

REPORT NUMBER 110-GTL-04-002

**SAFETY COMPLIANCE TESTING FOR
FMVSS NO. 110
TIRE SELECTION AND RIMS**

**GM DAEWOO AUTO & TECHNOLOGY COMPANY
REPUBLIC OF KOREA
2004 CHEVROLET AVEO, PASSENGER CAR
NHTSA NO. C40110**

**GENERAL TESTING LABORATORIES, INC.
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SEPTEMBER 1, 2004

FINAL REPORT

PREPARED FOR

**U. S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
ENFORCEMENT
OFFICE OF VEHICLE SAFETY COMPLIANCE
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TABLE OF CONTENTS

SECTION		PAGE
1	Introduction	1
2	Test Procedure and Summary of Results	2
3	Test Data	3
4	Test Equipment List	16
5	Photographs	17
	5.1 Left Side View of Vehicle	
	5.2 Right Side View of Vehicle	
	5.3 ¾ Frontal View from Left Side of Vehicle	
	5.4 ¾ Rear View from Right Side of Vehicle	
	5.5 Vehicle's Certification Label	
	5.6 Vehicle's Tire Information Label	
	5.7 Tire and Rim	
	5.8 Tire Showing Brand	
	5.9 Tire Showing Size, Speed Rating and Load Index	
	5.10 Tire Showing Max Load Rating and Max Inflation Pressure	
	5.11 Tire Showing Serial Number	
	5.12 View of Rim Contour	
	5.13 Rim Markings (Size)	
	5.14 Rim Markings	
	5.15 Rim Markings	
	5.16 Rim Markings	
	5.17 Spare Tire and Markings	
	5.18 Spare Tire Name and Serial Number	
	5.19 Left Front Tire after Blow-out with Ruler Next to Hole	
	5.20 Outside View of Left Front Tire after Blow-out	
	5.21 Inside View of Left Front Tire after Blow-out	
	5.22 Right Rear Tire after Blow-out with Ruler Next to Hole	
	5.23 Outside View of Right Rear Tire after Blow-out	
	5.24 Inside View of Right Rear Tire after Blow-out	
	5.25 Vehicle Ballasted for Normal Load	
	5.26 Vehicle Ballasted for Maximum Load	
	5.27 Vehicle Ballasted for Cargo	
	5.28 View of Vehicle on Scales	
6	Test Plots	46

SECTION 1

INTRODUCTION

1.0 PURPOSE OF COMPLIANCE TEST

A 2004 Chevrolet Aveo 4-door passenger car was subjected to FMVSS No. 110 testing to determine if the vehicle was in compliance with the requirements of the standard. All tests were conducted in accordance with NHTSA, Office of Vehicle Safety Compliance (OVSC) Laboratory Procedure, TP-110-02 dated 14 December 1988 and General Testing Laboratories, Inc (GTL) Test Procedure, TP-110-02 dated 22 May 2002.

1.1 TEST VEHICLE

The test vehicle was a 2004 Chevrolet Aveo 4-door passenger car. Nomenclature applicable to the test vehicle are:

- A. Vehicle Identification Number: KL1TJ62684B158294
- B. NHTSA No.: C40110
- C. Manufacturer: GM DAEWOO AUTO & TECHNOLOGY COMPANY
- D. Manufacture Date: 12/03

1.2 TEST DATE

The test vehicle was subjected to FMVSS No. 110 testing during the time period July 19-29, 2004.

SECTION 2

TEST PROCEDURE AND SUMMARY OF RESULTS

2.0 GENERAL

The 2004 Chevrolet Aveo 4-door passenger car, NHTSA No. C40110, was subjected to FMVSS No. 110 testing during the time period July 19-29, 2004.

2.1 TEST PROCEDURE

Prior to test, the test vehicle was inspected for completeness, systems operability and appropriate fuel and liquid levels, i.e., oil and coolant. The vehicle was then photographically documented as required by the DOT/NHTSA and GTL test procedures. Subsequent events included weighing the vehicle to establish delivered curb weight and the distribution of weight on the front and rear axles and each wheel position. The vehicle normal load as well as the maximum load on each wheel were measured. Data from each tire furnished with the vehicle were recorded. The vehicle tire placard was surveyed and photographed. Required dimensional data and other identifying data for the left front and right rear rims were obtained. The contour of the aforementioned rims was documented photographically.

In preparation for the deflated tire retention test, test instrumentation was installed in the vehicle. With the driver aboard, the vehicle was ballasted to equal the "vehicle maximum load on the tire" on the front and rear axle, as previously established. The tire pressure of all tires was adjusted to placard specifications for cold tire inflation at maximum loaded vehicle weight. The deflated tire retention test was then conducted on the left front tire followed by the right rear tire. The tests were conducted with the vehicle traveling in a straight line at 96.6 kph (60 mph). The respective tire was blown by an explosive charge on the tire's sidewall. Test data collected during the test included vehicle speed, deceleration, stopping distance, distance of uncontrolled deviation from a straight line and tire pressure. After the vehicle was stopped, any tire bead separation from the rim flange was documented photographically.

2.2 SUMMARY OF RESULTS

The test vehicle appears to be in compliance with the requirements of FMVSS No. 110.

SECTION 3

TEST DATA

**DATA SHEET 1
SUMMARY**

VEHICLE MAKE/MODEL/BODY STYLE: 2004 CHEVROLET AVEO PASSENGER CAR
 VEHICLE NHTSA NO.: C40110 ; VIN: KL1TJ62684B
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/19/04

REQUIREMENT

PASS/FAIL

TIRE LOAD LIMITS AND PLACARD

The vehicle is equipped with tires that meet the requirements of FMVSS 109. (FMVSS 110, S4.1)

PASS

The vehicle maximum load on the tire shall not be greater than the applicable maximum load rating as marked on the sidewall of the tire. (FMVSS 110, S4.2.1)

PASS

The vehicle normal load on the tire shall not be greater than the high speed performance test load specified in FMVSS 109 paragraph S5.5. (FMVSS 110, S4.2.2)

PASS

The placard must be permanently affixed to the glove compartment door or equally accessible location; and display the required information. (FMVSS 110, S4.3)

PASS

No inflation pressure other than the maximum permissible inflation pressure is specified unless as required. (FMVSS 110, S4.3.1)

PASS

RIM DIMENSIONS

Each rim shall be constructed to the dimensions of a rim or alternate specified for the tire size. (FMVSS No. 110, S4.4.1 (a))

PASS

DEFLATED TIRE RETENTION

Each rim shall retain the deflated tire until the vehicle can be stopped. (FMVSS 110, S4.4.1(b))

PASS

Statement of indication of compliance or noncompliance to FMVSS 110 and data reference:
THE AVEO APPEARS TO COMPLY WITH THE REQUIREMENTS OF FMVSS 110.

REMARKS:

RECORDED BY: [Signature]
 APPROVED BY: [Signature]

DATE: 07/19/04

DATA SHEET 2 **TEST VEHICLE INFORMATION/RECEIVING INSPECTION**

LABORATORY: GENERAL TESTING LABORATORIES DATE: 07/19/04

VEHICLE MODEL YEAR/MAKE/MODEL/BODY STYLE: 2004 CHEVROLET AVEO

MANUFACTURE DATE: 12/03 NHTSA NO.: C40110 BODY COLOR: GRAY

VIN: KL1TJ62684E VEHICLE TYPE: PASSENGER CAR

GVWR 1486 kg (3276 lbs) GAWR(Fr) 830 kg (1830 lbs) GAWR(Rr) 801 kg (1767 lbs)

BELTED SEATING POSITIONS: FRONT 2 MID N/A REAR 3 OTHER N/A

ENGINE DATA: 4 Cylinders 1.6 Liters Cubic Inches

TRANSMISSION DATA: Automatic X Manual 5 No. of Speeds

FINAL DRIVE DATA: Rear Drive X Front Drive 4 Wheel Drive

INSTALLED TIRE DATA: Size - P185/60R14 82H Mfr. - KUMHO

CHECK APPROPRIATE BOXES FOR VEHICLE EQUIPMENT/MAKE SURE ALL OPTIONS ON WINDOW STICKER ARE LISTED:

