

SAFETY COMPLIANCE TESTING FOR FMVSS 124H ACCELERATOR CONTROL SYSTEMS

**DAIMLERCHRYSLER CORPORATION
2004 CHRYSLER PACIFICA, MPV
NHTSA NO. C40301**

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



MAY 10, 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**

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the author(s) and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names or products are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Prepared By: Dellie Messick
Approved By: Shawn B. Farnham
Approval Date: 5/10/04

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By: St. John
Acceptance Date: 5/13/04

1. Report No. 124H-GTL-04-003	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 10, 2004
		6. Performing Organ. Code GTL
7. Author(s) Grant Farrand, Project Engineer Debbie Messick, Project Manager		8. Performing Organ. Rep# GTL-DOT-04-124-003
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 7 th Street, S.W., Room 6115 Washington, DC 20590		13. Type of Report and Period Covered Final Test Report April 21, 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: NONE		
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 7 th St., S.W. Washington, DC 20590 Telephone No. (202) 366-4946
19. Security Classif. (of this report) UNCLASSIFIED	21. No. of Pages 49	22. Price
20. Security Classif. (of this page) UNCLASSIFIED		

TABLE OF CONTENTS

SECTION		PAGE
1	Purpose of Compliance Test	1
2	Test Procedure and Discussion of Results	2
3	Compliance Test Data	3
4	Test Equipment List and Calibration Information	9
5	Photographs	10
	5.1 Front of Vehicle	
	5.2 Left Side View of Vehicle	
	5.3 Right Side View of Vehicle	
	5.4 Vehicle's Certification and Tire Information Label	
	5.5 View of Throttle Body	
	5.6 Throttle Position Sensor Close-up	
	5.7 Throttle Position Sensor Location	
	5.8 Throttle Return Springs #1 and #2	
	5.9 Throttle Return Springs #1 and #2 Location	
	5.10 Accelerator Pedal	
	5.11 Vehicle in Test Chamber	
	5.12 Test Instrumentation Set-up	
6	Plots	23
7	Manufacturer's Drawings	40

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 performed at high ambient temperature of 52° C (-5 +0) in accordance with the NHTSA Test Procedure TP-124-06.

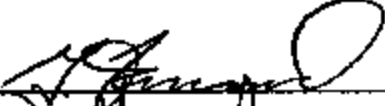
SECTION 3
COMPLIANCE TEST DATA

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: APRIL 21, 2004
TEST LAB: GENERAL TESTING LABORATORIES
VEHICLE ENGINE TYPE: V6 GVWR: 2588 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: 

DATE: 04/21/04

APPROVED BY: 

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: APRIL 21, 2004

Check one:

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

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	4250	120.0	120.1	2%	27	P
50%	50	4250	130	120.2	2%	32	P
75%	75	4250	135	121	2%	37	P
100%	100		140.8	122.2	2%	37	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:

RECORDED BY: *[Signature]*

DATE: 04/21/04

APPROVED BY: *[Signature]*

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: APRIL 21, 2004

Check one:

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

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	4250	133	122.0	2%	36	P
50%	50	4250	140.5	122.1	2%	40	P
75%	75	4250	150.0	122.8	2%	46	P
100%	100	4250	154.6	123.0	2%	50	P

RETURN TIME REQUIREMENTS:

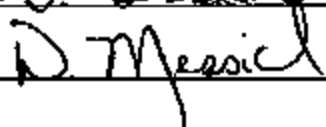
- 1 second (1000 ms) for vehicles less than 4536 kg.
- 2 seconds (2000 ms) for vehicles more than 4536 kg.
- 3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL

REMARKS:

RECORDED BY: 

DATE: 04/21/04

APPROVED BY: 

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: APRIL 21, 2004

Check one:

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

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	4250	143.5	121.9	2%	35	P
50%	50	4250	148.7	121.0	2%	42	P
75%	75	4250	150.1	120.8	2%	47	P
100%	100	4250	153.0	120.2	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:

RECORDED BY: *[Signature]*

DATE: 04/21/04

APPROVED BY: *[Signature]*

**DATA SHEET 4
FAIL-SAFE OPERATION SEVERED**

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2004 CHRYSLER PACIFICA, MPV

VEHICLE NHTSA NO.: C40301

DATE OF TEST: APRIL 21, 2004

Check one:

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

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	4250	146.2	121.7	2%	22	P
50%	50	4250	155.6	122.0	2%	26	P
75%	75	4250	168.0	121.2	2%	26	P
100%	100	4250	180.0	120.2	2%	30	P

RETURN TIME REQUIREMENTS:

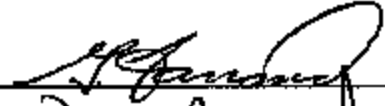
1 second (1000 ms) for vehicles less than 4536 kg.

2 seconds (2000 ms) for vehicles more than 4536 kg.

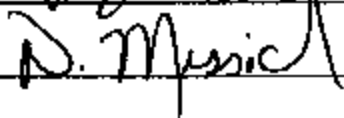
3 seconds (3000 ms) for vehicles exposed to -18° C or less

PASS X FAIL

REMARKS:

RECORDED BY: 

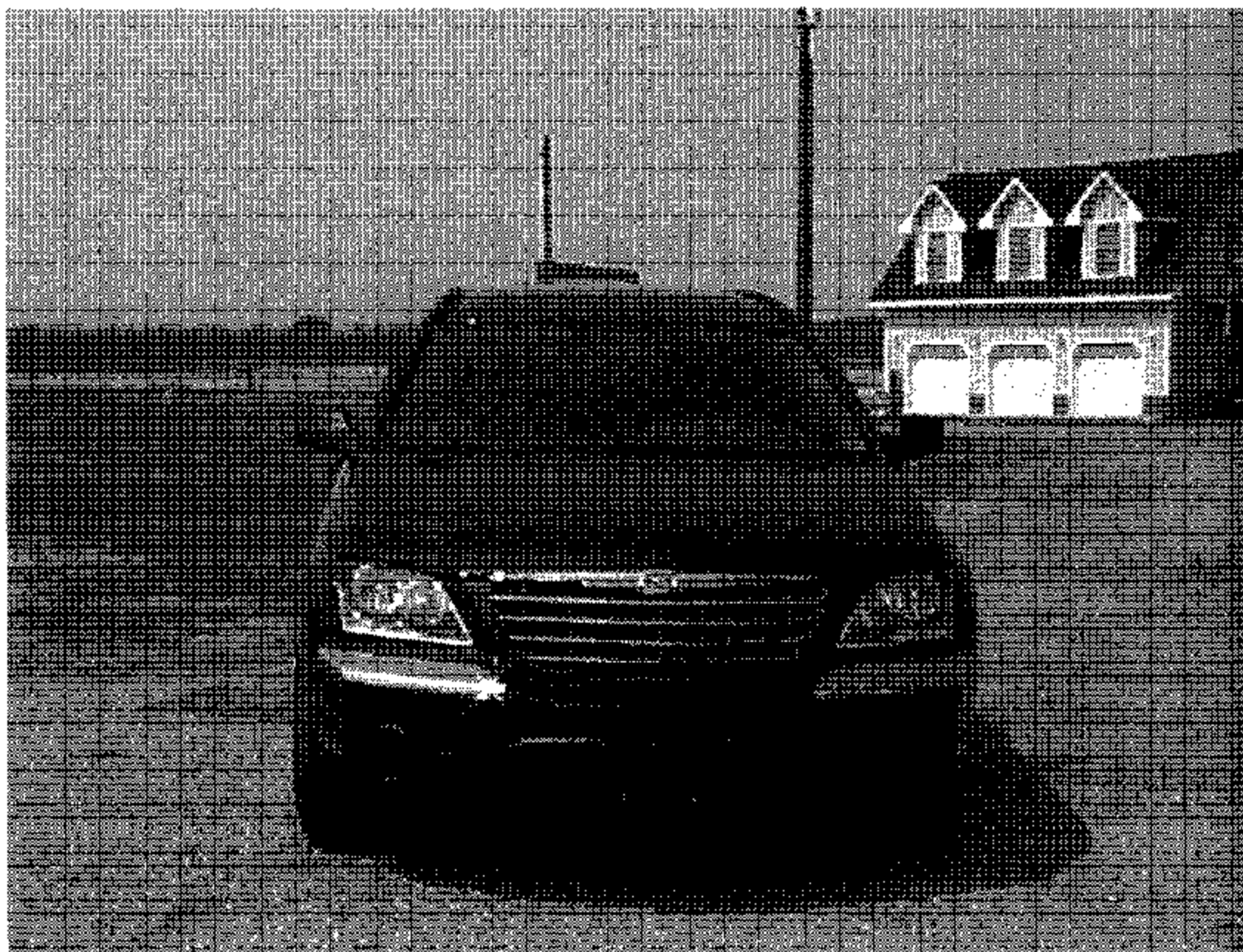
DATE: 04/21/04

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	0 /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



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

FIGURE 5.1
FRONT VIEW OF VEHICLE



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

FIGURE 5.2
LEFT SIDE VIEW OF VEHICLE



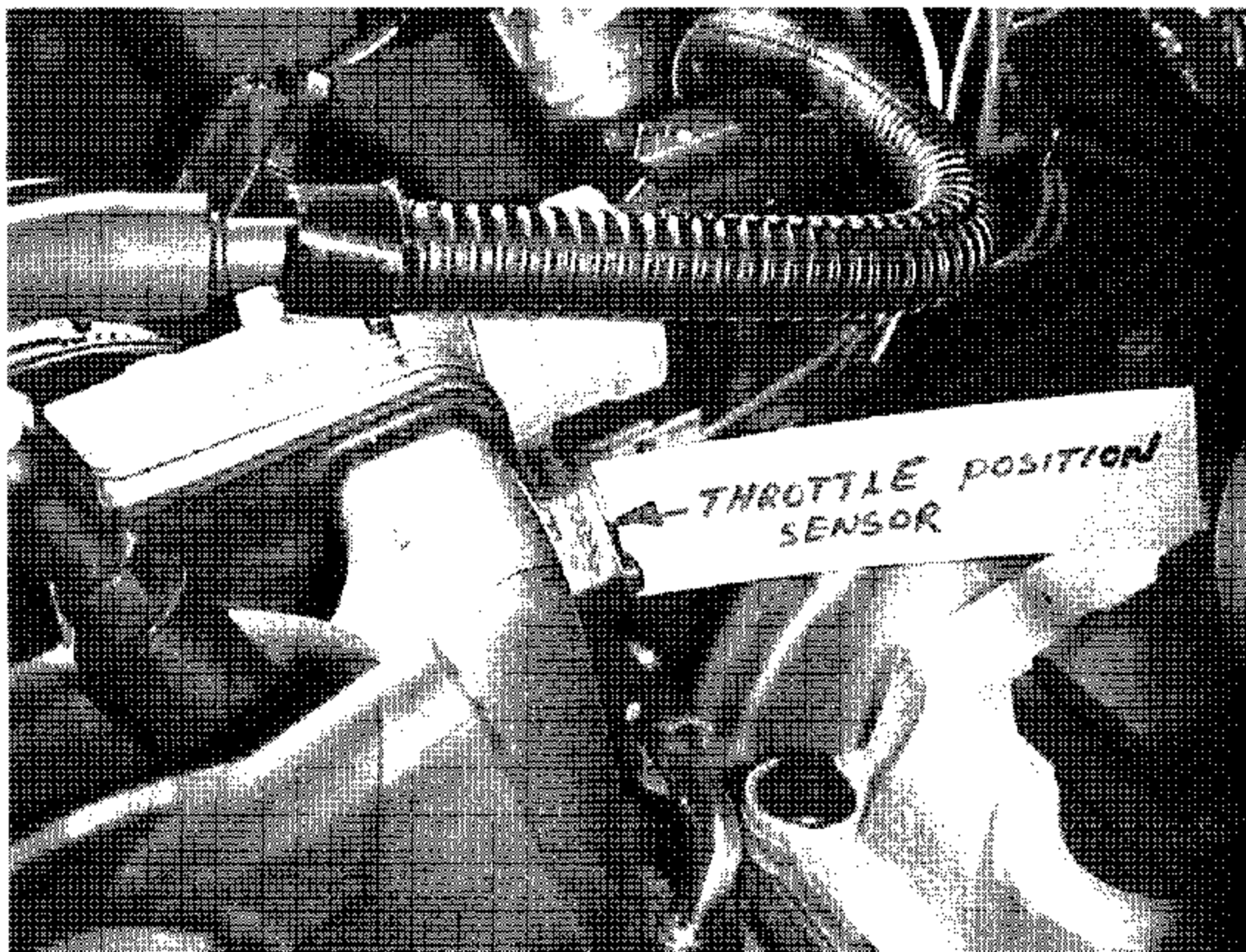
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124H

