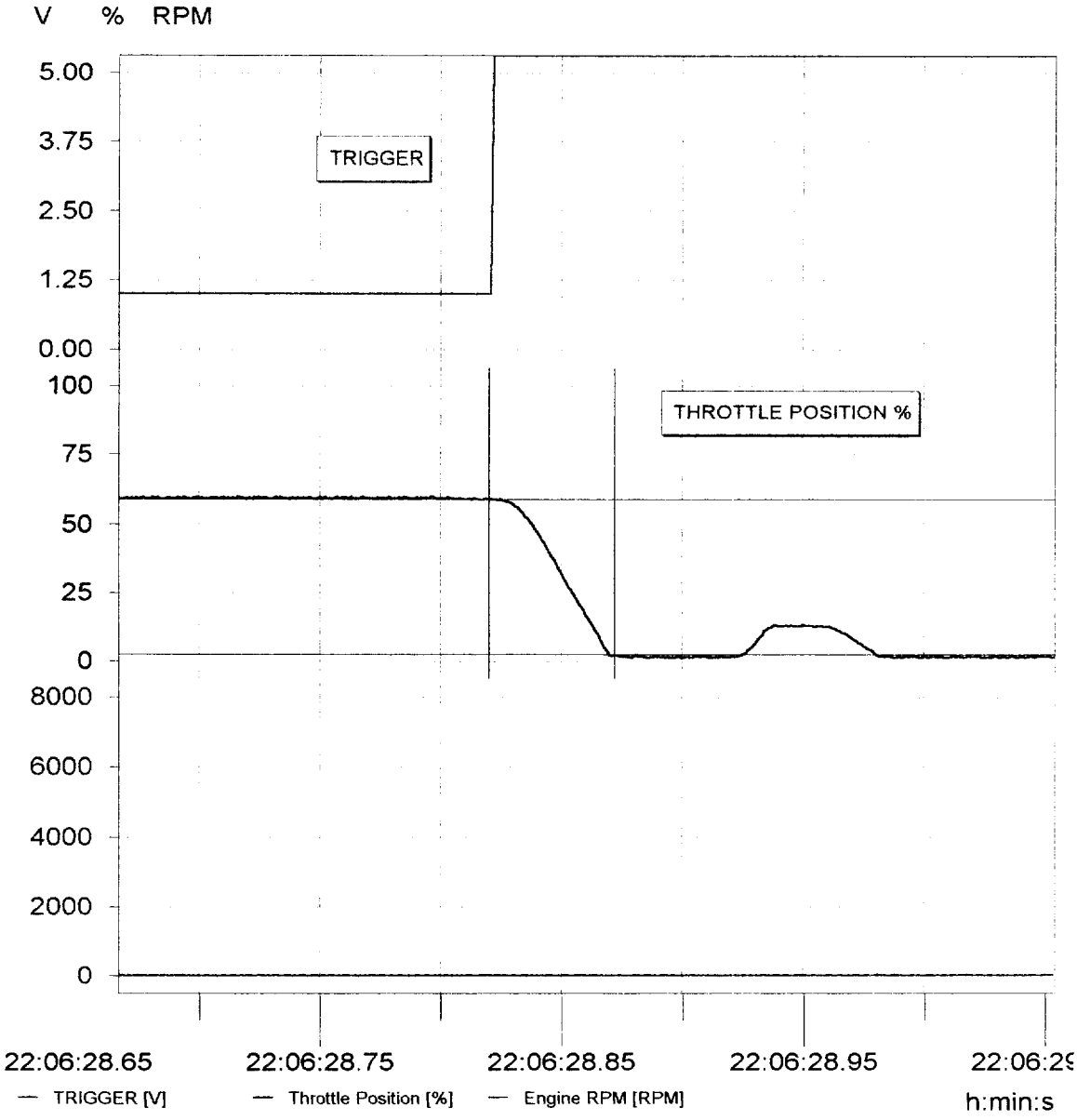
Channel:Throttle Position

Y1:	30.056 %	Y2:	2.107 %
t1:	-34448.510 ms	t2:	-34404.510 ms
dt:	0.044 s	f:	22.727 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 2/ 50% WOT 10:10:40 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