<input checked="" type="checkbox"/>	Air Conditioning		Traction Control	<input checked="" type="checkbox"/>	Clock
<input checked="" type="checkbox"/>	Tinted Glass		All Wheel Drive		Roof Rack
<input checked="" type="checkbox"/>	Power Steering		Cruise Control	<input checked="" type="checkbox"/>	Console
<input checked="" type="checkbox"/>	Power Windows	<input checked="" type="checkbox"/>	Rear Window Defroster	<input checked="" type="checkbox"/>	Driver Air Bag
<input checked="" type="checkbox"/>	Power Door Locks		Sun Roof or T-Top	<input checked="" type="checkbox"/>	Passenger Air Bag
	Power Seat(s)	<input checked="" type="checkbox"/>	Tachometer	<input checked="" type="checkbox"/>	Front Disc Brakes
	Power Brakes		Tilt Steering Wheel		Rear Disc Brakes
<input checked="" type="checkbox"/>	Antilock Brake System	<input checked="" type="checkbox"/>	AM/FM/CD		Other -

REMARKS:

RECORDED BY: [Signature]

DATE: 07/19/04

APPROVED BY: [Signature]

DATA SHEET 3
CURB WEIGHT WITH OPTIONS, NORMAL LOAD, VEHICLE MAXIMUM LOAD

VEHICLE MAKE/MODEL/BODY STYLE: 2004 CHEVROLET AVEO PASSENGER CAR
 VEHICLE NHTSA NO.: C40110 ; VIN: KL1TJ62684B
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/19/04

Full Fluid Levels:

Fuel Full ; Coolant Full ; Other Fluids Full

Tire Pressure: LF 210 KPA (30 psi) LR 210 KPA (30 psi)
 RF 210 KPA (30 psi) RR 210 KPA (30 psi)

A. MEASURED CURB WEIGHT WITH INSTALLED OPTIONS AND ACCESSORIES

LF 354 KG (780 LB) LR 216 KG (476 LB)
 RF 358 KG (790 LB) RR 210 KG (463 LB)
 Front Axle 712 KG (1570 LB) Rear Axle 426 KG (939 LB)
 Total Vehicle 1138 KG (2509 LB)

B. VEHICLE NORMAL LOAD ON THE TIRE

(1) Seating Capacity (from Tire Information Placard) = 5

(2) Normal Load # of Occupants from FMVSS 110, Table I 3

Occupant Distribution: Front Seat- 2 Second Seat- 1
 Third Seat - N/A Fourth Seat- N/A

(3) Total Normal Occupant Load 204 KG (450 LB)
 (# of occupants x 68 KG per occupant)

(4) Measured Normal Load on Axles

LF 400 KG (882 LB) LR 272 KG (600 LB)
 RF 403 KG (889 LB) RR 267 KG (588 LB)
 Frt Axle 803 KG (1771 LB) Rr Axle 539 KG (1188 LB)
 Total Vehicle 1342 KG (2959 LB)

DATA SHEET 3 - CONTINUED

- (5) Calculated Vehicle Normal Load on the Tire
 Front Tires (measured front axle normal load/2) = 402 KG (886 LB)
 Rear Tires (measured rear axle normal load/2) = 270 KG (595 LB)

- (6) High Speed Test Load from FMVSS 109 (S5.5)

	Front	Rear
Installed Tire Size	<u>P185/60R14</u>	<u>P185/60R14</u>
Max. Load Rating on Sidewall	<u>475 KG(1047 LBS)</u>	<u>475 KG(1047 LBS)</u>
High Speed Test Load (88% of sidewall max. load rating)	<u>418 KG(921 LBS)</u>	<u>418 KG(921 LBS)</u>
Optional Tire Size(s)	<u>N/A</u>	<u>N/A</u>
Max. Load Rating on Sidewall (Obtain from approved reference manual)	<u>N/A</u>	<u>N/A</u>
High Speed Test Load (88% of sidewall max. load rating)	<u>N/A</u>	<u>N/A</u>

Vehicle Normal Load on the Tire is not greater than the High Speed Test Load

Installed Tires; [(5) < (6)]	Front Tires Rear Tires	PASS/FAIL <u>PASS</u> <u>PASS</u>
Optional Tires; [(5) < (6)]	Front Tires Rear Tires	<u>N/A</u> <u>N/A</u>

C. MEASURED VEHICLE WITH FULL OCCUPANT LOAD

LF <u>410 KG (904 LB)</u>	LR <u>329 KG (726 LB)</u>
RF <u>420 KG (926 LB)</u>	RR <u>319 KG (703 LB)</u>
Front Axle <u>830 KG (1830 LB)</u>	Rear Axle <u>648 KG (1429 LB)</u>
Total Vehicle <u>1478 KG (3259 LB)</u>	

DATA SHEET 3 – CONTINUED

D. VEHICLE MAXIMUM LOAD ON THE TIRE

- (1) Vehicle Capacity Weight (from Placard) 390 KG (858 LB)
- (2) Seating Capacity (from Placard) 5
- (3) Total Occupant Load (seating capacity x 68 KG) 340 KG (750 LB)
- (4) Luggage/Cargo Load (Subtract (3) from (1)) 50 KG (108 LB)
- (5) Measured Maximum Load on Axles
- | | |
|--|---------------------------------|
| LF <u>411 KG (906 LB)</u> | LR <u>353 KG (778 LB)</u> |
| RF <u>417 KG (919 LB)</u> | RR <u>347 KG (764 LB)</u> |
| Fr Axle <u>828 KG (1825 LB)</u> | Rr Axle <u>699 KG (1542 LB)</u> |
| Total Vehicle <u>1527 KG (3367 LB)</u> | |
- (6) Calculated Vehicle Maximum Load on the Tire
- Front Tires (measured front axle max. load/2) = 414 KG (913 LB)
- Rear Tires (measured rear axle max. load/2) = 350 KG (772 LB)
- (7) Maximum Load Rating on Tire Sidewall (obtain data from B.(6))

	Front	Rear
Installed Tire Size	<u>P185/60R14</u>	<u>P185/60R14</u>
Max. Load Rating on Sidewall	<u>475 KG (1047 LBS)</u>	<u>475 KG (1047 LBS)</u>
Optional Tire Size(s)	<u>N/A</u>	<u>N/A</u>
Max Load Rating on Sidewall (obtain from approved reference manual)	<u>N/A</u>	<u>N/A</u>

Vehicle Maximum Load on the Tire is not greater than the Maximum Load Rating Marked on the Tire Sidewall

Installed Tires; [(6) < (7)]	Front Tires Rear Tires	PASS/FAIL <u>PASS</u> <u>PASS</u>
Optional Tires; [(6) < (7)]	Front Tires Rear Tires	<u>N/A</u> <u>N/A</u>

DATA SHEET 3 – CONTINUED

E. VEHICLE LOAD ON THE TIRE FOR OTHER DISPLAYED LOAD AND TIRE INFLATION PRESSURE CONDITIONS

- (1) Condition Description (Load, Tire Size, Inflation Pressure)
Vehicle at maximum load of 390 kg (858 lbs) with P185/60R14 tire at
210 kPa (30 psi) on tire label.
- (2) Condition Load on Tire/Axle
- | | | | | | | | |
|---------------------------|-----|---------|-----|--------------------------|-----|---------|-----|
| LF | 411 | KG (906 | LB) | LR | 353 | KG (778 | LB) |
| RF | 417 | KG (919 | LB) | RR | 347 | KG (764 | LB) |
| Frt Axle 828 KG (1825 LB) | | | | Rr Axle 699 KG (1542 LB) | | | |
| Total Vehicle | | | | 1527 KG (3367 LB) | | | |

- (3) Load Rating of Tire at Recommended Inflation Pressure

	Front	Rear
Displayed Tire Size	<u>P185/60R14</u>	<u>P185/60R14</u>
Recommended Inflation Pressure	<u>210 kPa (30 psi)</u>	<u>210kPa (30 psi)</u>
Tire Load Rating (obtained from 2004 Tire and Rim Association Yearbook)	<u>443 KG (977 LBS)</u>	<u>443 KG (977 LBS)</u>

Vehicle Load on the Tire is not greater than the Tire Load Rating at the Tire Recommended Inflation Pressure

	PASS/FAIL
Front Tires [(2) < (3)]	<u>PASS</u>
Rear Tires [(2) < (3)]	<u>PASS</u>

NOTE: Section E should be repeated for every different load/tire inflation pressure condition displayed.