FIGURE 5.3
RIGHT SIDE VIEW OF VEHICLE



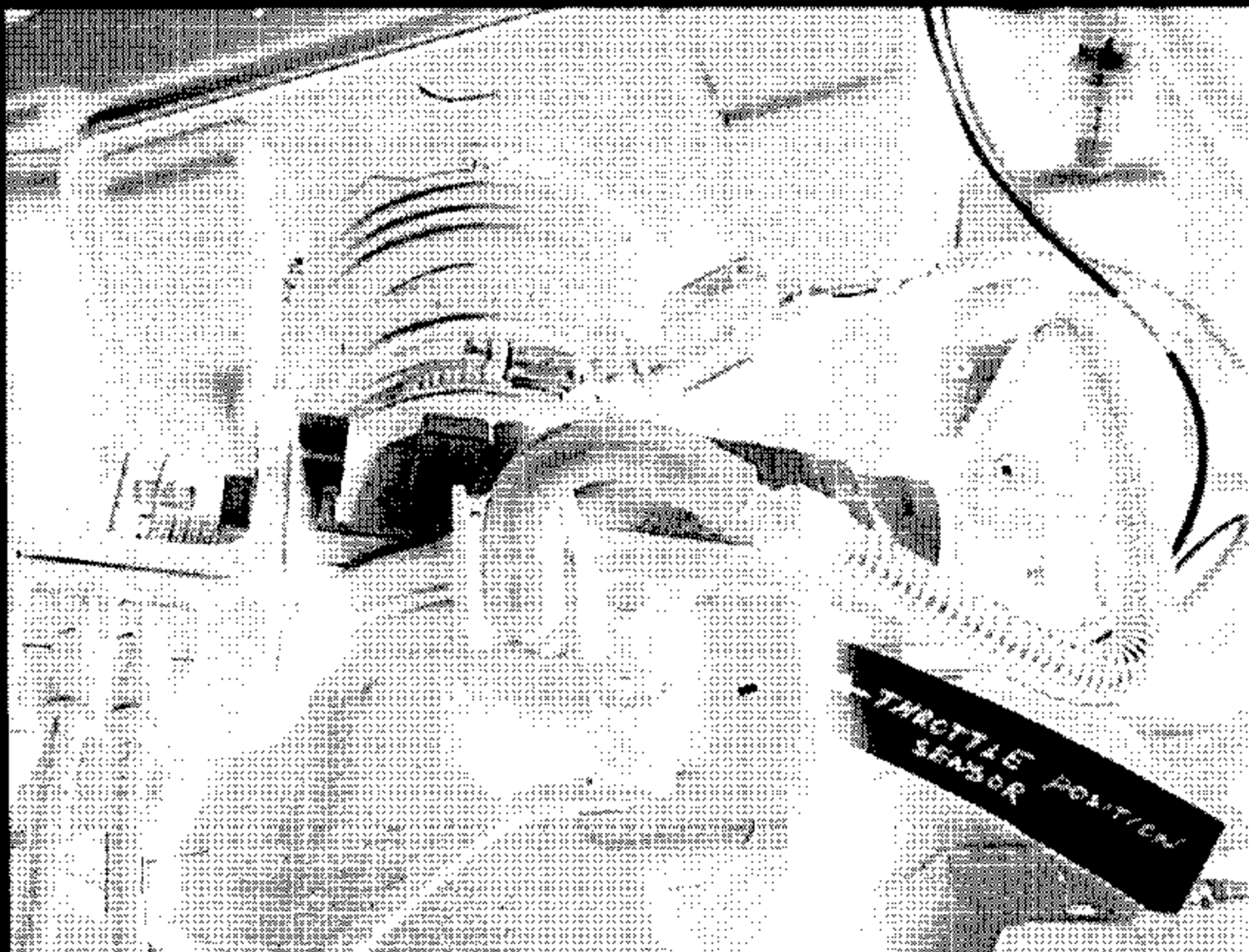
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124H

FIGURE 5.5
VIEW OF THROTTLE BODY



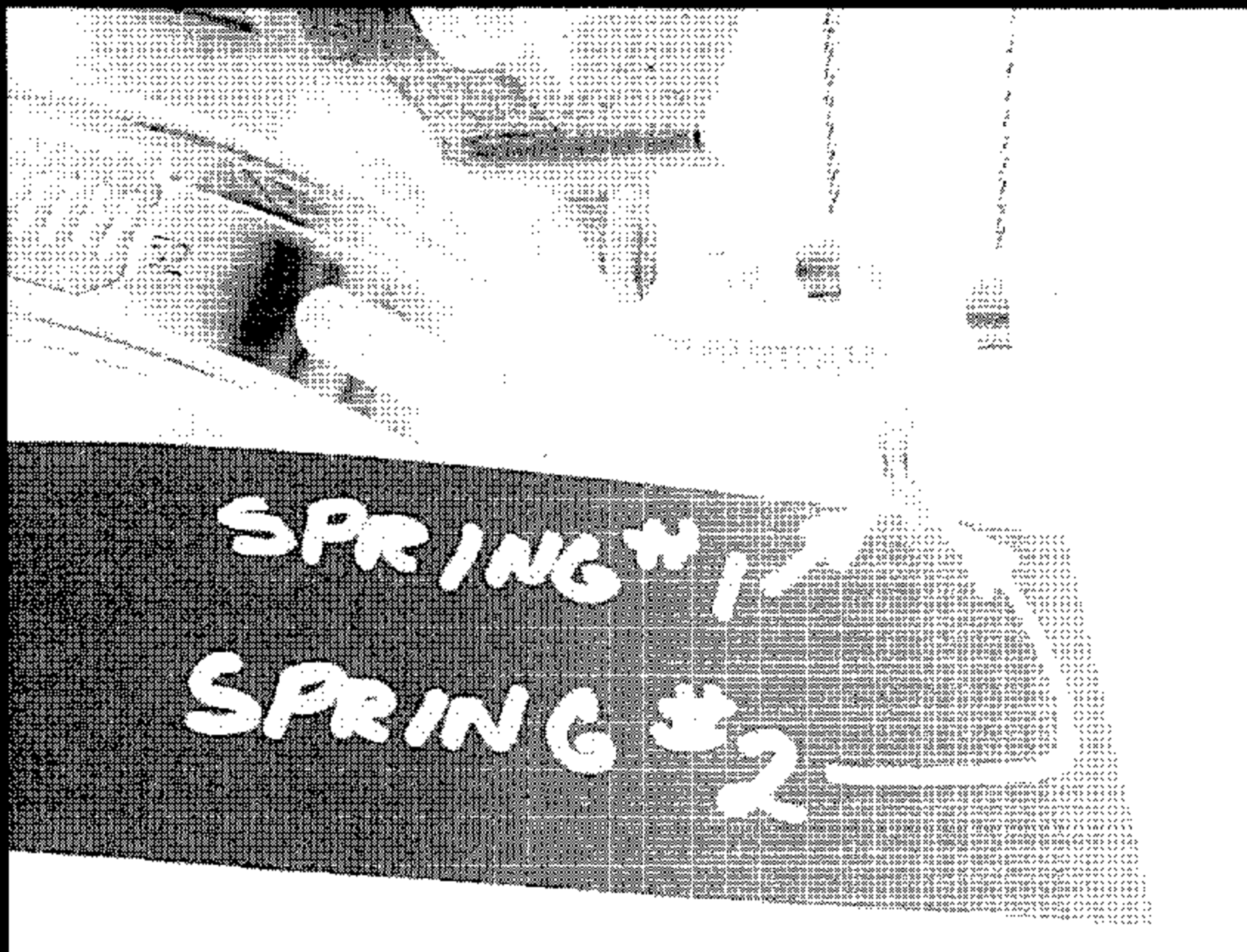
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124H

FIGURE 5.6
THROTTLE POSITION SENSOR CLOSE-UP



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

FIGURE 5.7
THROTTLE POSITION SENSOR LOCATION



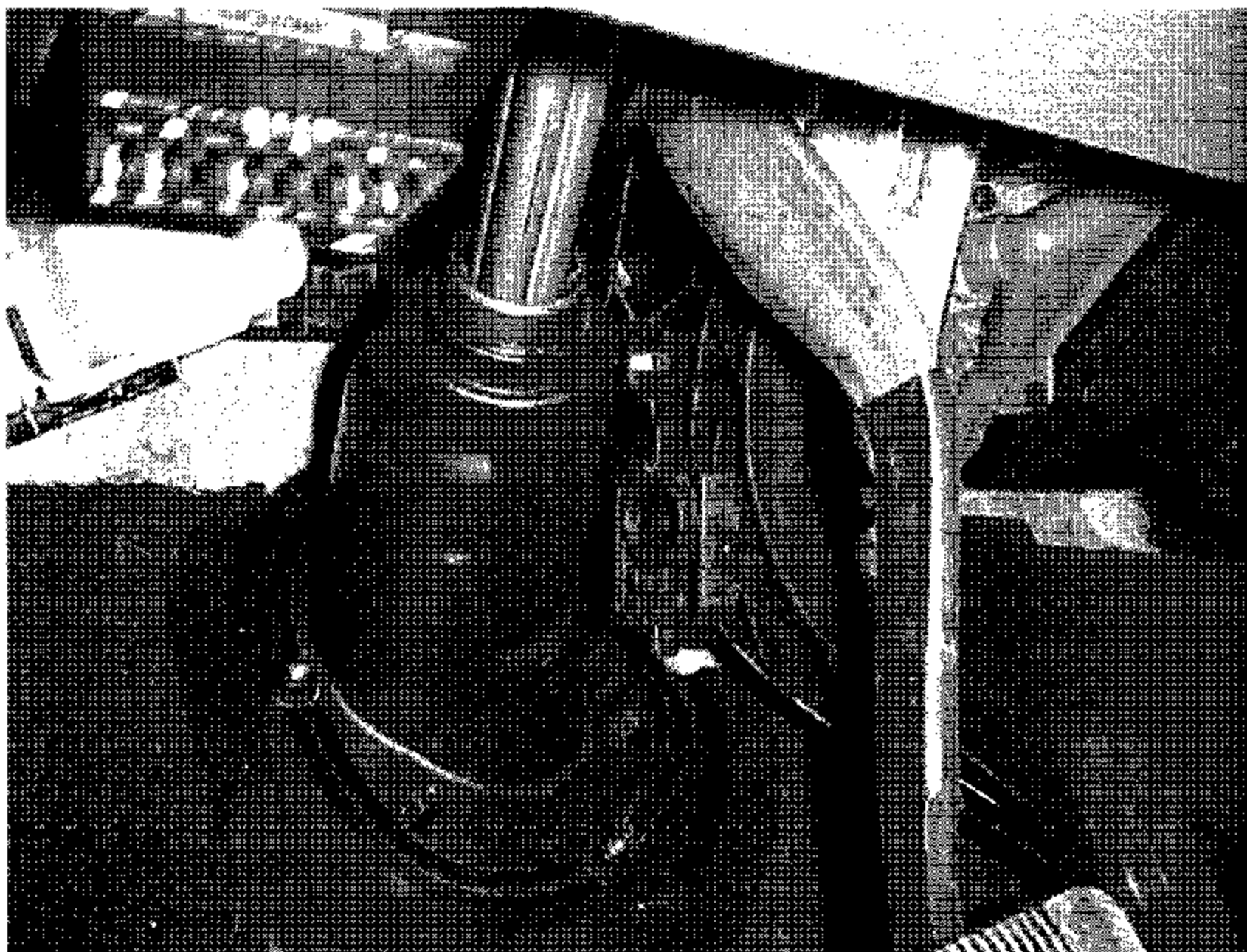
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124H