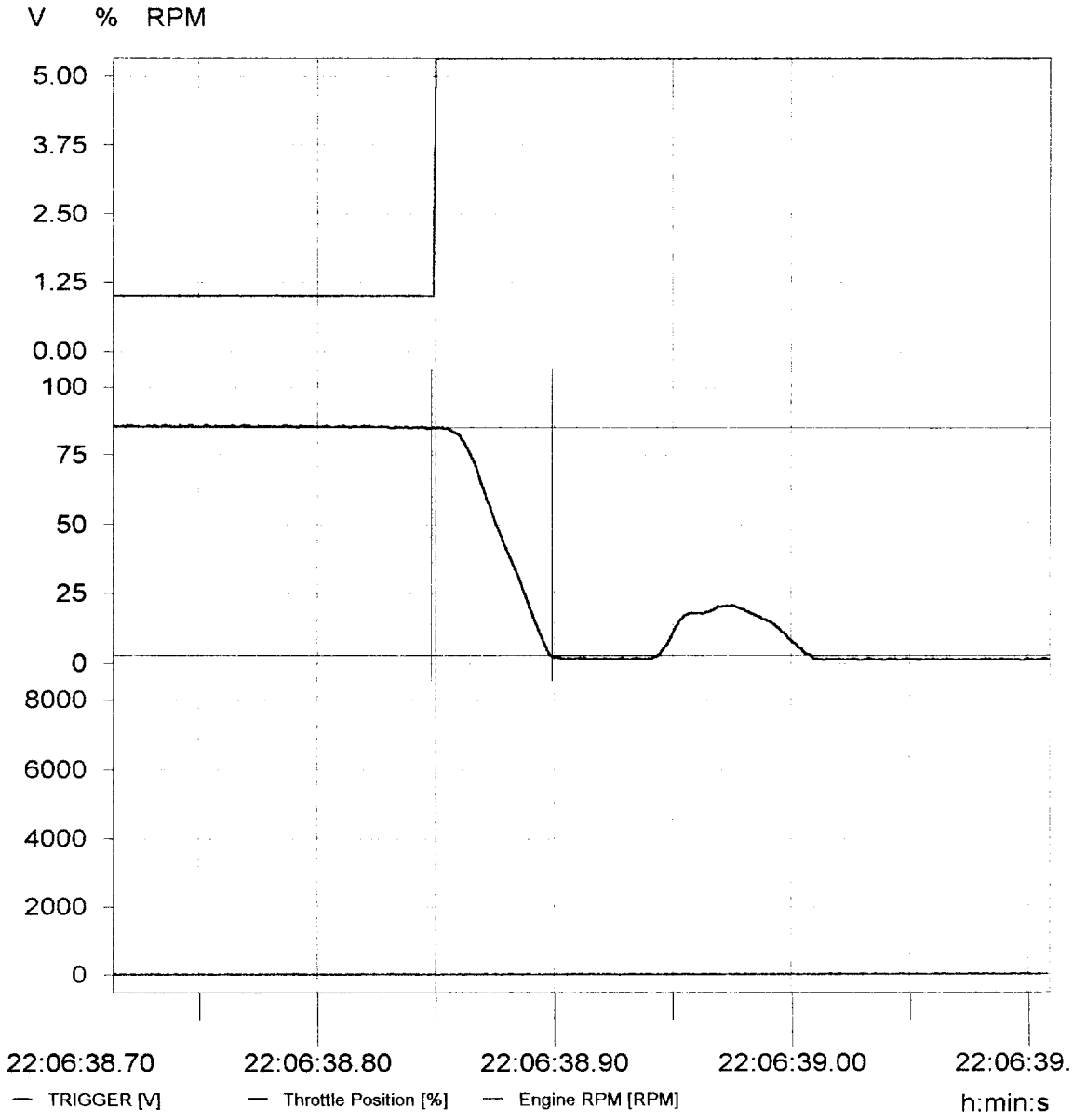
Channel:Throttle Position

Y1:	58.875 %	Y2:	2.304 %
t1:	-25180.510 ms	t2:	-25128.510 ms
dt:	0.052 s	f:	19.231 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 2/ 75% WOT 10:11:52 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