REMARKS:

RECORDED BY:

[Signature]

DATE: 07/19/04

APPROVED BY:

[Signature]

DATA SHEET 4
TIRE INFORMATION LABEL OR PLACARD

VEHICLE MAKE/MODEL/BODY STYLE: 2004 CHEVROLET AVEO PASSENGER CAR
 VEHICLE NHTSA NO.: C40110 ; VIN: KL1TJ62684B
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/19/04

	PASS/FAIL
A. Description of Placard: <u>Self Adhesive decal</u>	<u>Pass</u>
B. Description of Placard Location: <u>Bottom of Driver "B" pillar</u>	<u>Pass</u>
Permanently Affixed <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
C. Enter Information from Placard:	
Vehicle Capacity Weight - <u>390 KG (858 LBS)</u>	
Designated Seating Capacity (DSC) - <u>5</u>	<u>Pass</u>
Expressed In—	
(1) Total No. of Occupants <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
(2) Terms of Occupants for Each Seat Location <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<u>Pass</u>
Manufacturer's Recommended Cold Tire Inflation Pressure for Maximum Load Vehicle Weight:	
FRONT - <u>210 kPa (30 psi)</u> REAR - <u>210 kPa (30 psi)</u>	
All Other Recommended Inflation Pressures: <u>None</u>	
All Other Recommended Loading Conditions: <u>None</u>	
Manufacturer's Recommended Size Designation: <u>P185/60R14</u>	
All Other Manufacturer's Recommended Size Designation: <u>None</u>	
DATA CORRECTLY DISPLAYED	<u>Pass</u>

DATA SHEET 4 continued

PASS/FAIL

D. For Every Inflation Pressure Listed Above Indicate:

(1)	Less than Maximum?	(YES/NO)	<u>Yes</u>	<u>Pass</u>
(2)	Loading Condition Stated?	(YES/NO)	<u>Yes</u>	<u>Pass</u>

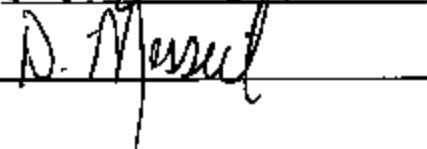
DATA INDICATES COMPLIANCE (X) YES () NO

REMARKS:

RECORDED BY:

DATE: 07/19/04

APPROVED BY:



**DATA SHEET 5
VEHICLE TIRE DATA**

VEHICLE MAKE/MODEL/BODY STYLE: 2004 CHEVROLET AVEO PASSENGER CAR
 VEHICLE NHTSA NO.: C40110 ; VIN: KL1TJ62684B
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/19/04

All tires on the vehicle are the same size: (Yes/No) Yes

INFORMATION FROM TIRE SIDEWALL:

	Front Axle (R.F. Tire)	Rear Axle (L.R. Tire)	Spare
Tire Size Designation	<u>P185/60R14</u>	<u>P185/60R14</u>	<u>T105/70D14</u>
Tire Load Index/Speed Symbol	<u>82-H</u>	<u>82-H</u>	<u>84-M</u>
Maximum Inflation Pressure	<u>300 kPa (44 psi)</u>	<u>300 kPa (44 psi)</u>	<u>420kPa(60psi)</u>
Maximum Load Rating	<u>475 KG (1047 LBS)</u>	<u>475 KG(1047 LBS)</u>	<u>500KG(1021LB)</u>
Mfr. Name or Brand & Code	<u>KUMHO</u>	<u>KUMHO</u>	<u>KUMHO</u>
Tube or Tubeless	<u>Tubeless</u>	<u>Tubeless</u>	<u>Tubeless</u>
Treadwear/Traction/Temp. Grades	<u>380-A-A</u>	<u>380-A-A</u>	<u>N/A</u>
Sidewall (Plies & Composition)	<u>1 polyester</u>	<u>1 polyester</u>	<u>2 Nylon</u>
Tread (Plies & Composition)	<u>1 polyester</u> <u>2 steel</u>	<u>1 polyester</u> <u>2 steel</u>	<u>3 Nylon</u>

Serial Number: Left Front - DOT YOR8-YP1A-4803
 Right Front - DOT YOR8-YP1A-4803
 Left Rear - DOT YOR8-YP1A-4803
 Right Rear - DOT YOR8-YP1A-4803
 Spare - DOT A4A8 YA1F 4703

Tires have "DOT" markings: (X) YES () NO

REMARKS:

RECORDED BY: [Signature]

DATE: 07/19/04

APPROVED BY: [Signature]

DATA SHEET 6 RIM DIMENSIONS

VEHICLE MAKE/MODEL/BODY STYLE: 2004 CHEVROLET AVEO PASSENGER CAR
 VEHICLE NHTSA NO.: C40110 ;VIN: KL1TJ62684E
 LABORATORY: GENERAL TESTING LABORATORIES
 TEST DATE: 07/19/04

A. Rim Size & Flange

	Tire Size	Specfd. Rims	Measured Width of Rims	Measured Height of Rims	PASS/ FAIL
Right Front:	<u>P185/60R14</u>	<u>5.0 to 6.5" Jx14</u>	<u>5.5"</u>	<u>14"</u>	<u>Pass</u>
Left Rear:	<u>P185/60R14</u>	<u>5.0 to 6.5" Jx14</u>	<u>5.5"</u>	<u>14"</u>	<u>Pass</u>

REFERENCE USED: 2004 Tire and Rim Association Yearbook

B. Trade Stamps, Marks, Symbols: A4, NO. 2, ET45

Rim Manufacturer's Name or Label: DHA

Other Rim/Wheel Marking: 5.5J x 14

Rim Inspection Comments: No "D.O.T." Stamp

Tire Inspection Comments: None

Wheel/Rim Construction (i.e., welded, one piece, cast, deep dish, etc.)
One piece cast aluminum

DATA INDICATES COMPLIANCE: (X) YES () NO

REMARKS:

RECORDED BY: [Signature]

DATE: 07/19/04

APPROVED BY: [Signature]

DATA SHEET 7 DEFLATED TIRE RETENTION

VEHICLE MAKE/MODEL/BODY STYLE: 2004 CHEVROLET AVEO PASSENGER CAR

VEHICLE NHTSA NO.: C40110 ; VIN: KL1TJ62684B

LABORATORY: GENERAL TESTING LABORATORIES

TEST DATE: 07/29/04

Tire Pressures: LF 210 kPa (30 psi) LR 210 kPa (30 psi)
(cold) RF 210 kPa (30 psi) RR 210 kPa (30 psi)

Test Weight (should be the same weight and distribution recorded on Data Sheet 3 Section D.5.)

LF 414 kg (912 lb) LR 351 kg (773 lb)
RF 413 kg (910 lb) RR 350 kg (771 lb)
Front Axle 826 kg (1822 lb) Rear Axle 700 kg (1544 lb)

TOTAL VEHICLE 1527 kg (3366 lb)

Description of Weight Distribution: Sand bags in front passenger seat, rear seat and trunk.

A. Retention Test Left Front:

Odometer (START): 1726 km (1073 miles) Fuel Level: Full

Tire Pressure: 210 kPa (30 psi)

Ambient Temperature: 27.7 degrees C (82 F)

Wind Speed: 3.2 kmph (2.0 mph)

Size of Deflation Opening: 3.05 cm (1.2 in.) in diameter

Speed: 98.5 kmph (60 mph)

Deceleration Rate: 2.07 mpsps avg. (6.8 fpsps)

Distance Traveled After Initial Release of Air: 167 m (548 ft)

Distance of Deviation: < .3 m (<1 ft)

Description of Bead Separation, Outboard: None

Description of Bead Separation, Inboard: None

DATA SHEET 7 continued DEFLATED TIRE RETENTION

B. Retention Test Right Rear:

Odometer (START): 1730 km (1075 miles) Fuel Level: Full

Tire Pressure: 210 kPa (30 psi)

Ambient Temperature: 29.4 degrees C (85 F)

Wind Speed: 3.2 kmph (2 mph)

Size of Deflation Opening: 2.54 cm (1.0 in.) in diameter

Speed: 97.4 kmph (60.5 mph)

Deceleration Rate: 1.52 mpsps avg. (5 fpsps)

Distance Traveled After Initial Release of Air: 230 m (753 ft)

Distance of Deviation: <.3 m (<1 ft)

Description of Bead Separation, Outboard: None

Description of Bead Separation, Inboard: None

NOTE: No Rotation of Tire on rim.