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



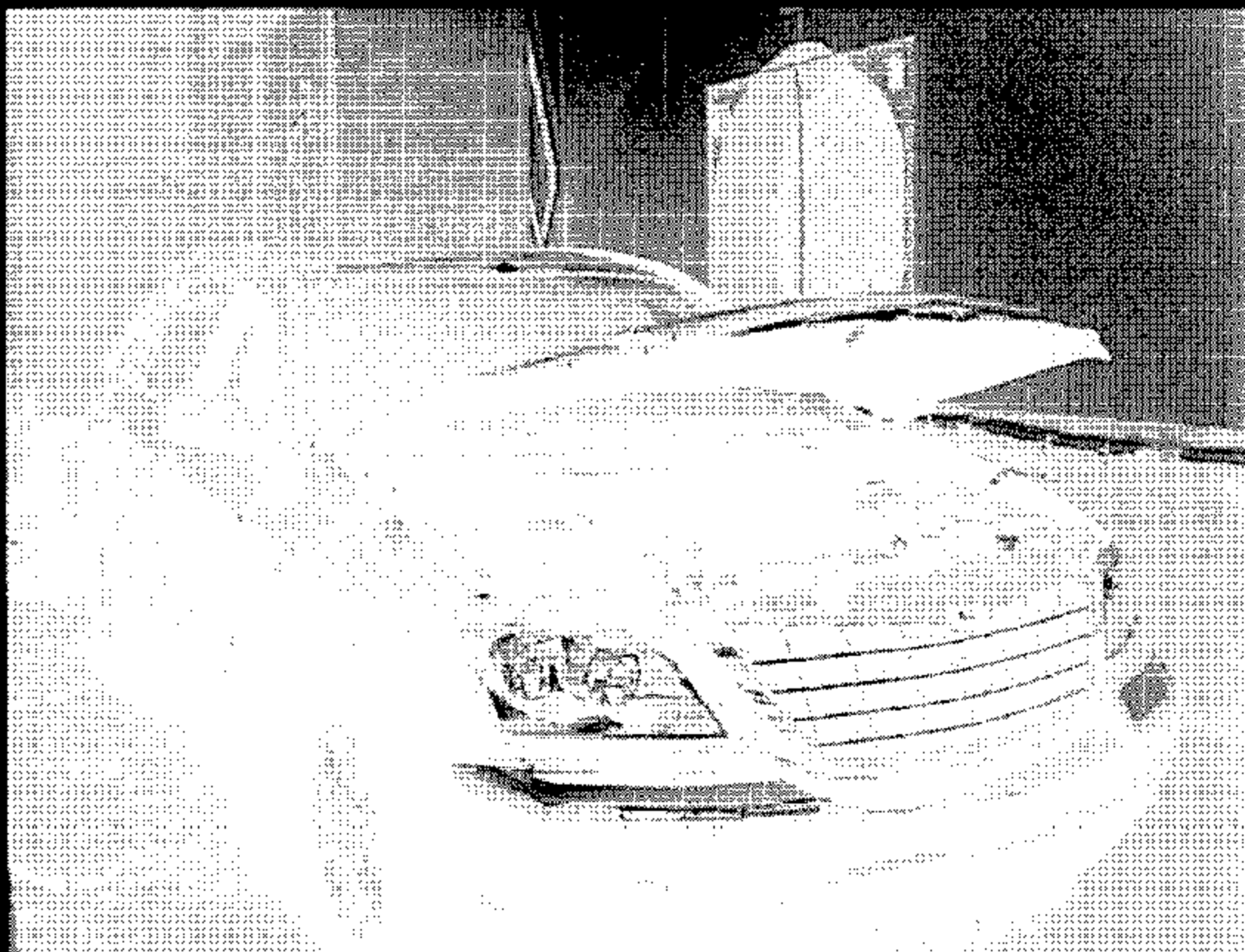
2004 CHRYSLER PACIFICA
NHTSA NO. C40301
FMVSS NO. 124H

FIGURE 5.9
THROTTLE RETURN SPRINGS #1 & #2
LOCATION



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

FIGURE 5.10
ACCELERATOR PEDAL



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

FIGURE 5.11
VEHICLE IN TEST CHAMBER



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

FIGURE 5.12
124 TEST INSTRUMENTATION SET-UP

SECTION 6 PLOTS

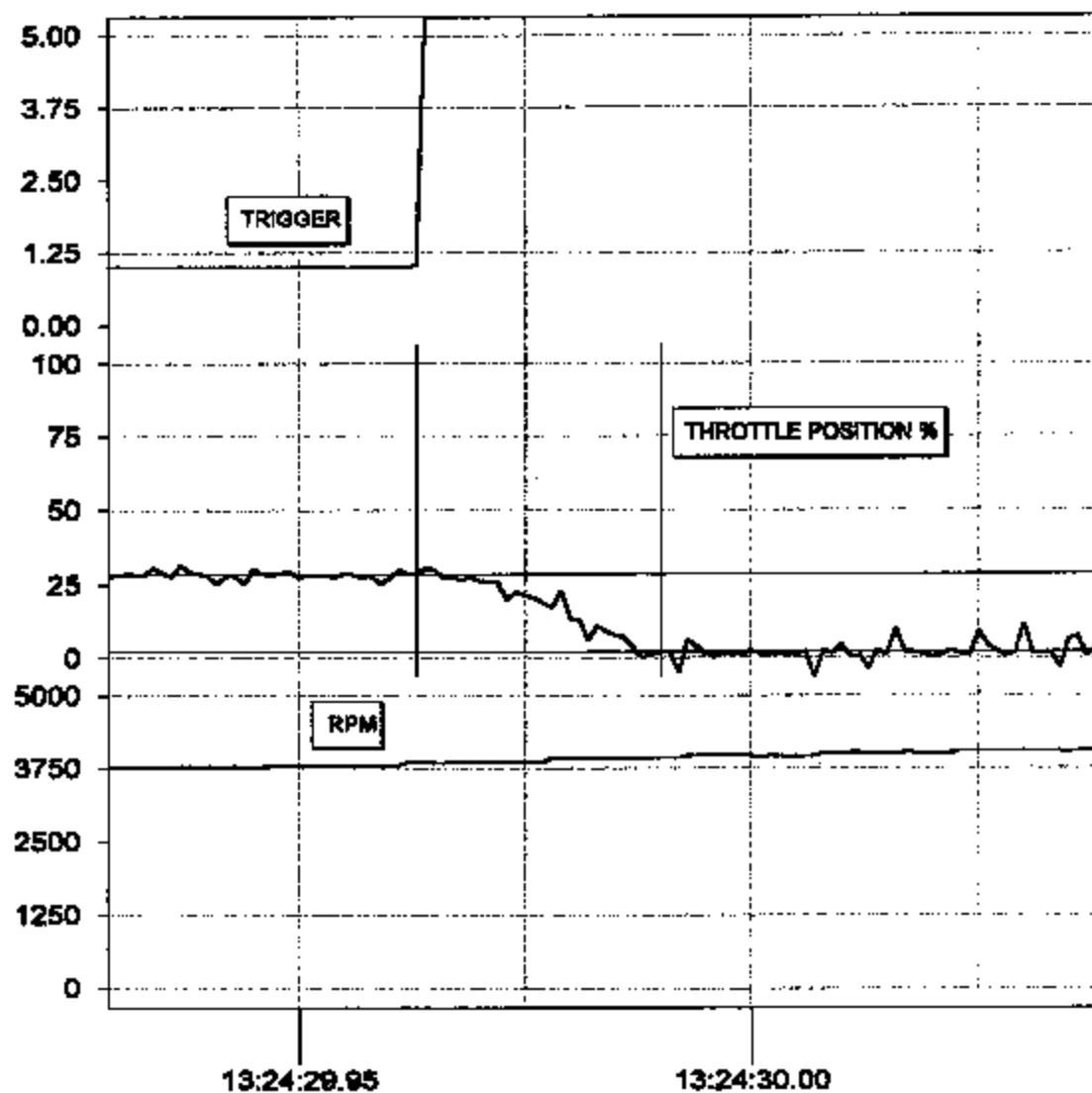
FMVSS 124 THROTTLE RETURN TEST

124 HOT/NORMAL/ 25% WOT

1:29:48 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA

V % RPM



— TRIGGER [V]

— Throttle Position [%]

— Engine RPM [RPM]

h:min:s

Channel: Throttle Position

Y1: 28.862 %

t1: -33477.869 ms

dt: 0.027 s

Y2: 2.029 %

t2: -33450.569 ms

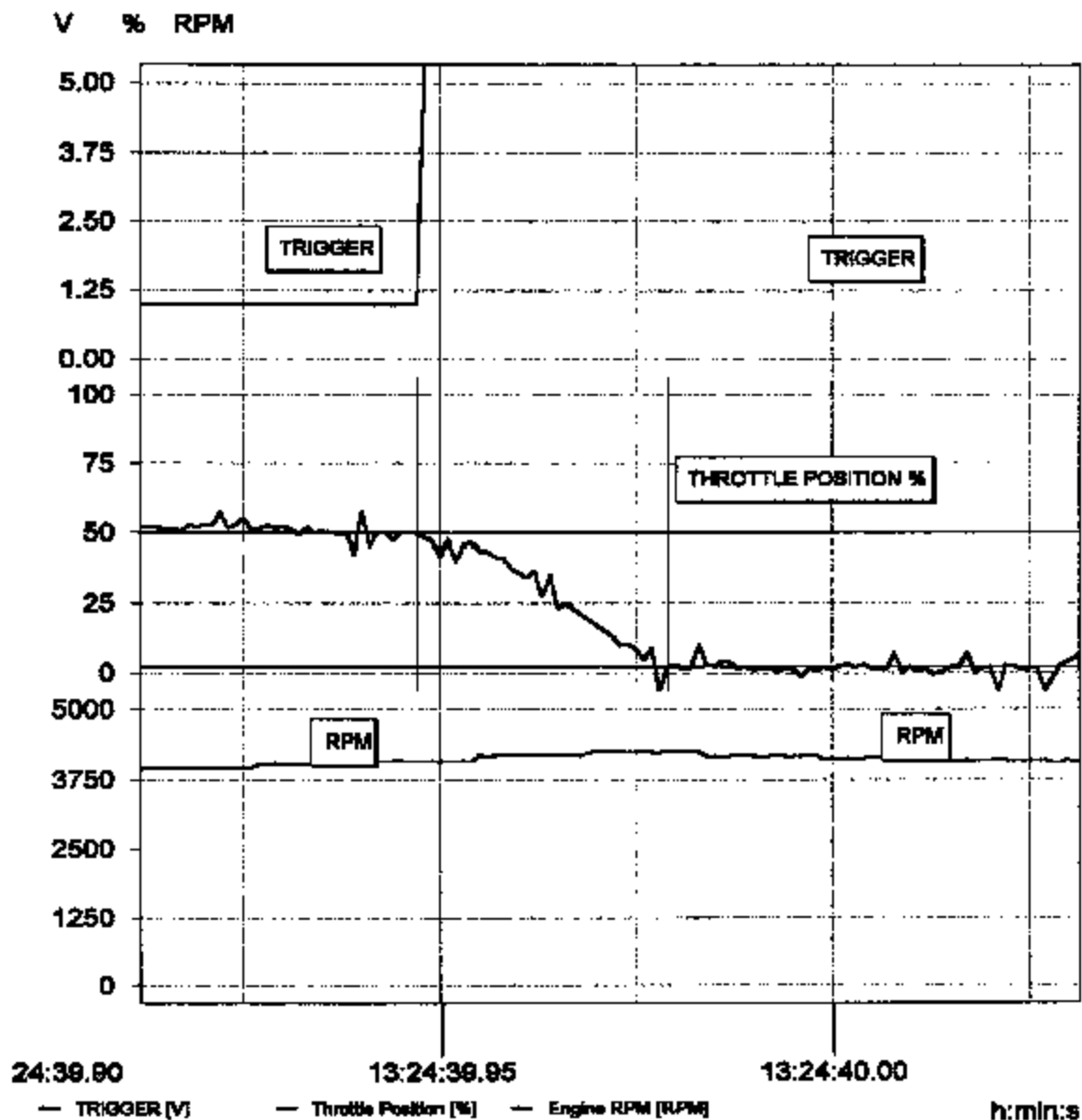
f: 37.037 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/NORMAL/ 50% WOT