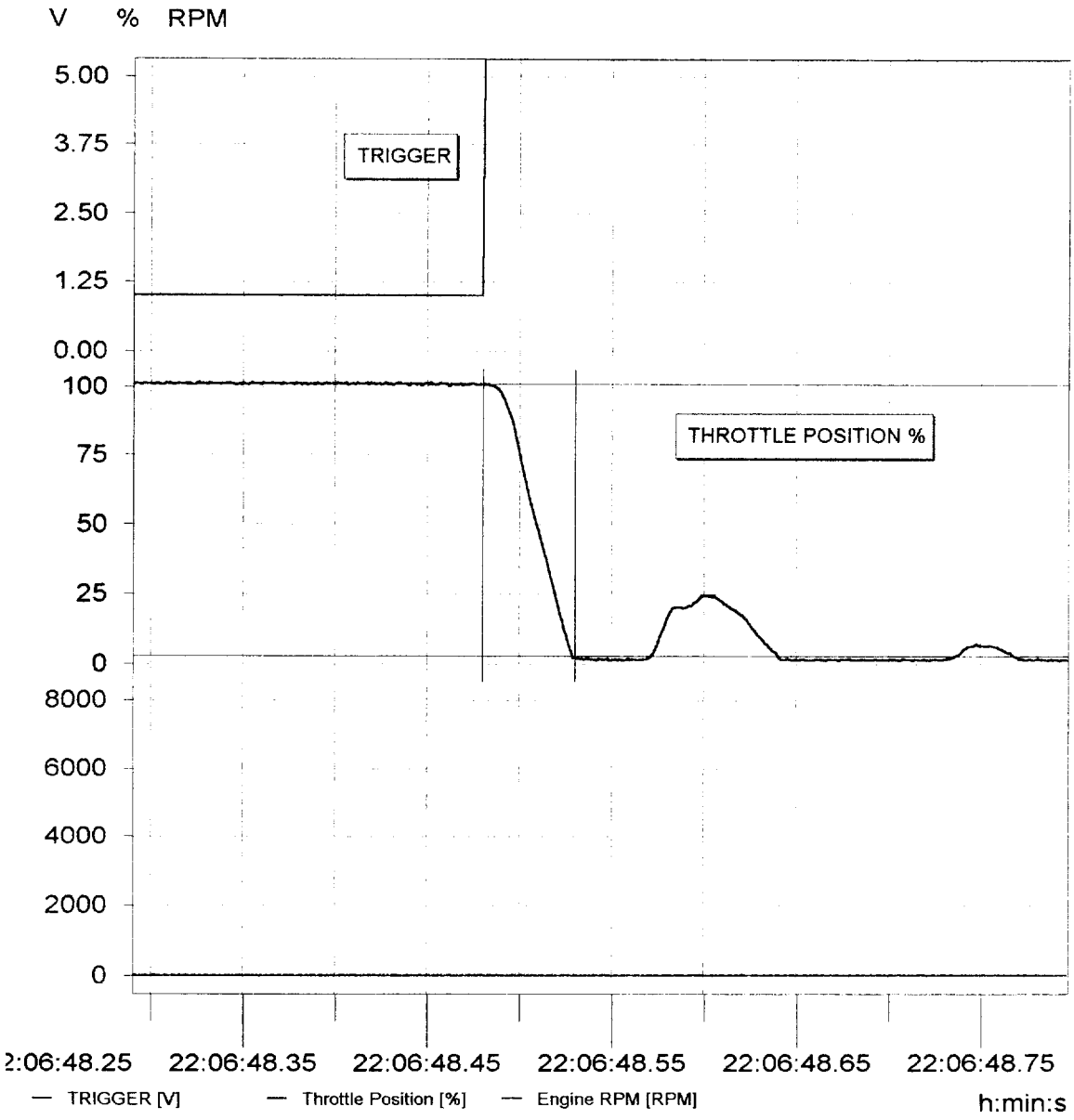
Channel: Throttle Position

Y1:	84.840 %	Y2:	2.620 %
t1:	-15152.510 ms	t2:	-15101.510 ms
dt:	0.051 s	f:	19.608 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SPRING 2/ 100% WOT 10:13:18 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