C. REMARKS: (Stability, Control, Suspension, etc.)

Good control, normal stopping

PASS/FAIL

Left Front
Right Rear

Pass
Pass

DATA INDICATES COMPLIANCE: (X) YES () NO

REMARKS:

RECORDED BY: [Signature]

DATE: 07/29/04

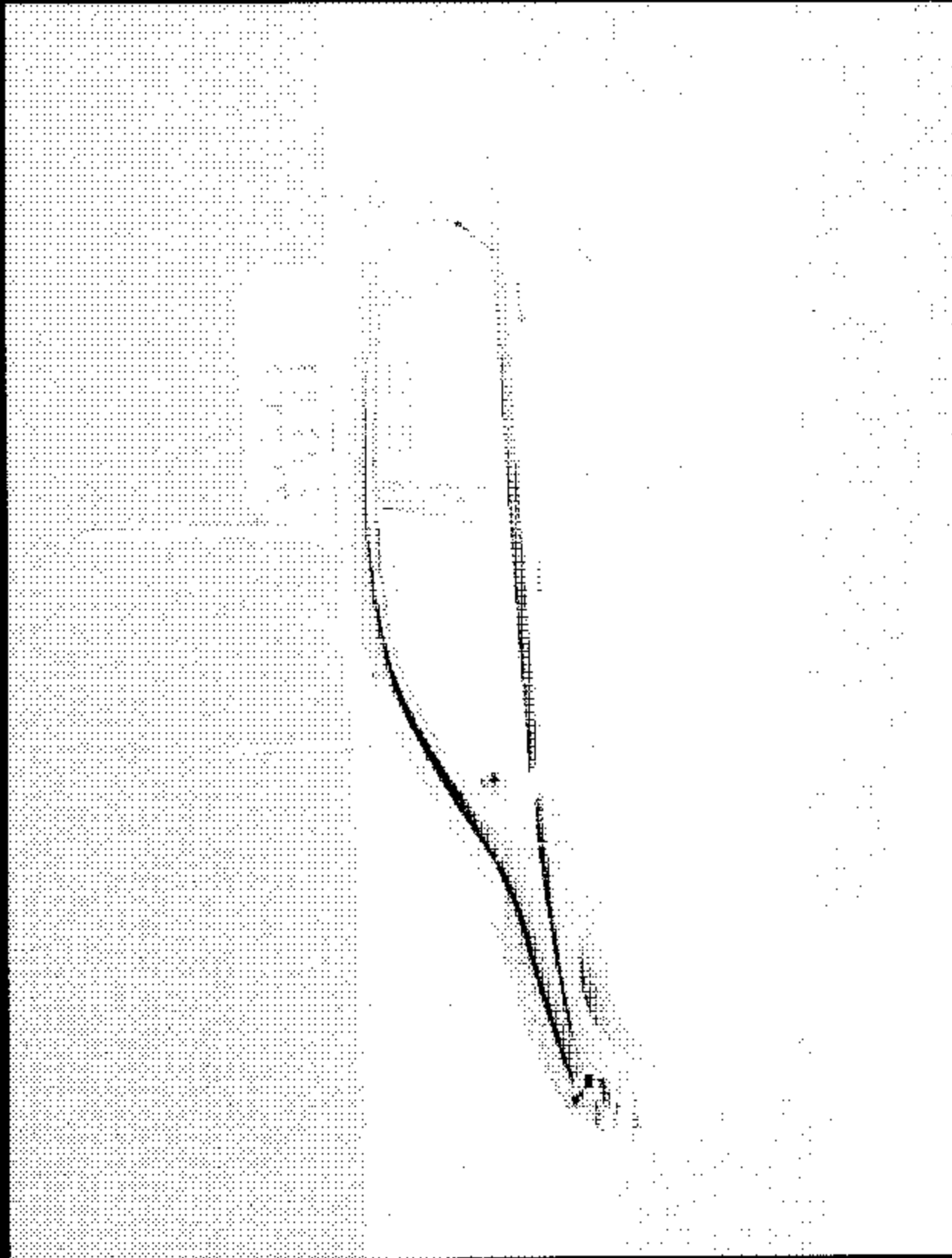
APPROVED BY: [Signature]

SECTION 4
INSTRUMENTATION AND EQUIPMENT LIST

TABLE 1 - INSTRUMENTATION & EQUIPMENT LIST

EQUIPMENT	DESCRIPTION	MODEL/ SERIAL NO.	CAL. DATE	NEXT CAL. DATE
PAD SCALES	#1 199744LF	199744LF	07/04	07//05
	#2 199744RF	199744RF	07/04	07//05
	#3 199744LR	199744LR	07/04	07//05
	#4 199744RR	19974RR	07/04	07//05
PRESSURE TRANSDUCER	BLH	D-HF #65409	BEFORE USE	BEFORE USE
SURFACE LEVEL	STANLEY	641186	02/04	02/05
DATA ACQUISITION COMPUTER	GEO1	N/A	BEFORE USE	BEFORE USE
ANEMOMETER	HASTINGS	RM-1	05/04	05/05
SLIP RING ASSEMBLY	GTL	N/A	BEFORE USE	BEFORE USE
DECELEROMETER	GTL	N/A	BEFORE USE	BEFORE USE
INCLINOMETER	STARRETT	002	02/04	02/05
VBOX	RACELOGIC	VB2 #004337	BEFORE USE	BEFORE USE

SECTION 5
PHOTOGRAPHS



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.1
LEFT SIDE VIEW OF VEHICLE