1:32:00 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 40.835 %

t1: -23483.559 ms

dt: 0.092 s

Y2: 1.000 %

t2: -23461.559 ms

f: 31.250 Hz

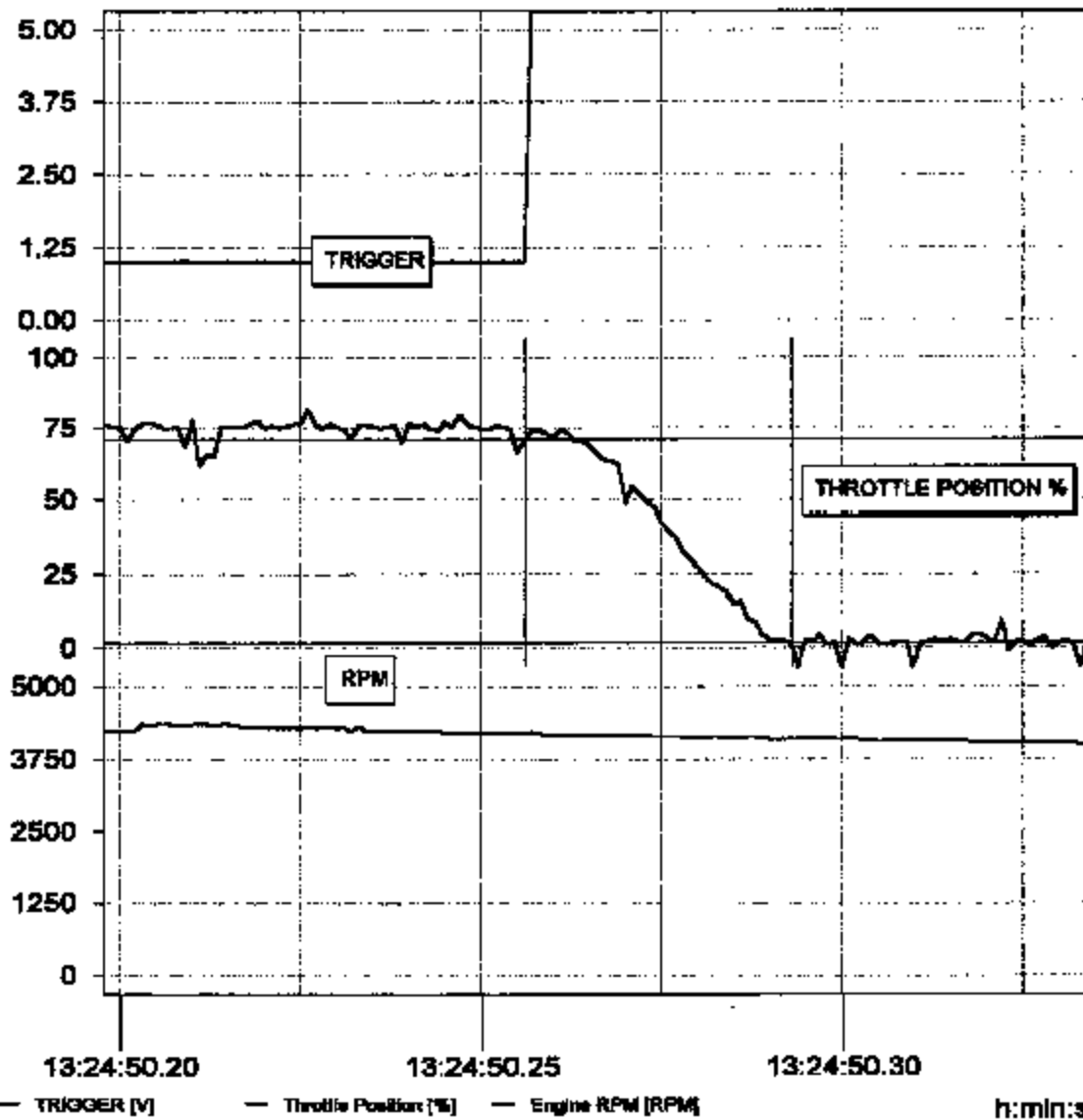
FMVSS 124 THROTTLE RETURN TEST

124 HOT/NORMAL/ 75% WOT

1:35:05 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA

V % RPM



Channel: Throttle Position

Y1: 70.831 %
t1: -13184.559 ms
dt: 0.037 s

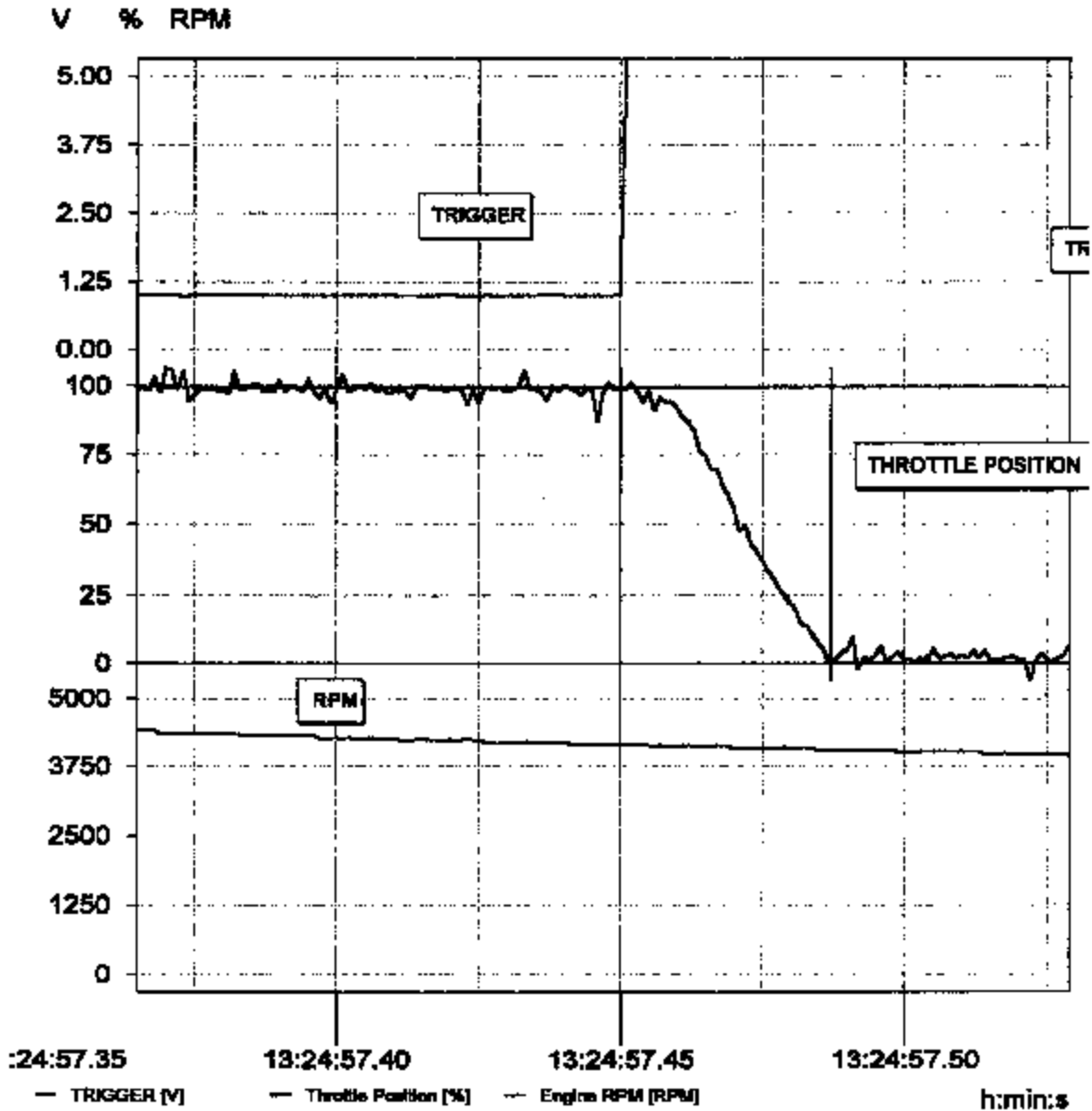
Y2: 1.880 %
t2: -13147.559 ms
f: 27.027 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/NORMAL/ 100% WOT