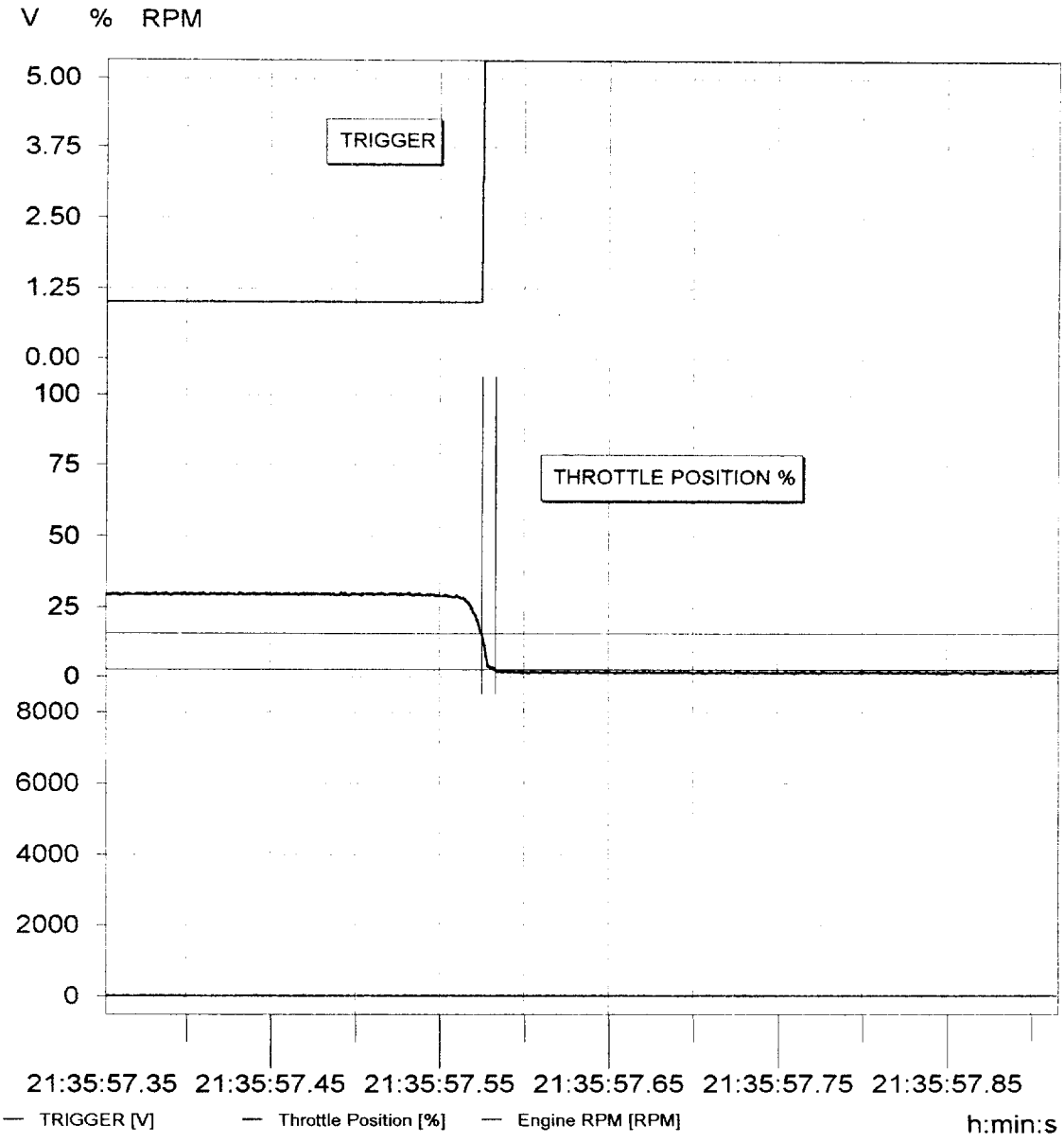
Channel:Throttle Position

Y1:	100.953 %	Y2:	2.719 %
t1:	-5520.510 ms	t2:	-5470.510 ms
dt:	0.050 s	f:	20.000 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SEVERED/ 25% WOT 9:40:30 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