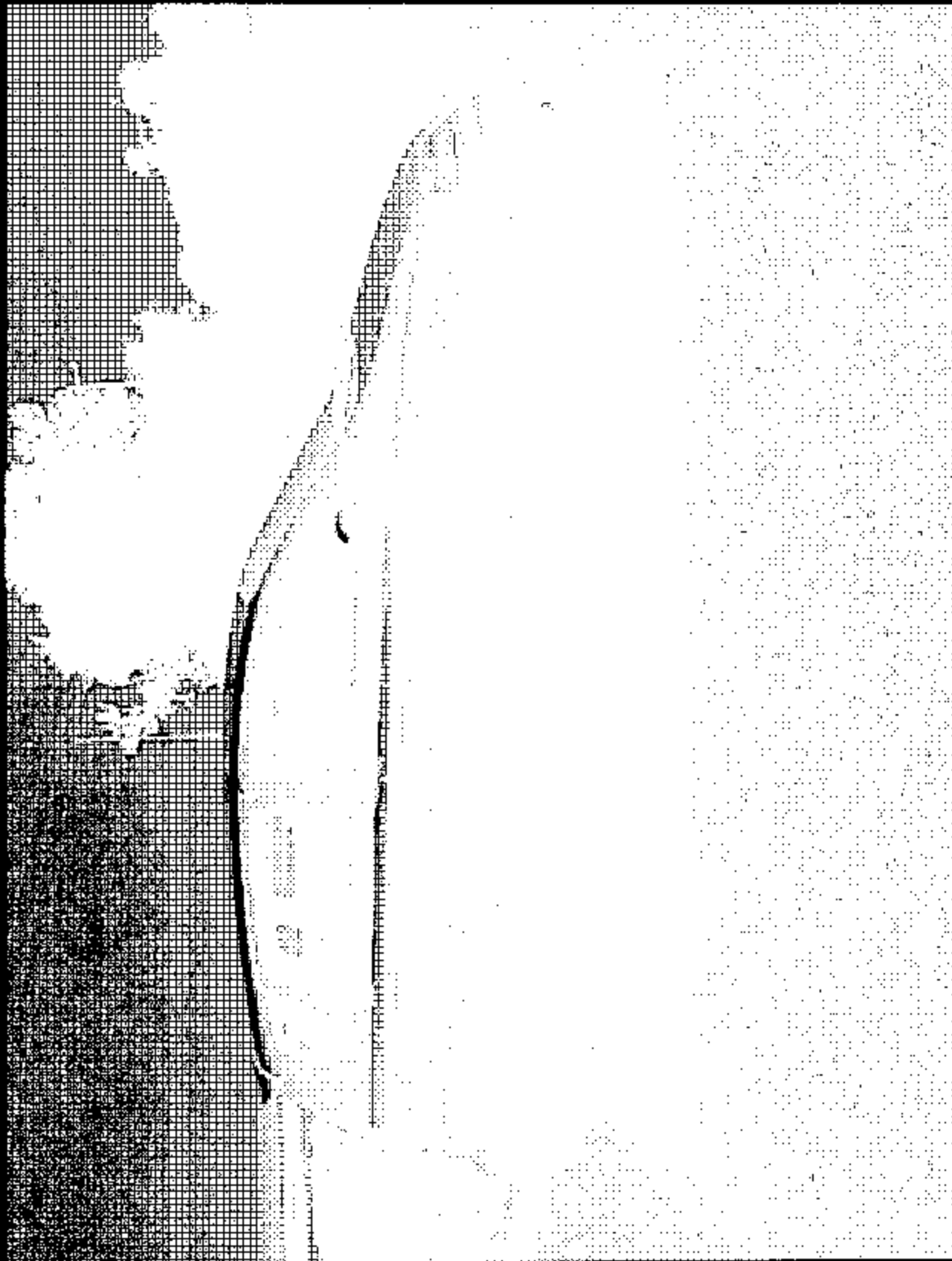
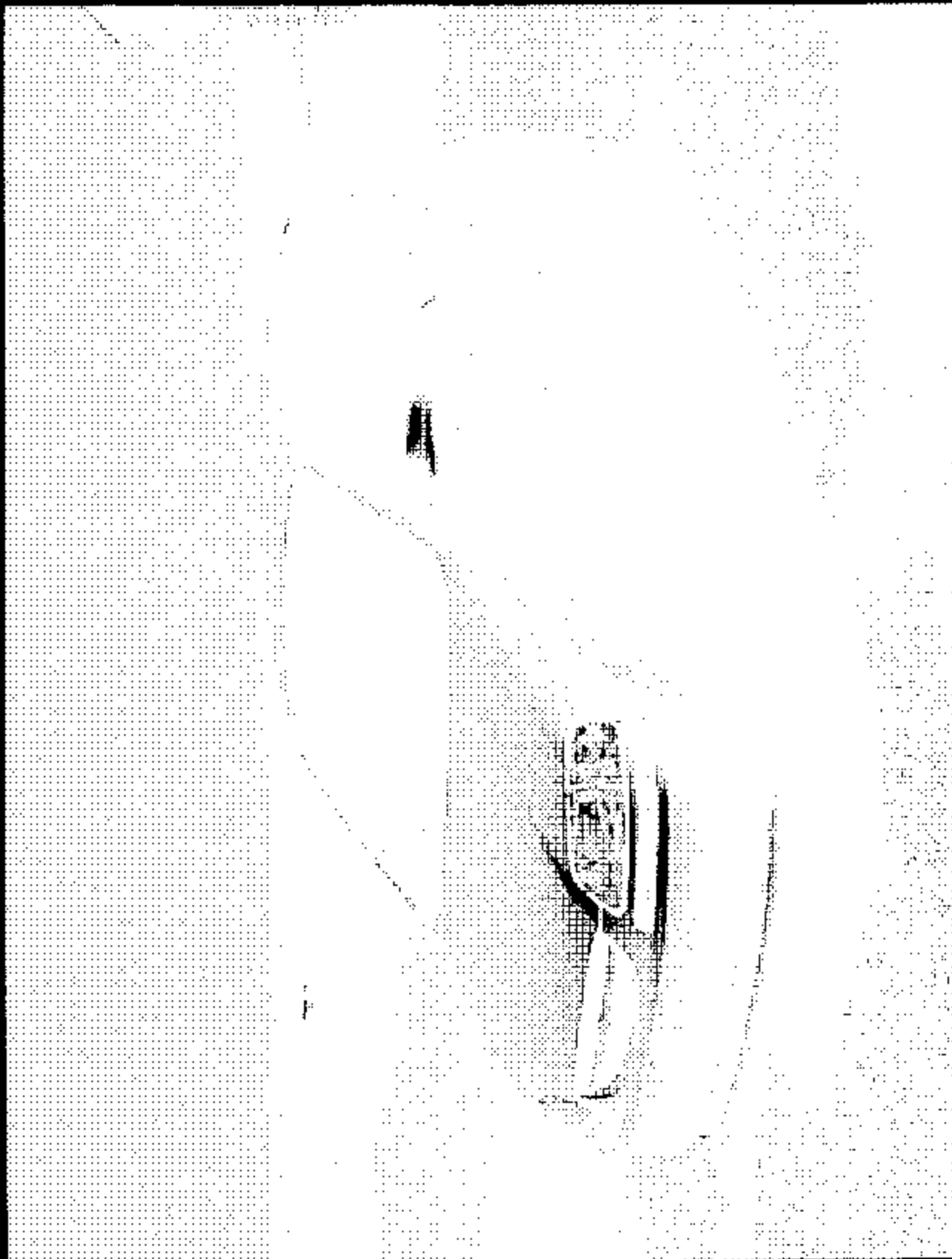


FIGURE 5.2
RIGHT SIDE VIEW OF VEHICLE

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110



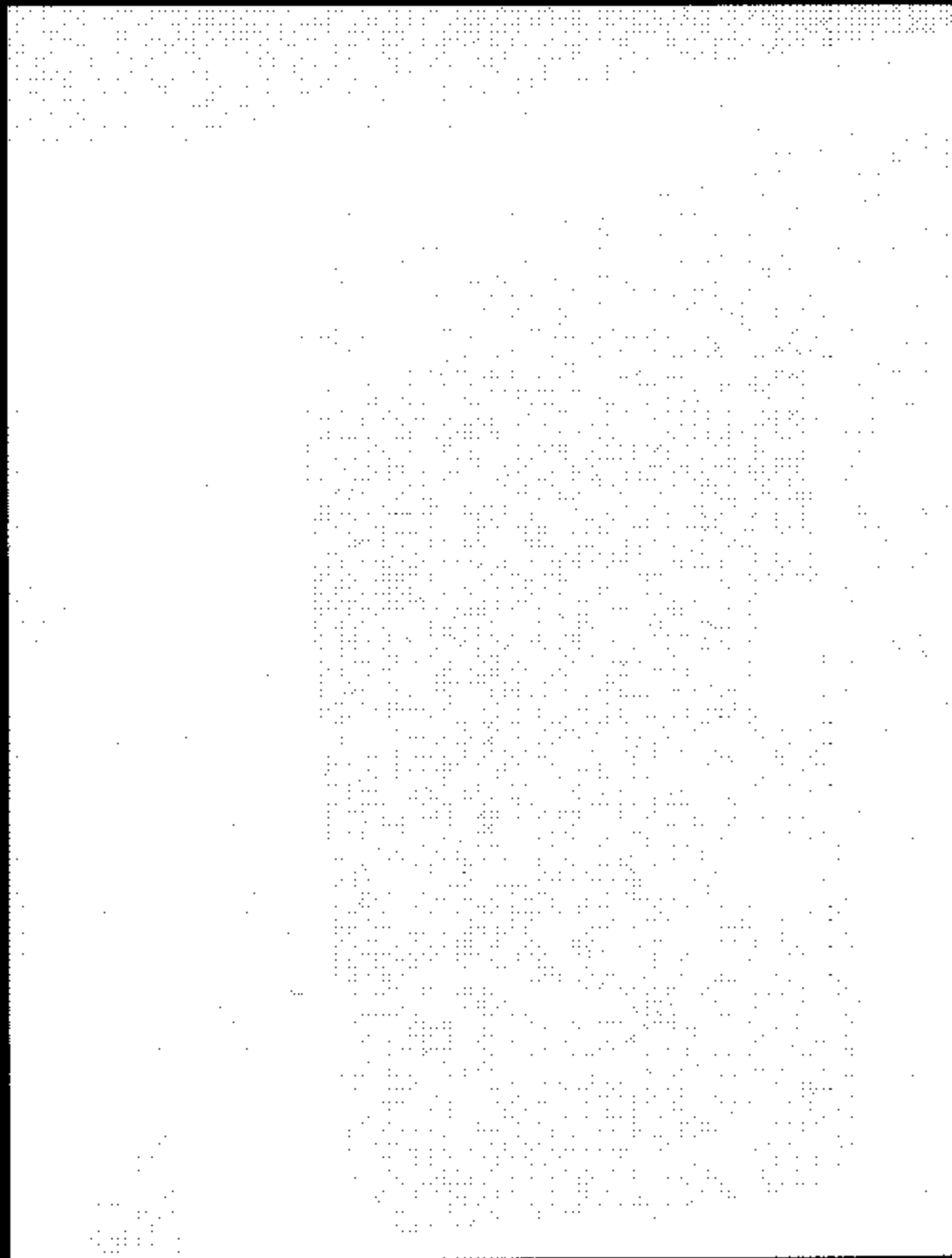
2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.3
¾ FRONTAL VIEW FROM LEFT SIDE OF
VEHICLE



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.4
¾ REAR VIEW FROM RIGHT SIDE OF VEHICLE