1:37:40 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



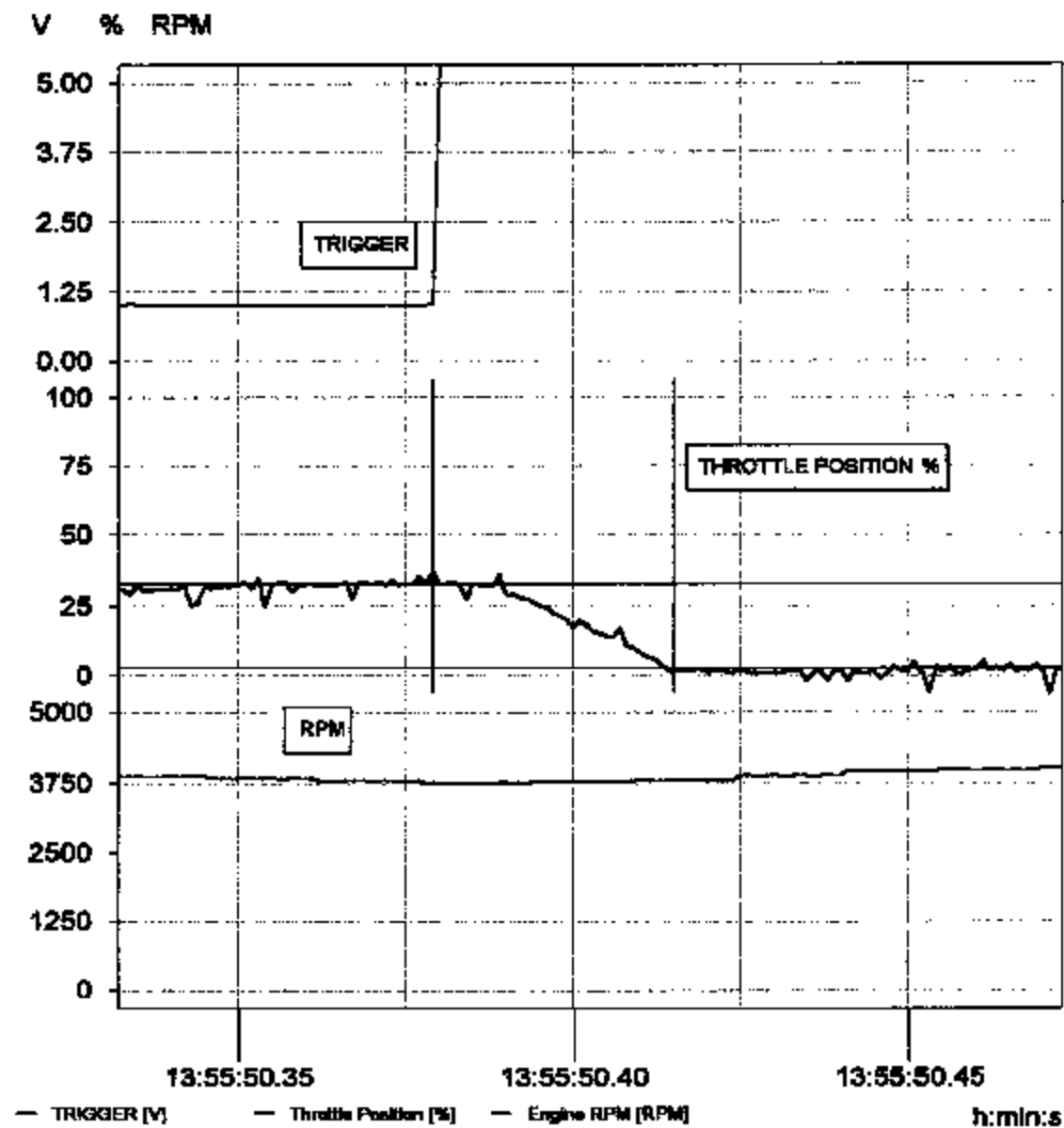
Channel: Throttle Position

Y1: 99.210 %
t1: -5990.559 ms
dt: 0.037 s

Y2: -0.095 %
t2: -6953.559 ms
f: 27.027 Hz

FMVSS 124 THROTTLE RETURN TEST 124 HOT/ SPRING 1/25% WOT 1:59:51 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA

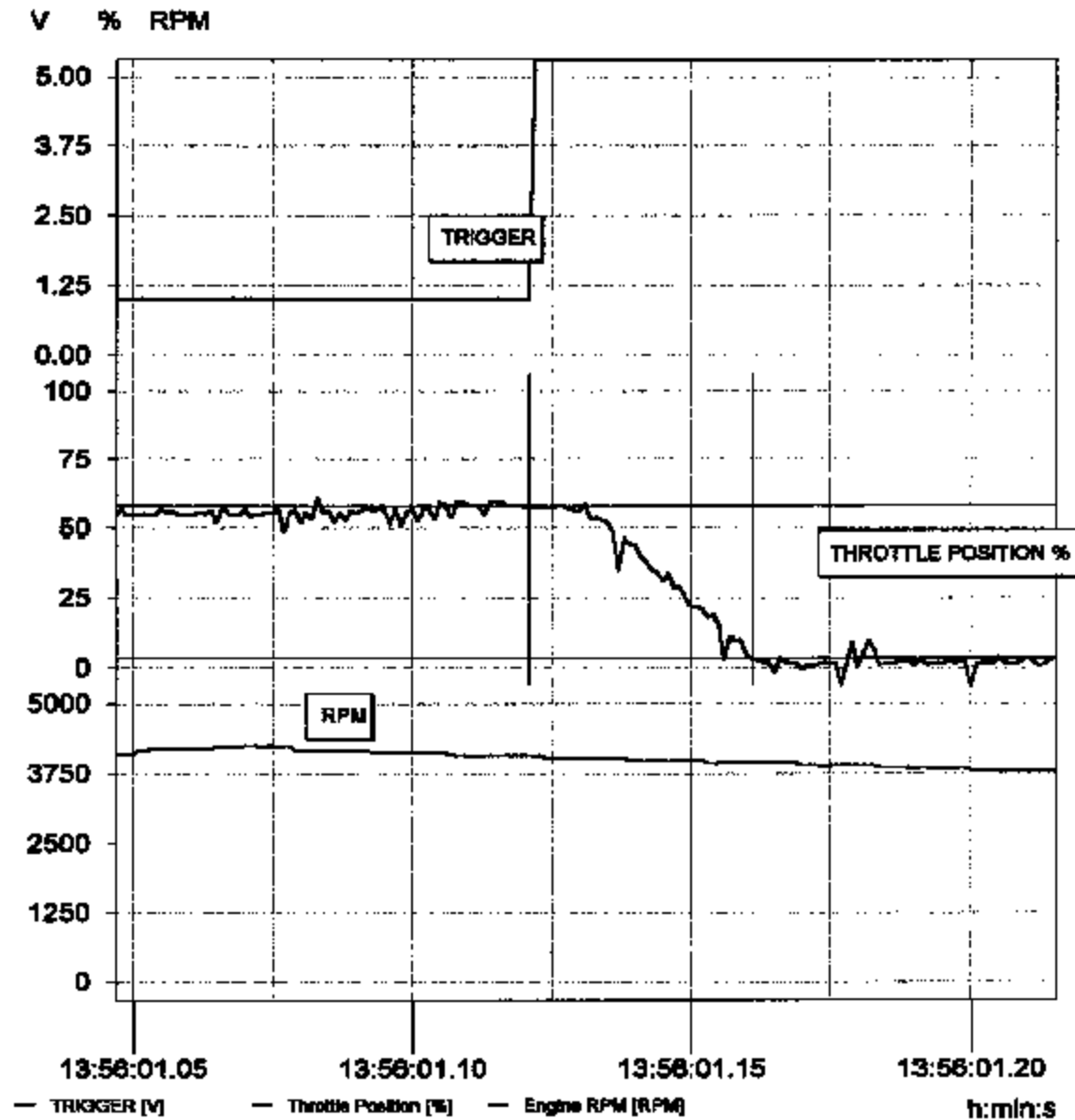


FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SPRING 1/ 50% WOT

2:01:47 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



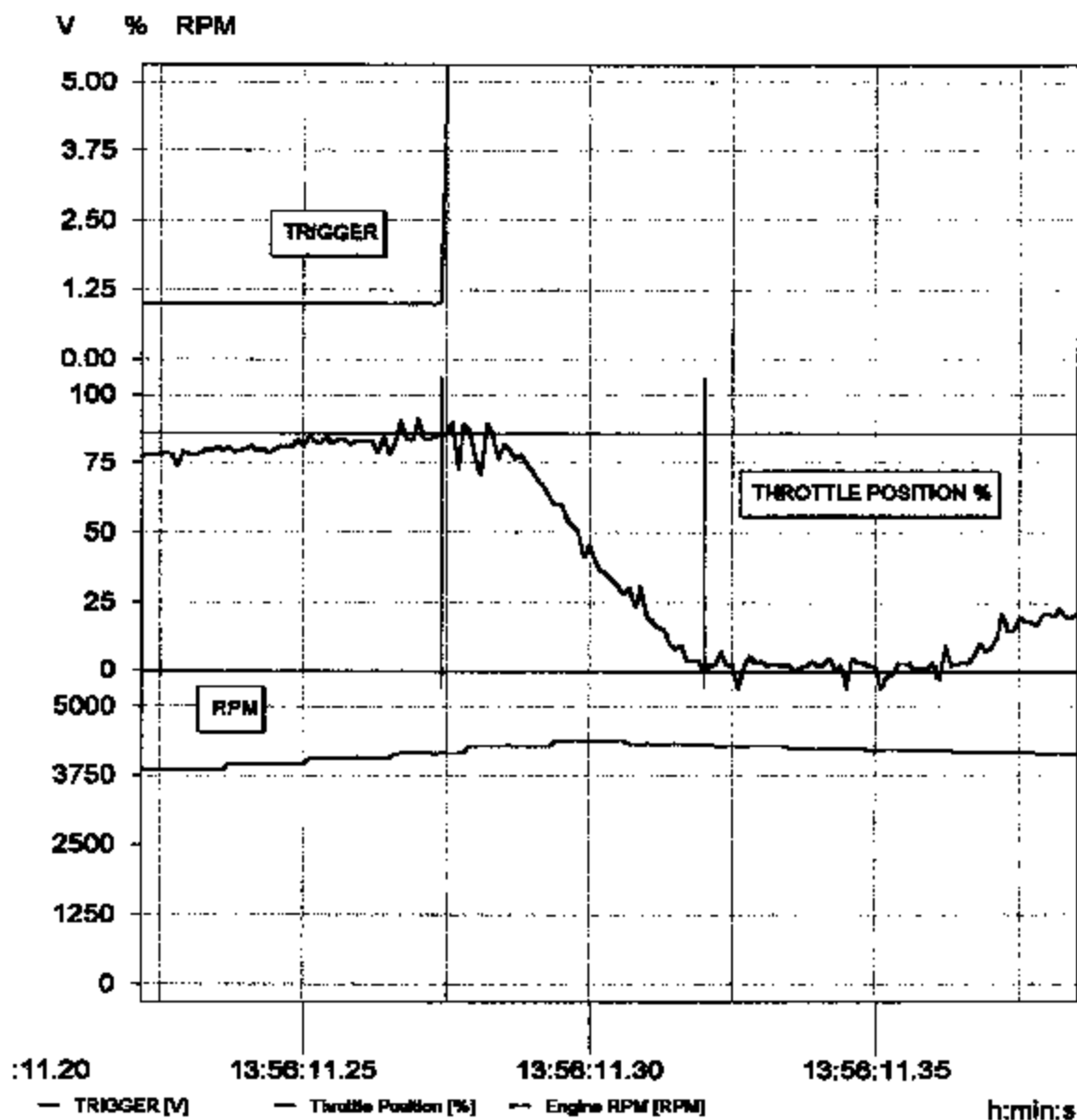
Channel: Throttle Position

Y1: 57.774 %
t1: -24319.559 ms
d1: 0.040 s

Y2: 3.472 %
t2: -24279.559 ms
f: 25.000 Hz

FMVSS 124 THROTTLE RETURN TEST **124 HOT/ SPRING 1/ 75% WOT** **2:04:29 PM 4/21/04**

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

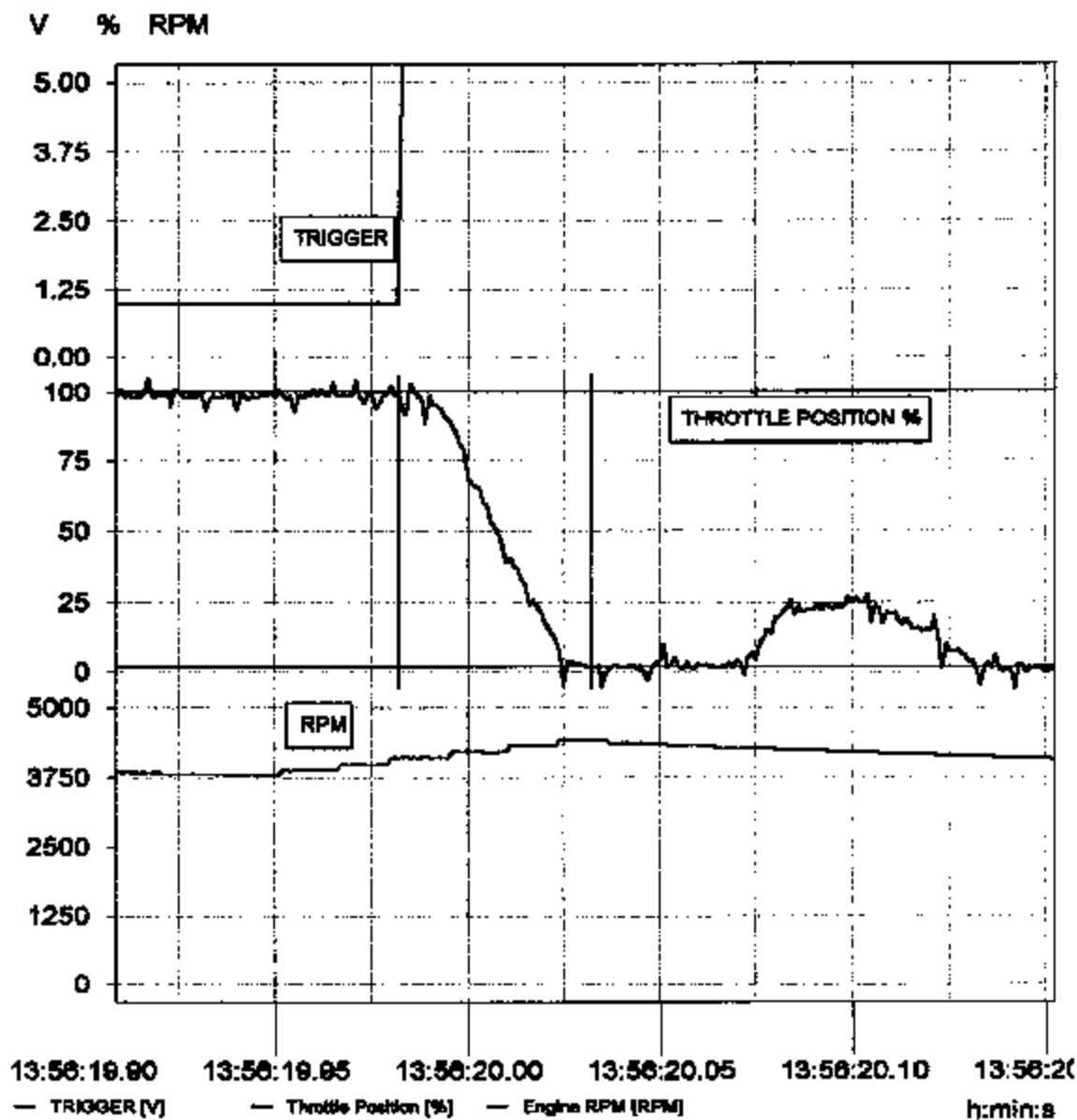
Y1: 85.715 %	Y2: -0.583 %
t1: -14105.559 ms	t2: -14120.559 ms
dt: 0.046 s	f: 21.739 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SPRING 1/ 100% WOT

2:06:20 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 100.518 %
t1: -6408.559 ms
dt: 0.050 s

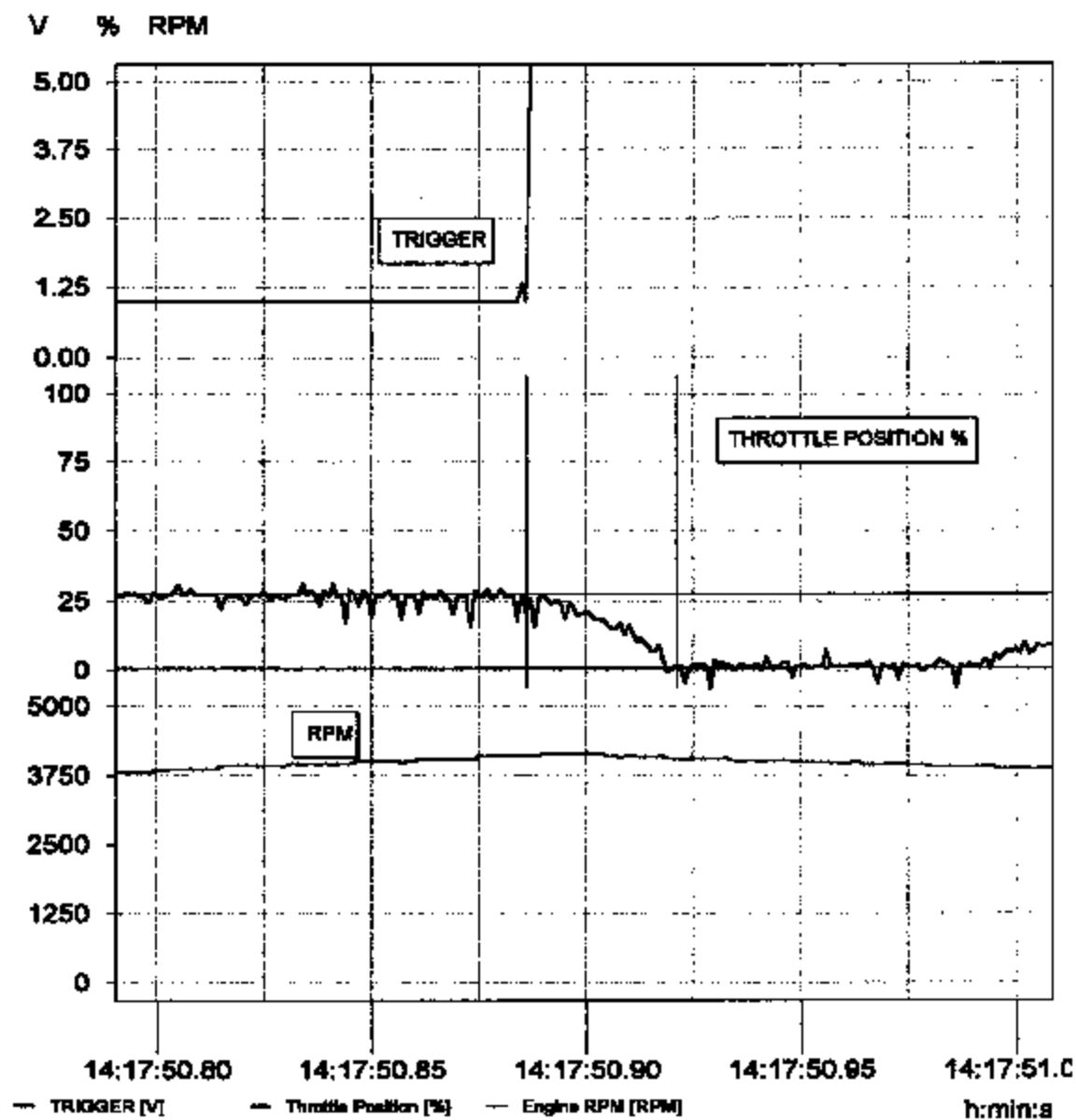
Y2: 1.782 %
t2: -6408.559 ms
f: 20.000 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SPRING 2/ 25% WOT