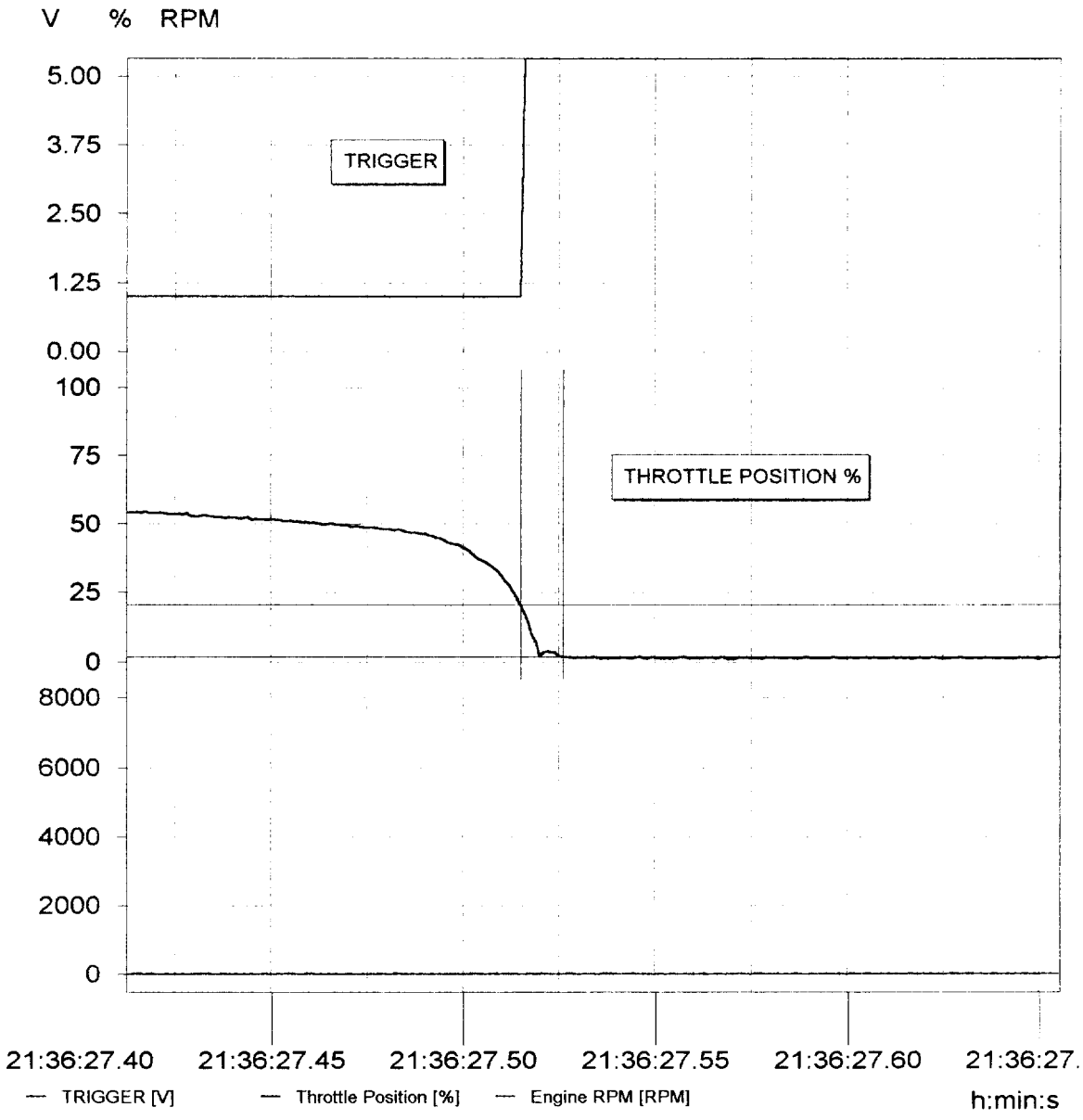
Channel:Throttle Position

Y1:	15.489 %	Y2:	2.492 %
t1:	-55431.679 ms	t2:	-55423.679 ms
dt:	0.008 s	f:	125.000 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SEVERED/ 50% WOT 9:42:31 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