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FMVSS NO. 110

FIGURE 5.5
VEHICLE CERTIFICATION LABEL

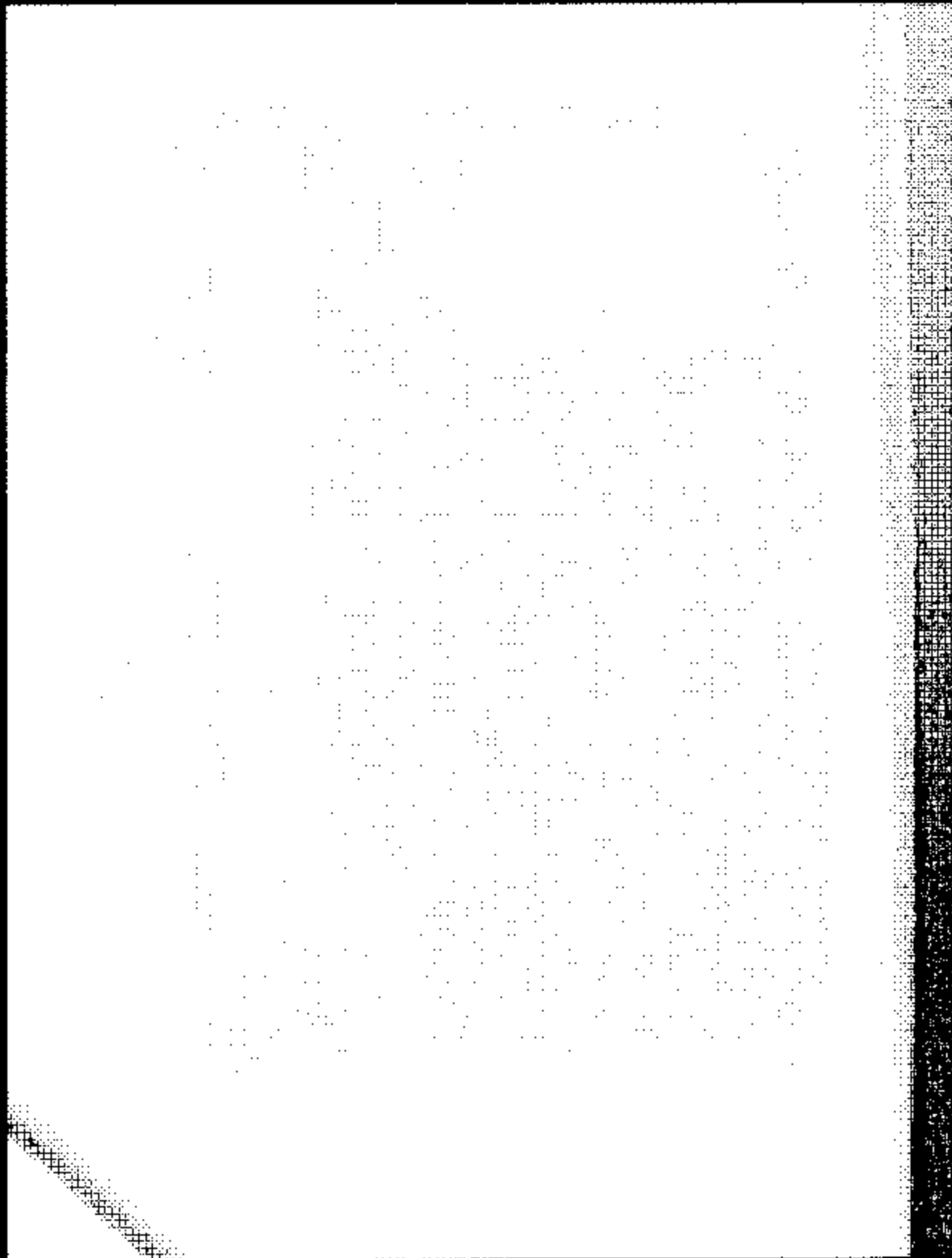


FIGURE 5.8
VEHICLE TIRE INFORMATION LABEL

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