2:20:41 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 27.561 %

t1: -34116.110 ms

dt: 0.036 s

Y2: 0.828 %

t2: -34080.110 ms

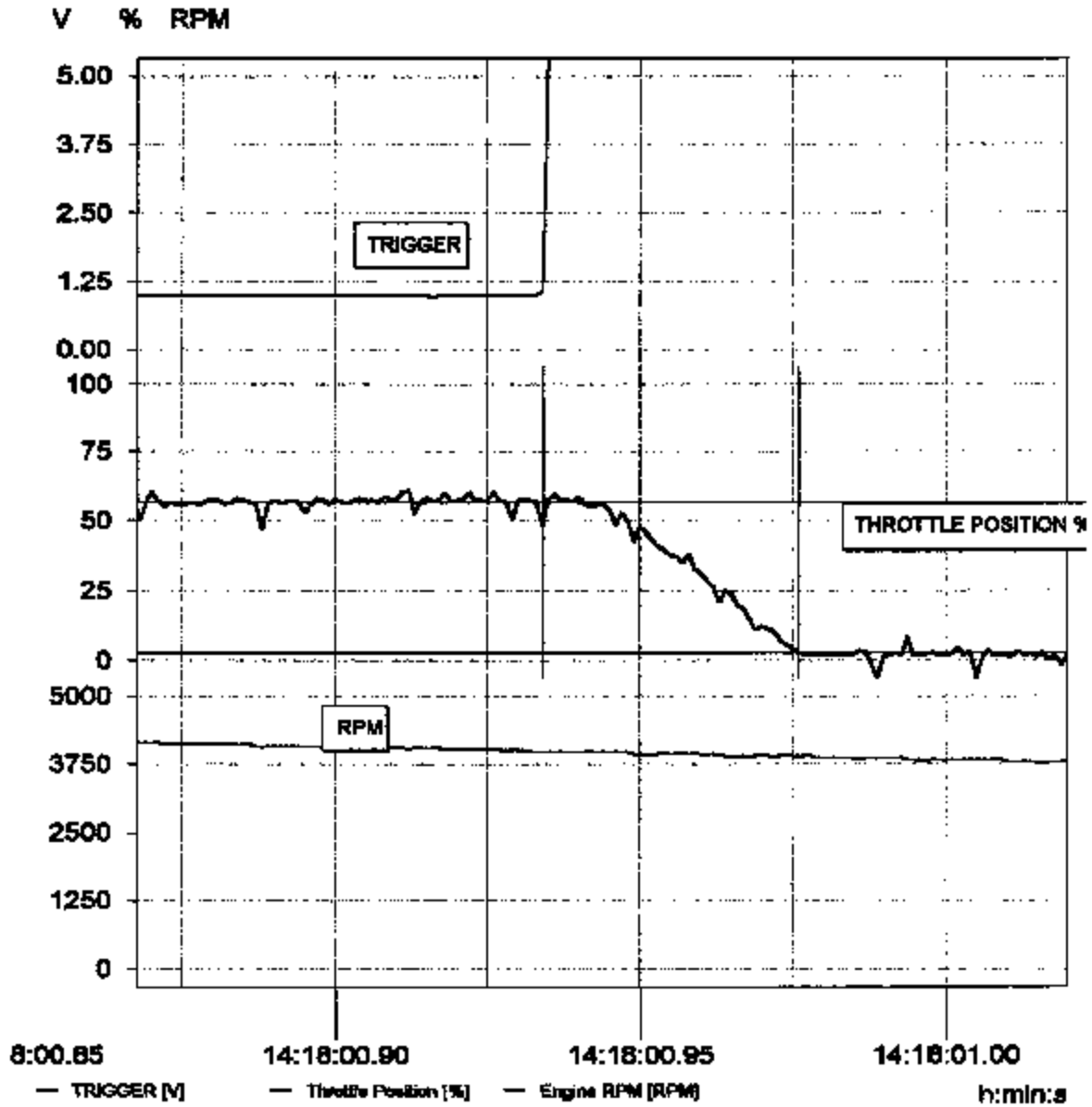
f: 28.571 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SPRING 2/ 50% WOT

2:22:35 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 58.379 %

t1: -24067.110 ms

dt: 0.042 s

Y2: 2.883 %

t2: -24025.110 ms

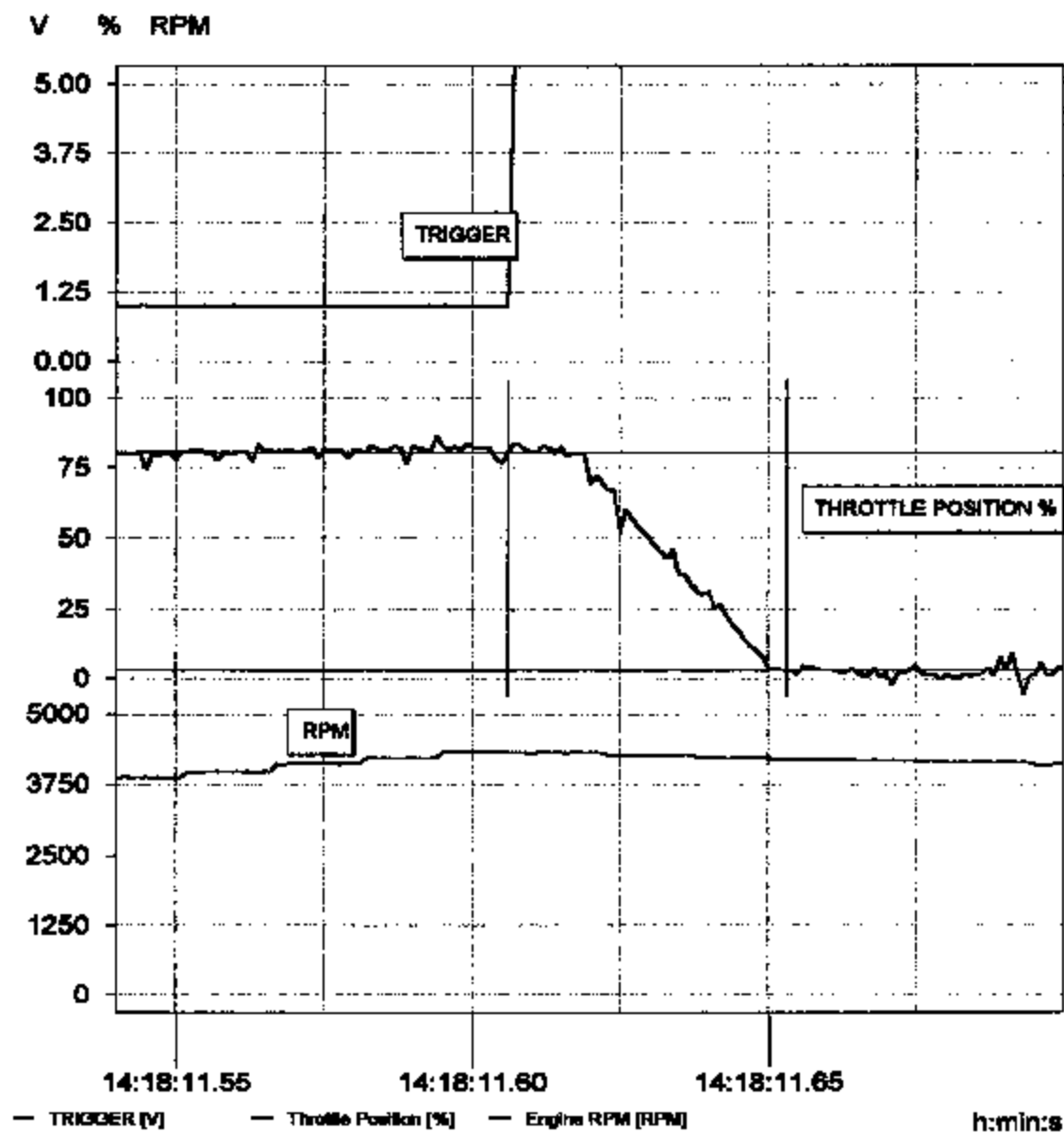
f: 23.810 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SPRING 2/ 75% WOT

2:24:53 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 80.183 %

t1: -13395.110 ms

dt: 0.047 s

Y2: 2.736 %

t2: -13348.110 ms

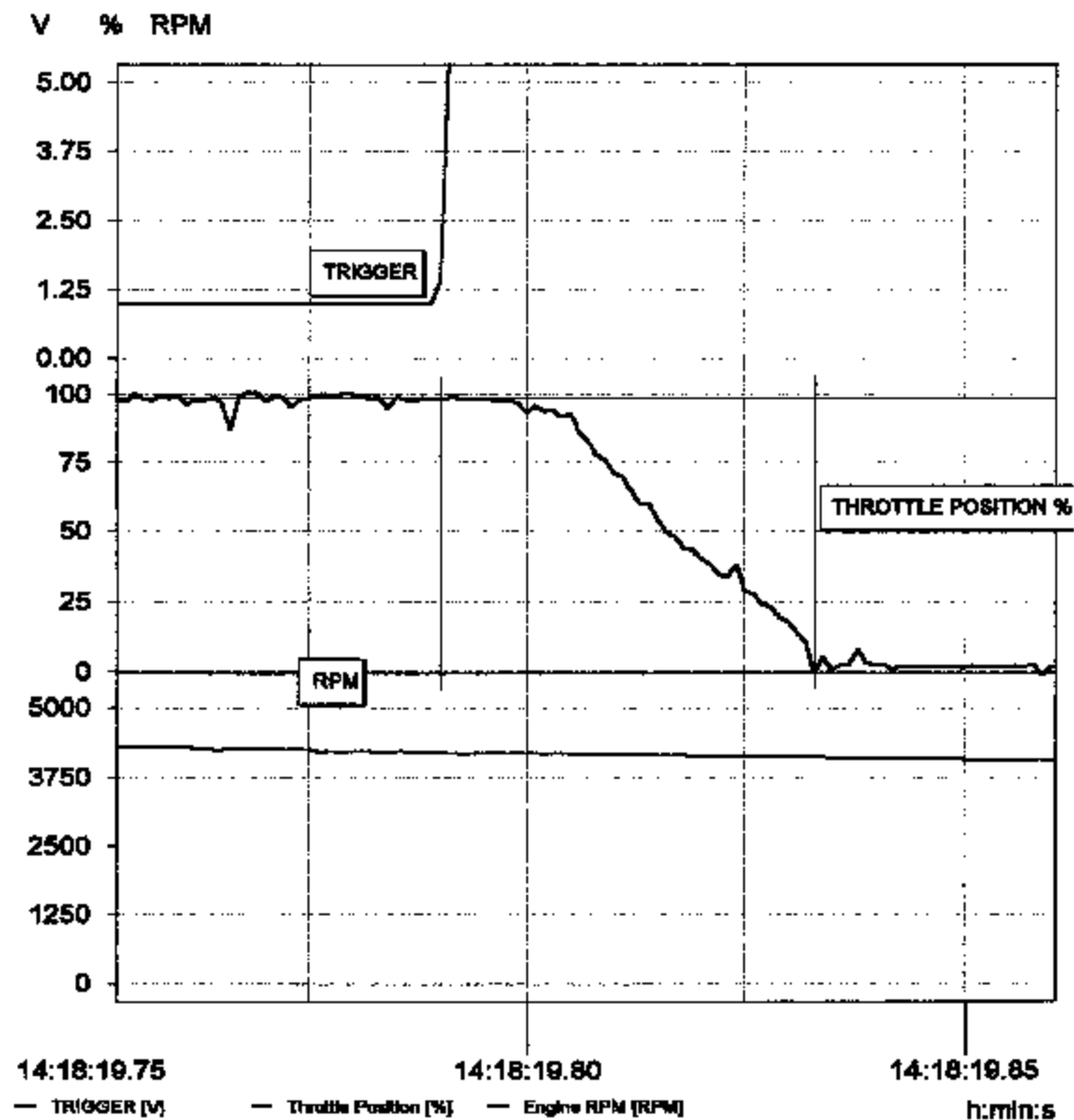
f: 21.277 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SPRING 2/ 100% WOT