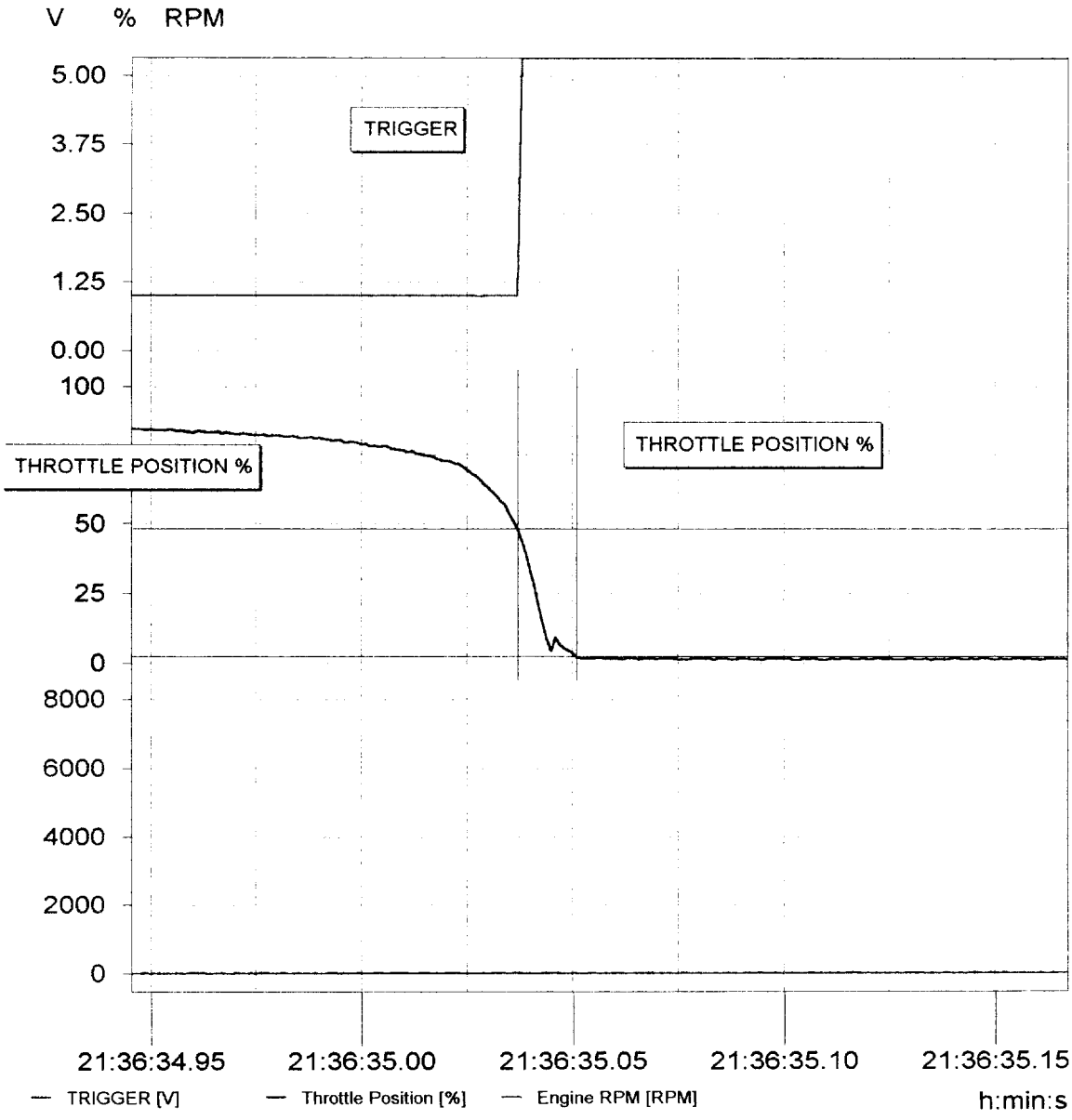
Channel:Throttle Position

Y1:	20.402 %	Y2:	1.830 %
t1:	-25491.679 ms	t2:	-25480.679 ms
dt:	0.011 s	f:	90.909 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SEVERED/ 75% WOT 9:43:58 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



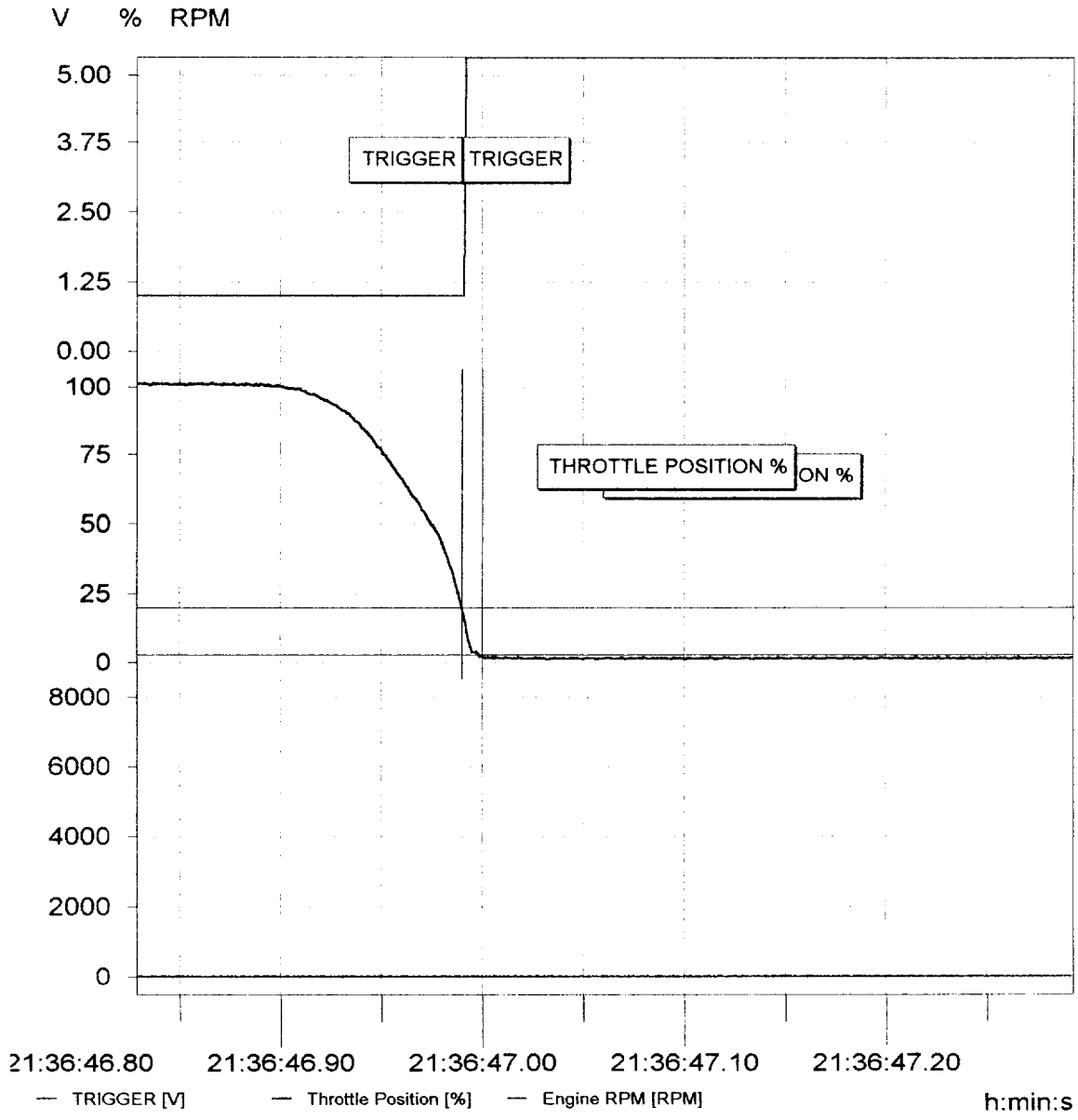
Channel:Throttle Position

Y1:	47.942 %	Y2:	2.196 %
t1:	-17969.679 ms	t2:	-17955.679 ms
dt:	0.014 s	f:	71.429 Hz