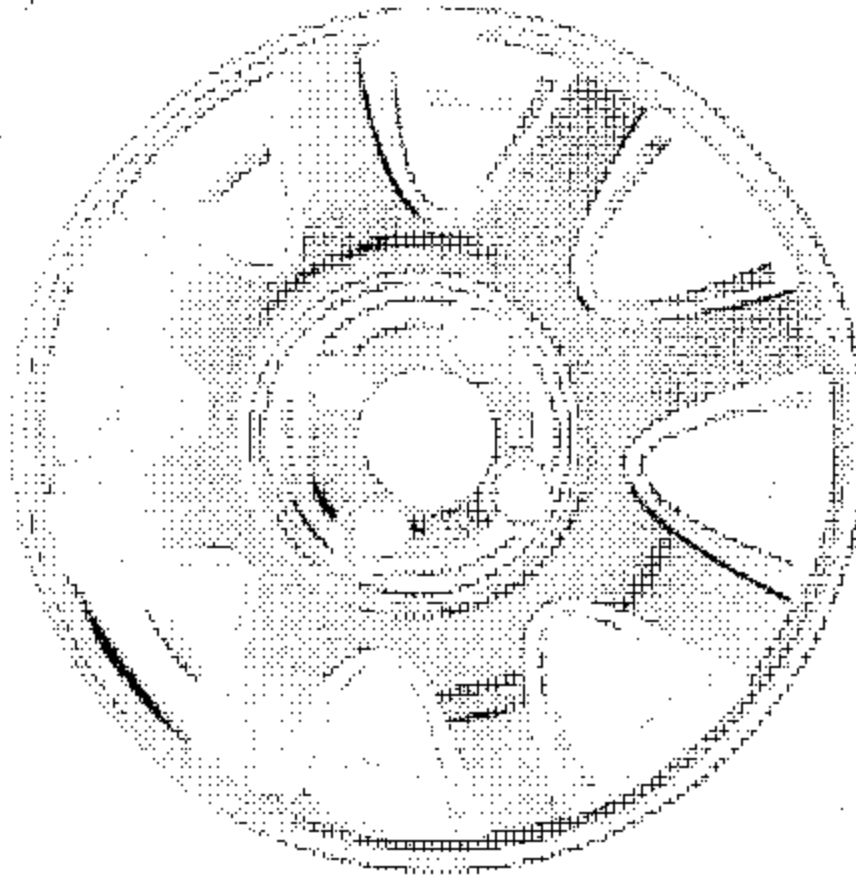


FIGURE 5.7
TIRE AND RIM

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

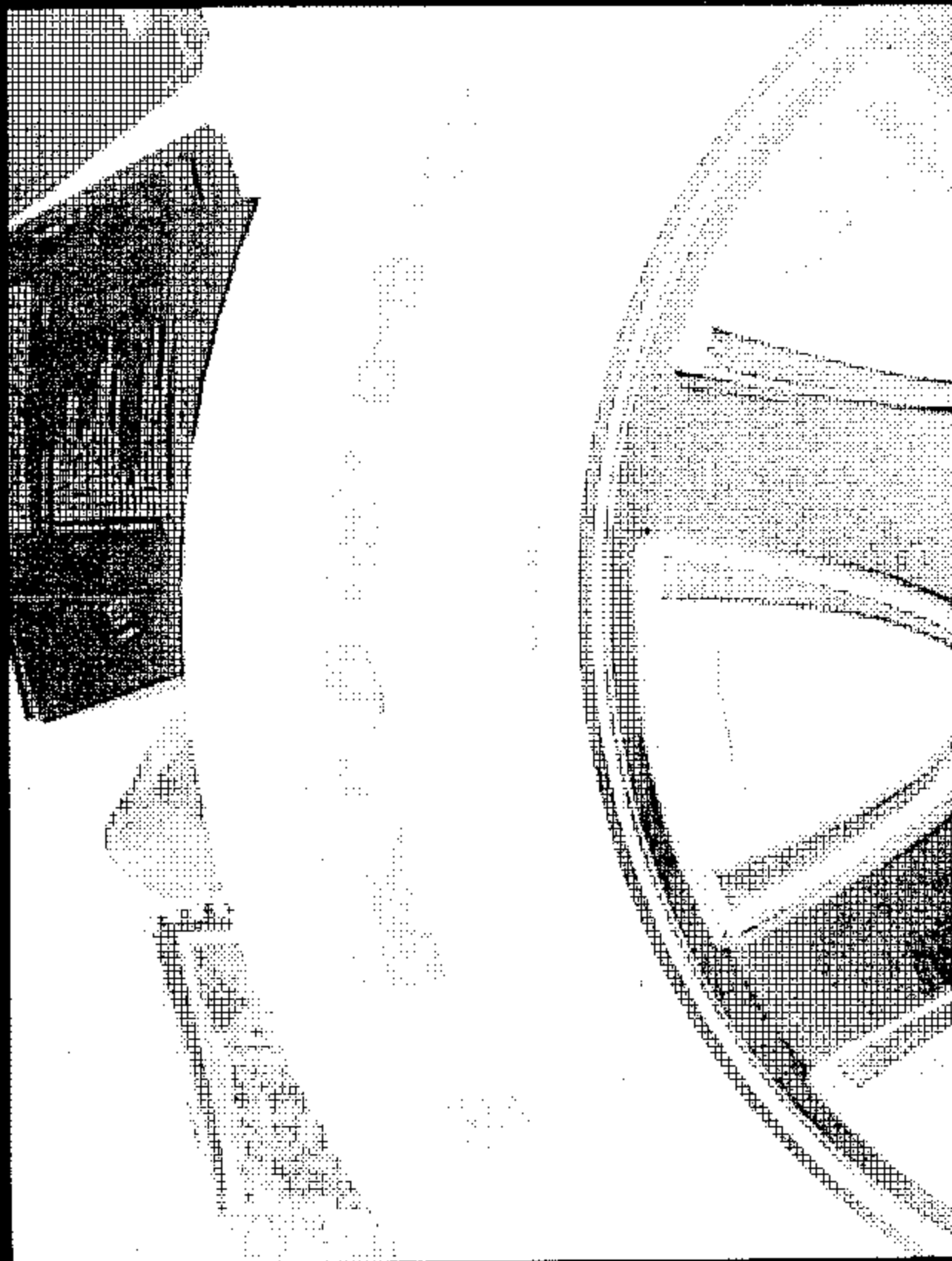
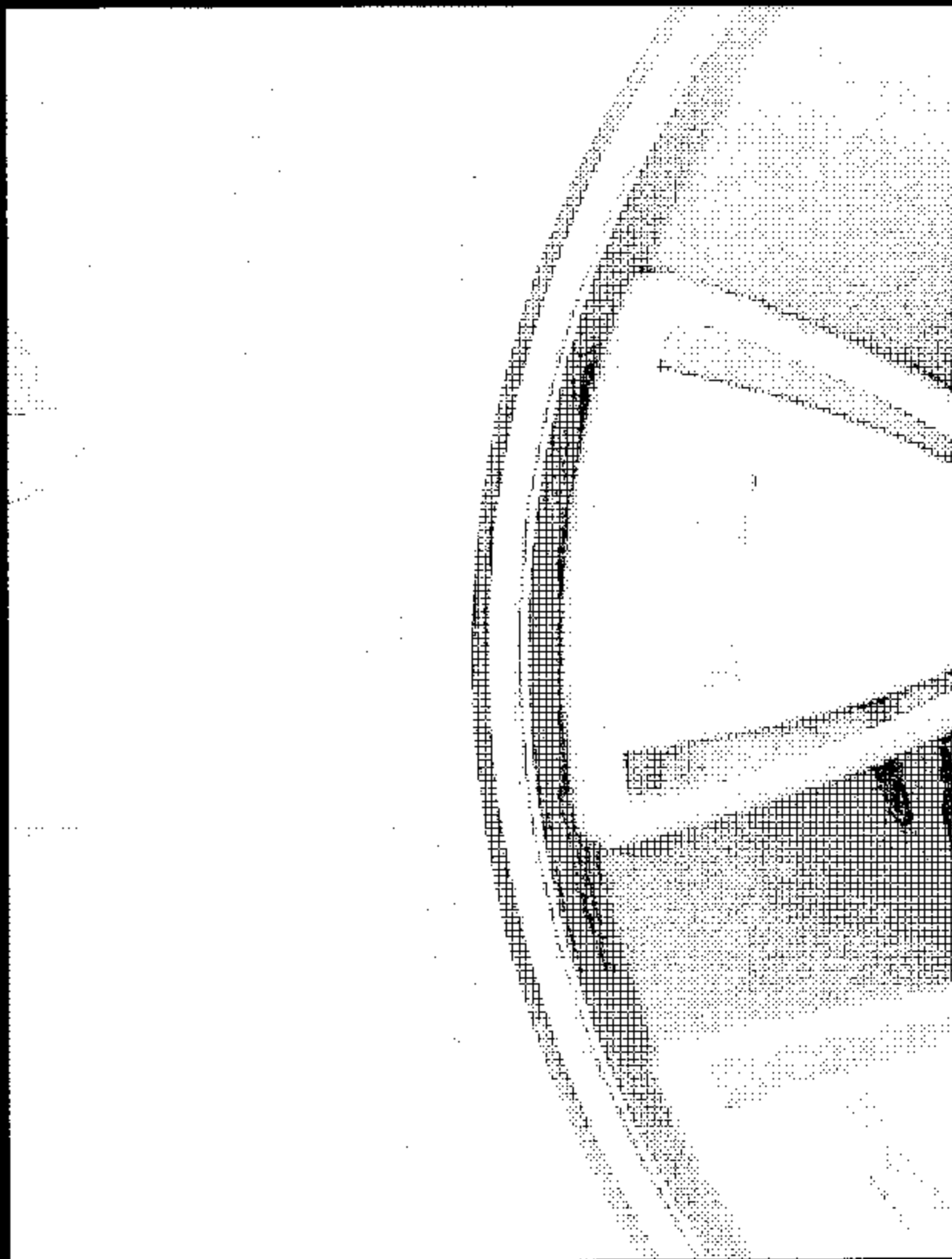