2:28:50 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 98.493 %
t1: -5211.110 ms
dt: 0.043 s

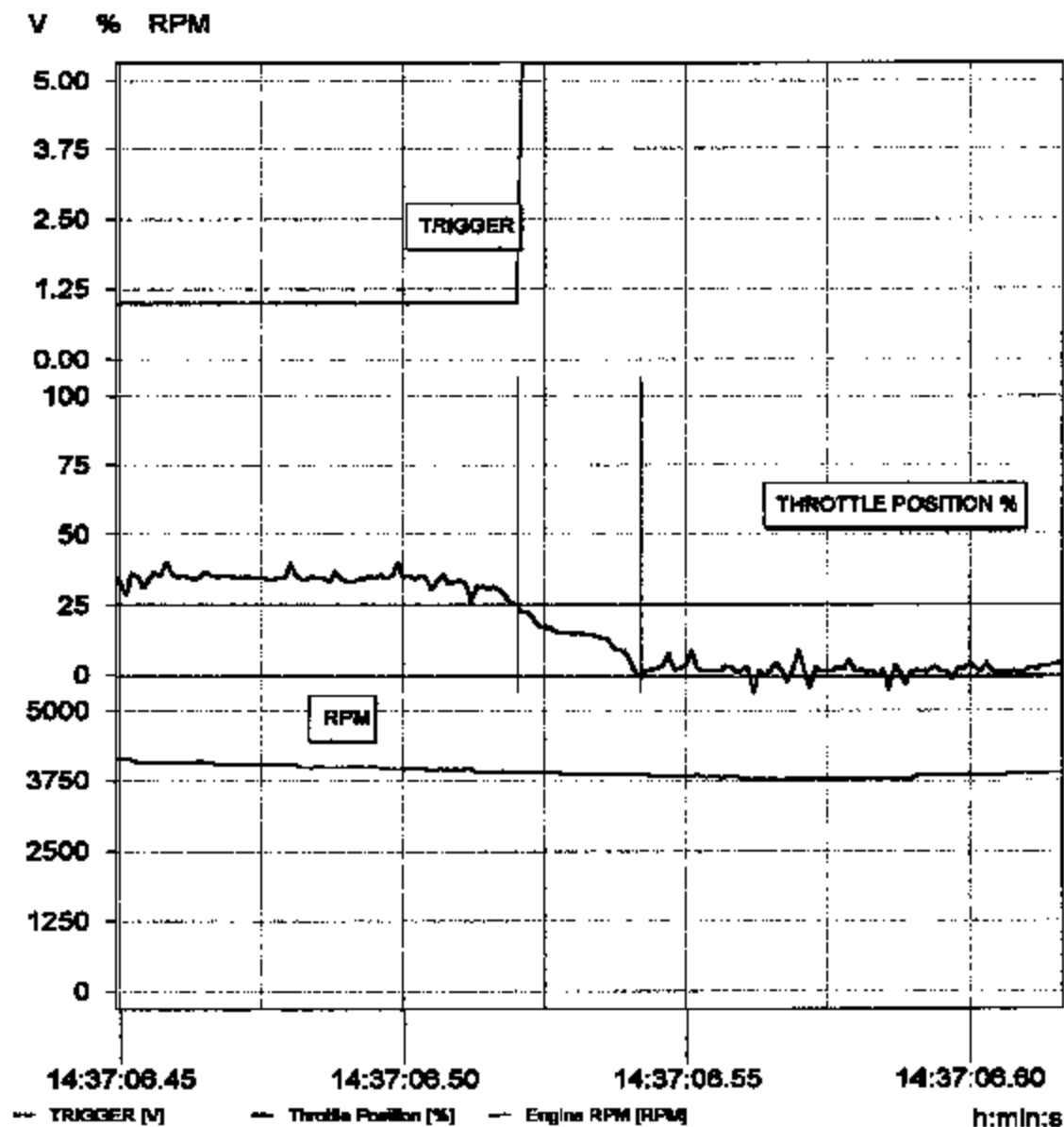
Y2: -0.893 %
t2: -5169.110 ms
f: 23.258 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SEVERED/ 25% WOT

2:58:46 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

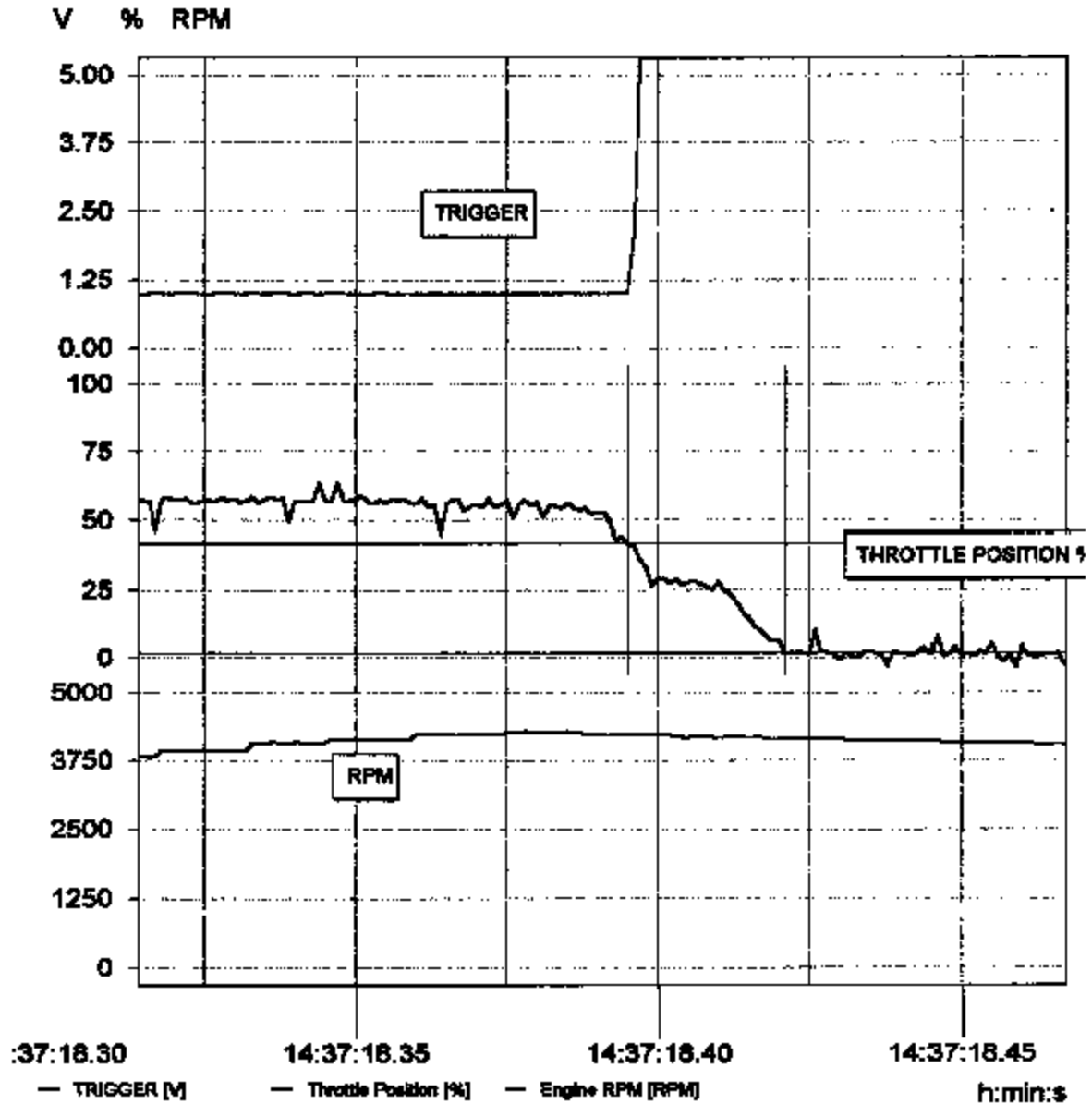
Y1: 28.406 %	Y2: -0.800 %
t1: -34480.362 ms	t2: -34458.362 ms
dt: 0.022 s	f: 45.455 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SEVERED/ 50% WOT

3:00:46 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 41.002 %
t1: -22805.362 ms
d1: 0.026 s

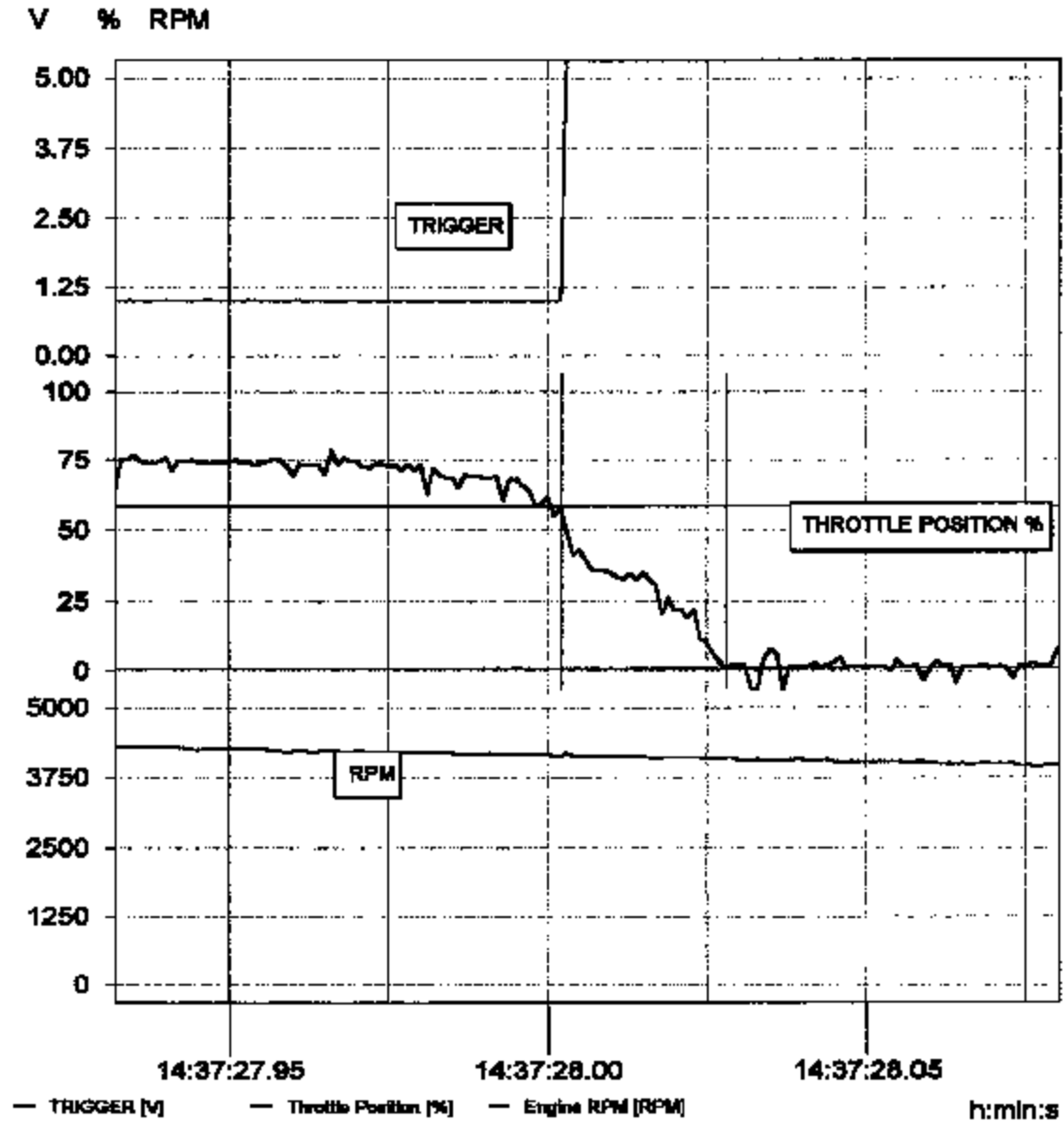
Y2: 1.858 %
t2: -22579.362 ms
f: 38.462 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SEVERED/ 75% WOT