FMVSS 124 THROTTLE RETURN TEST

124 COLD/ SEVERED/ 100% WOT 9:45:48 PM 5/4/04

NHTSA C40301 CHRY. PACIFICA



Channel:Throttle Position

Y1:	19.884 %	Y2:	2.660 %
t1:	-6016.679 ms	t2:	-6006.679 ms
dt:	0.010 s	f:	100.000 Hz

SECTION 7
MANUFACTURER'S DRAWINGS

VEHICLE INFORMATION/TEST SPECIFICATIONS
FMVSS 124 - Accelerator Control Systems

2004 MY – CHRYSLER PACIFICA

1.) A sketch of the driver operated accelerator control system (ACS) starting from the accelerator pedal up to and including the fuel metering device (carburetor, fuel injectors, fuel distributor, or fuel injection pump).

- See the Chrysler Pacifica Engineering Graphics Attachments I & II

2.) For Normal ACS operation, the method utilized to determine the engine idle state (air throttle plate position, fuel delivery rate, other).

- The engine idle state was determined by recording throttle position sensor (TPS) idle voltage prior to the start of test.

3.) For Fail-Safe operation of the ACS (disconnection or severance), the method utilized to determine return of engine power to the idle state (air throttle plate position, fuel delivery rate, air intake, engine rpm, other)

- With one of the two throttle body return springs disconnected, return of the engine power idle state was verified by measuring and recording TPS idle voltage.

4.) Is the vehicle ACS equipped with any of the following:
Accelerator Pedal Position Sensor (APS)
Throttle Plate Position Sensor (TPS)
Electronic Control Module (ECM)
Air throttle plate actuator motor

- The test vehicle was equipped with a throttle plate position sensor (TPS) and an electronic control module (ECM).

5.) If air throttle plate equipped, is there a procedure which can be utilized by the test laboratory to measure the position of the throttle plate by tapping into the TPS or ECM? If so, please describe.

- Throttle plate position was verified by tapping into the throttle position sensor (TPS) with a wire harness jumper.

6.) Point(s) chosen to demonstrate compliance with FMVSS 124 for single point disconnect and severance.

- The point chosen to show compliance with FMVSS 124 for single point disconnects was in the throttle body. One of the two throttle return springs was completely disconnected to demonstrate a worst case condition.

7.) Where applicable, were connections in the ACS beyond the ECM such as the fuel injectors tested for disconnection and severance. If yes, provide details.

- Not applicable – There were no other disconnects made in the accelerator control system.

8.) Where applicable, were idle return times tested for electrical severance accompanied by shorting to ground? If yes, please provide details.

- Not applicable – No idle return times were tested for electrical severance.

9.) All sources of return energy (springs) for the accelerator pedal and if applicable, the air throttle plate.

- The source of return energy for the throttle body, is the throttle return spring. One of the two springs was disconnected to demonstrate idle return times

10.) If fuel delivery rate is used to demonstrate return to idle state, provide:
   A. The method used to measure this signal i.e. connection to standard SAE J1587 data bus.
   B. Equipment required to measure signal.
   C. Fuel rate signal output range at the idle state.

- Fuel delivery was not used to demonstrate return to idle times.

11.) Is the ACS equipped with a limp home mode? If yes, provide operation description.

- The Chrysler Pacifica has a mechanical throttle control system. The system is not equipped with a limp home mode.

12.) Method by which the test laboratory can record engine RPM by connection to ECM, OBD connector, etc.