3:02:54 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 58.385 %
t1: -12968.382 ms
d1: 0.028 s

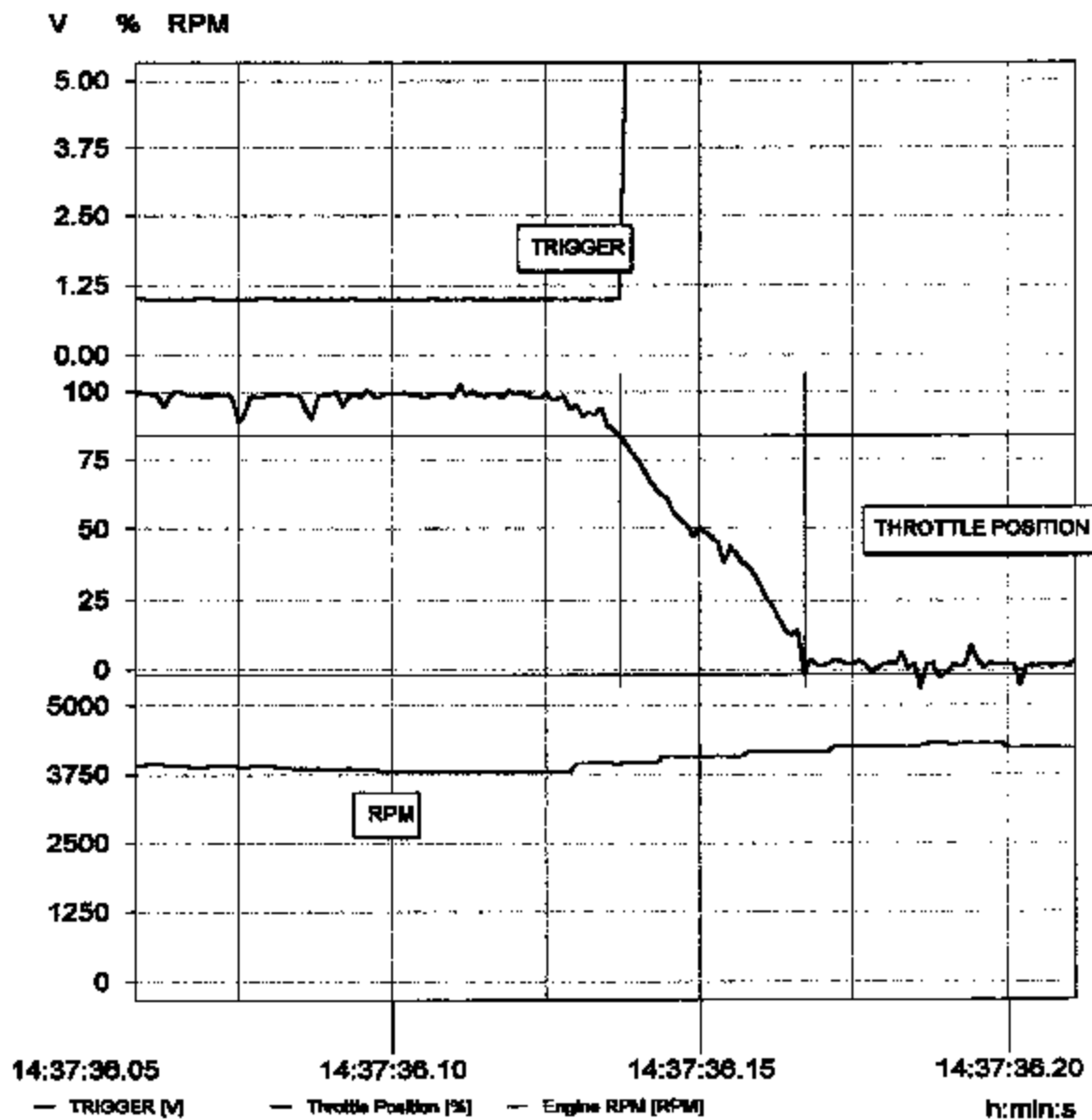
Y2: 0.978 %
t2: -12972.382 ms
f: 38.462 Hz

FMVSS 124 THROTTLE RETURN TEST

124 HOT/ SEVERED/ 100% WOT

3:04:29 PM 4/21/04

NHTSA C40301 CHRYSLER PACIFICA



Channel: Throttle Position

Y1: 83.680 %
t1: -4833.362 ms
dt: 0.030 s

Y2: -2.080 %
t2: -4833.362 ms
f: 33.333 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.

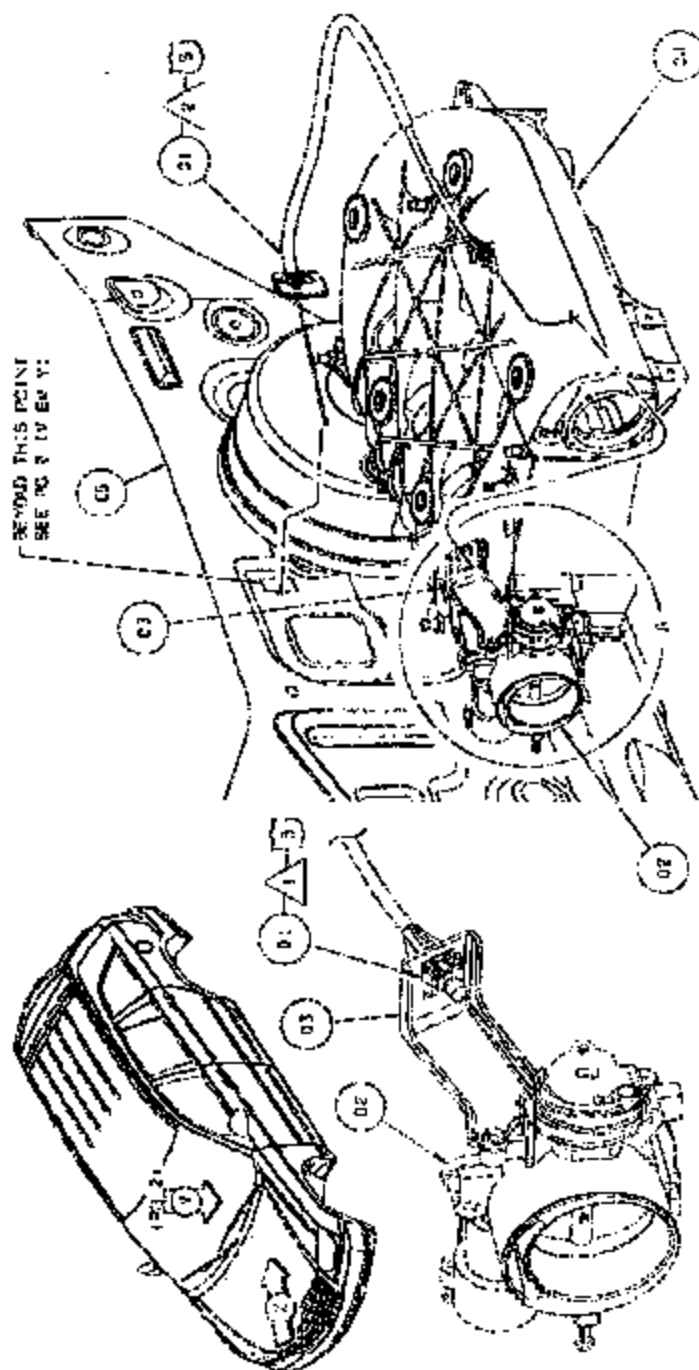
- The engine RPM can be monitored by using the OBD plug located under the instrument panel. A DRB (diagnostic readout box – available in the field) can be used to monitor and capture RPM data.

Attachment I

Engineering Graphics System

DAT/LEAC/CHRYSLER

Report Created: 09/13/02 1:12:42 PM



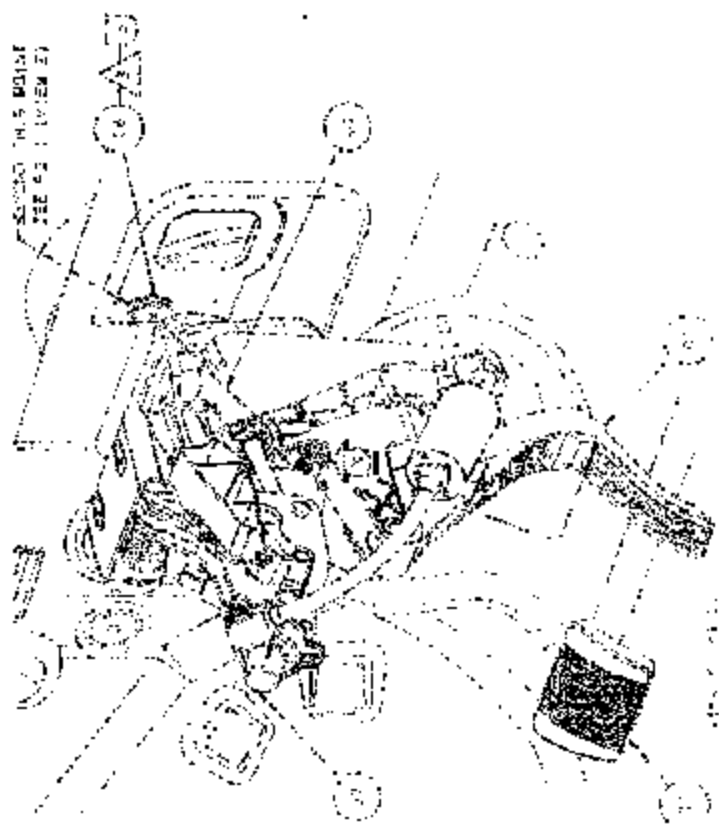
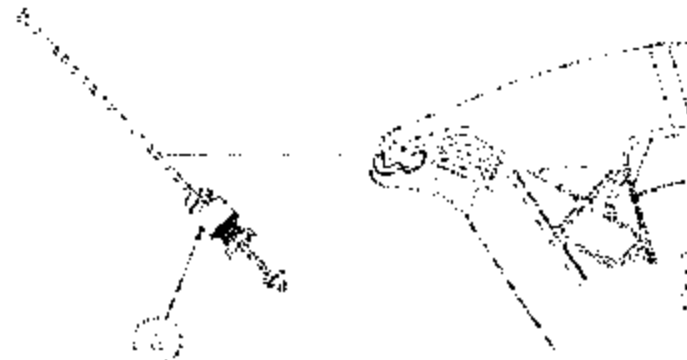
A INITIAL PLEASE OVERVIEW	Last Overhaul Package Revision: 9	9/13/02 3:11	Part VSC	7:20	Engineering Graphics TCF Overview	QIS Number: 07059134 Model Year: 2003 Build Date: 13-Sep-02 Overview VSC: 7000 - ACCELERATOR CONTROL SYSTEM	QIS Status: Replicate Vehicle: CTS Rel Date: 13-Sep-02 Overview Title: THROTTLE LINKAGE	2003-C3 7000-Overview-1
Rev	Ch No.	Revision (During This Page)	Date	By	Page 1 of 3			

Attachment II

Released
Engineering Graphics System

DAVIDSON/CHRYSLER

Report Created: 09/13/02 11:29:43 AM

			
SEVERAL THIS POINT SEE 43 (VIEW 2)			
Lead Overview/Parting Revision: B		Part/VEC	
E 20607MD-9A ITEM 01-0486162 TAB WAS AA		7120	
ITEM 06 WAS CANCELLED			
DEPT 2140 ITEM 08 WAS ADDED/ITEM 05 & VIEW X HERE		09/04/02 X823	
REVISOR		09/13/02	
VIEW X-NOTE SAFETY WERE REMOVED FROM			
ITEM 01 TO TEN ON			
INITIAL RELEASE OVERVIEW		07/17/02 0H13	
A			
Engineering Graphics TCF Overlay		03CSD135 2003 K 8537-SB-AMI 7200 - ACCELERATOR CONTROL SYSTEM Override Tab THEOTIS LINZAGE 2003-CS 7000-Overlay-1	
By		Page 2 of 3	