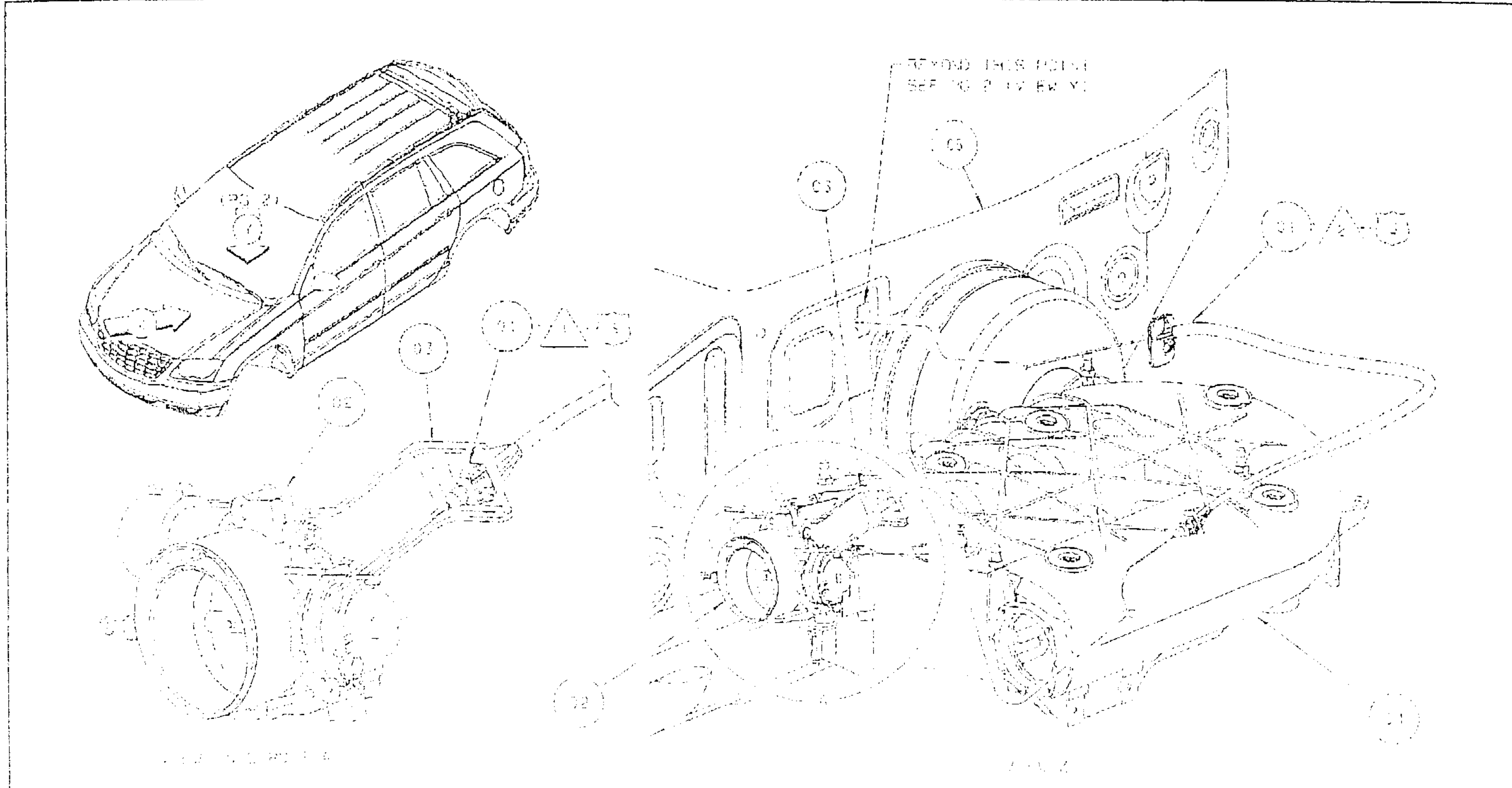
- The engine RPM can be monitored by using the OBD plug located under the instrument panel. A DRB (diagnostic readout box – available in the field) can be used to monitor and capture RPM data.

Attachment I

DAIMLERCHRYSLER

Engineering Graphics System

Report Created: 09/13/02 1:18:42 PM



Last Overview Package Revision:

Part VSC

Engineering Graphics
TCF Overview

GR Number:
GR Status:
Model-Year:
Vehicles:
Illustrator:
Ref Data:
Overview VSC
Overview Title

2003-CS 7000 - Overview - 1

Page 1 of

Rev | Ch No | Revisions Affecting This Page | Date | By

FORM 12
10/24/2003

Attachment II

DAIMLERCHRYSLER

Engineering Graphics System

Report Created: 09/13/02 1:18:42 PM

Last Overview Package Revision: B

Rev	CN No.	Revisions Effecting This Page	Date	By
B	2060/K013A	ITEM 01 04861687AB WAS AA	09/04/02	KS23
		ITEM 06 WAS CANCELLED		
	[illegible]	ITEM 08 WAS ADDED/ITEM 01 & VIEW X WERE REVISED	[illegible]	
		VIEW Y-NOTE SAFETY WERE REMOVED FROM ITEM 01 TO ITEM 08		
A		INITIAL RELEASE OVERVIEW	07/17/02	SM[illegible]

Part VSC: 7120

Engineering Graphics
TCF Overview

GR Number: 03CS0155 — GR Status: Complete
Model-Year: 2003 — Vehicles: CS
Illustrator: K. SESI-SENAWI — Rel Date: 13-Sep-02
Overview VSC: 7000 - ACCELERATOR CONTROL SYSTEM

Overview Title
THROTTLE LINKAGE

2003-CS 7000 - Overview - 1 — Page: 2 of: 3

FORM 12
10/24/2003