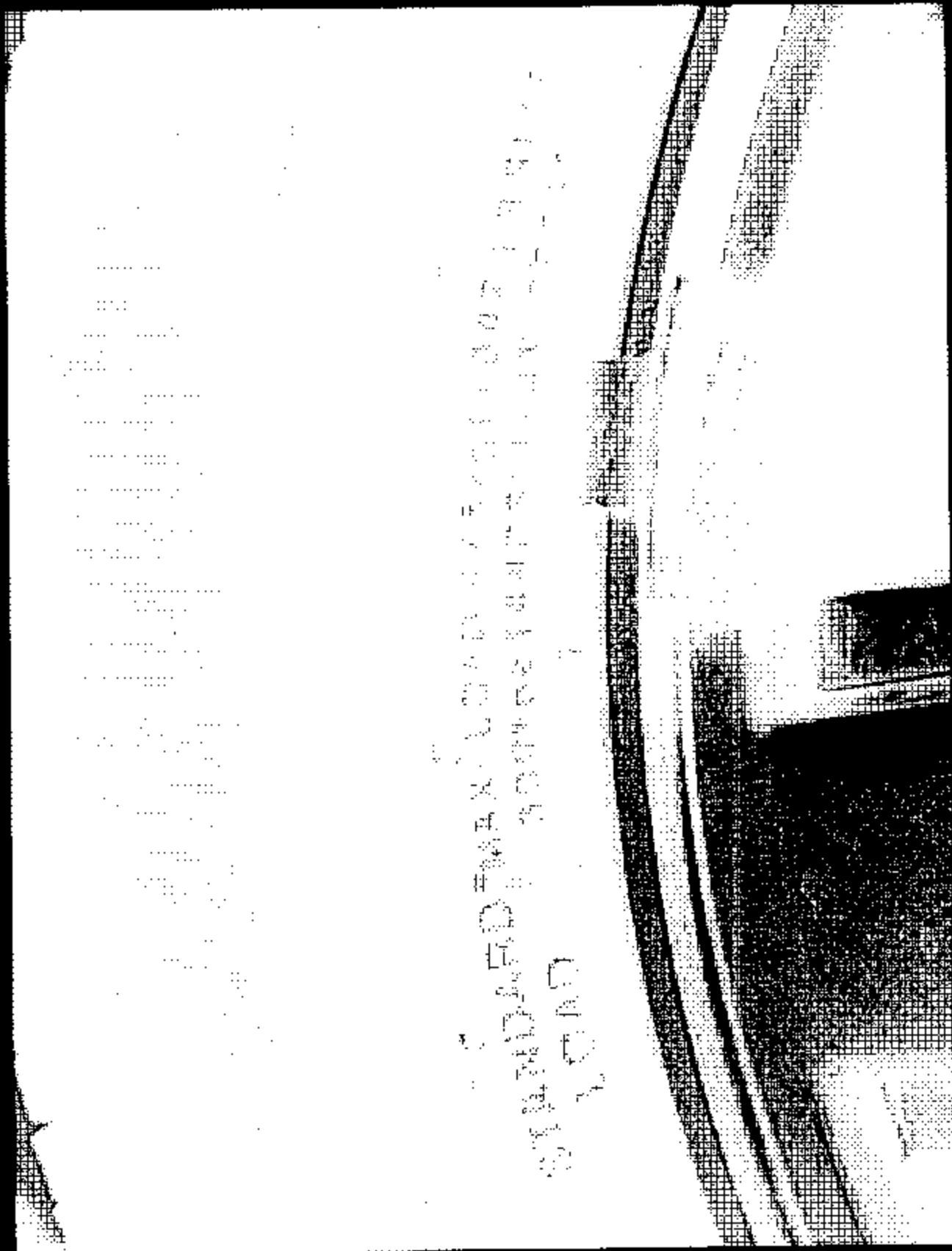
FIGURE 5.8
TIRE SHOWING BRAND

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110



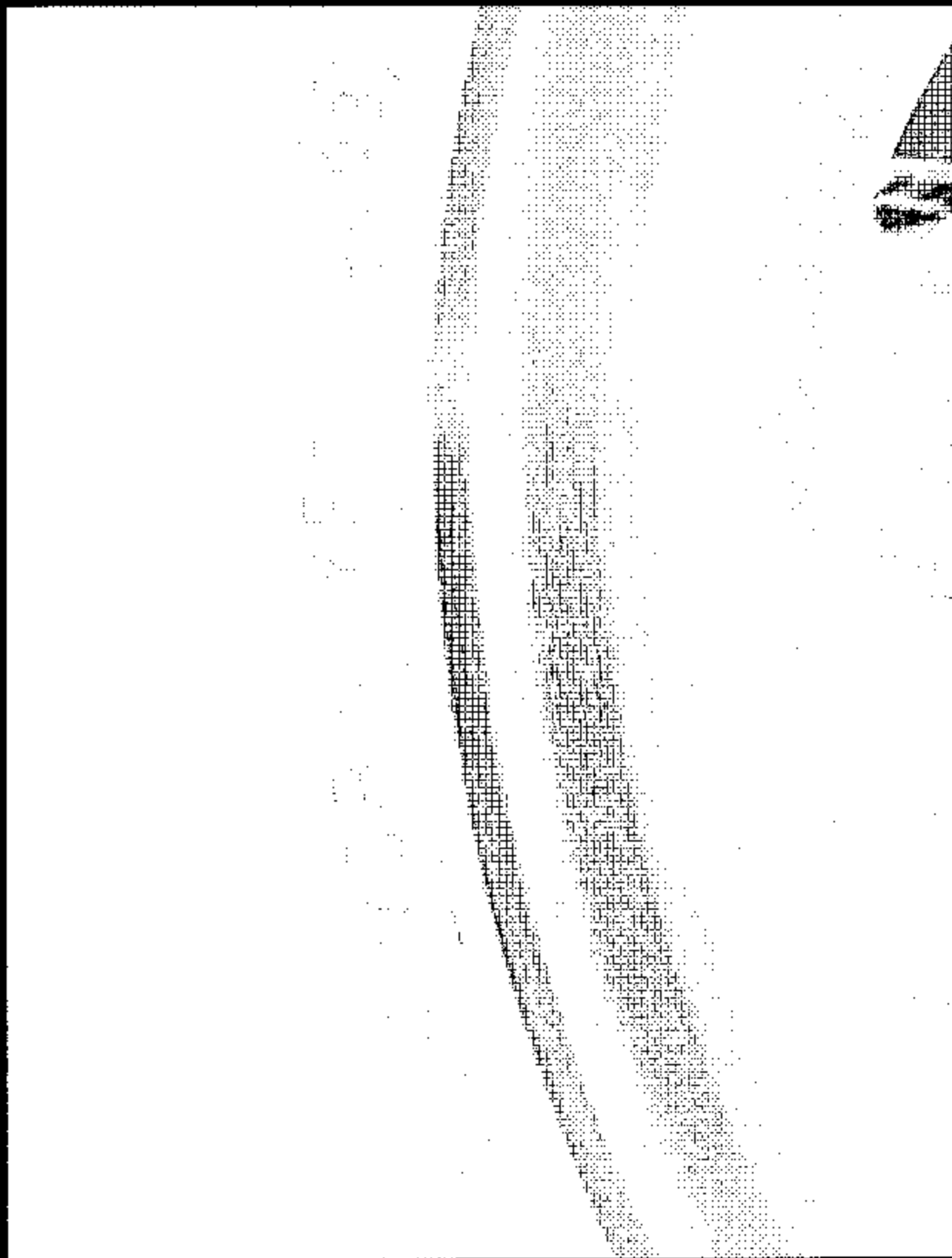
2004 CHEVROLET AVEO
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FMVSS NO. 110

FIGURE 5.9
TIRE SHOWING SIZE, SPEED RATING AND
LOAD INDEX



2004 CHEVROLET AVEO
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FMVSS NO. 110

FIGURE 5.10
TIRE SHOWING MAX LOAD RATING AND MAX
INFLATION PRESSURE



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.11
TIRE SHOWING SERIAL NUMBER

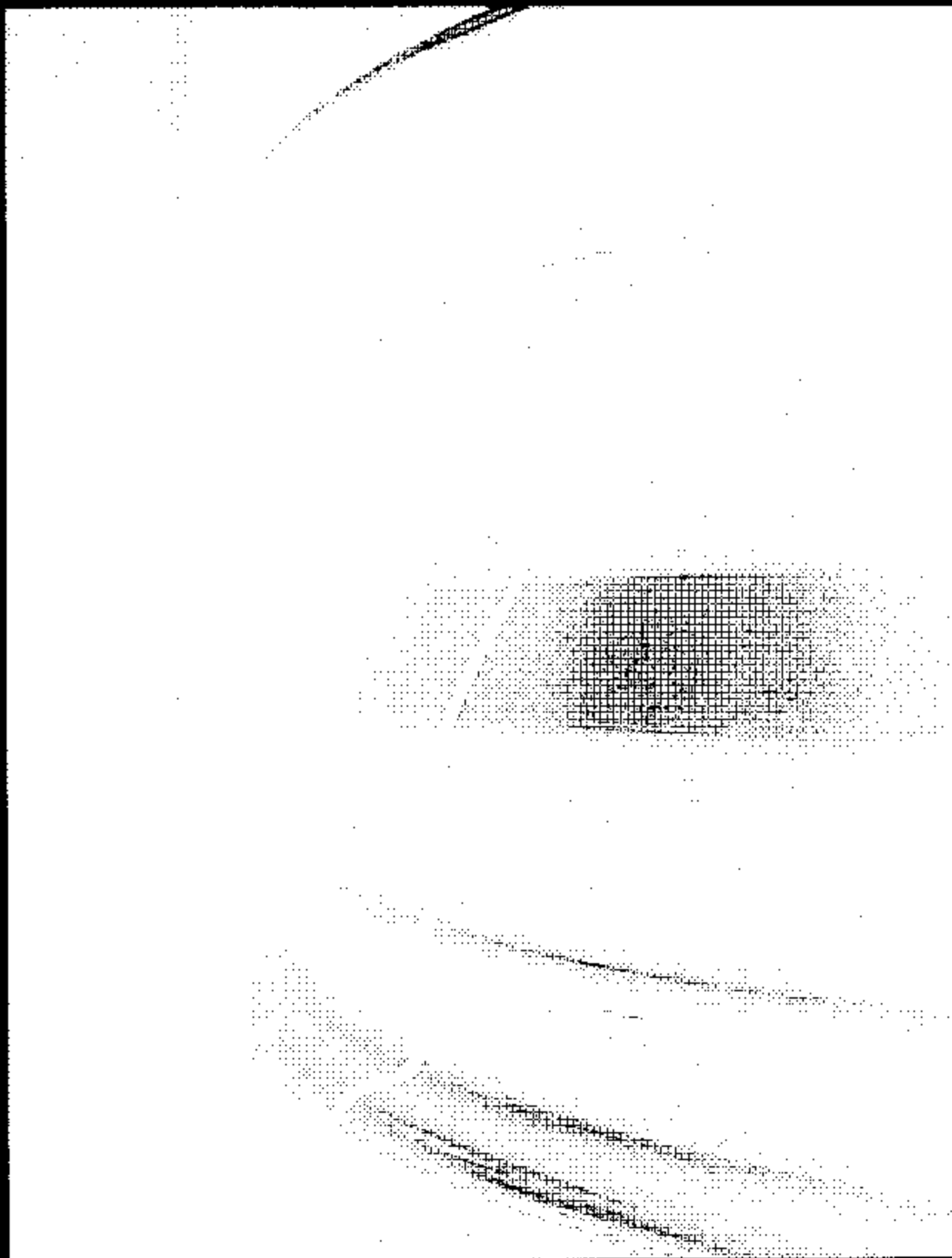
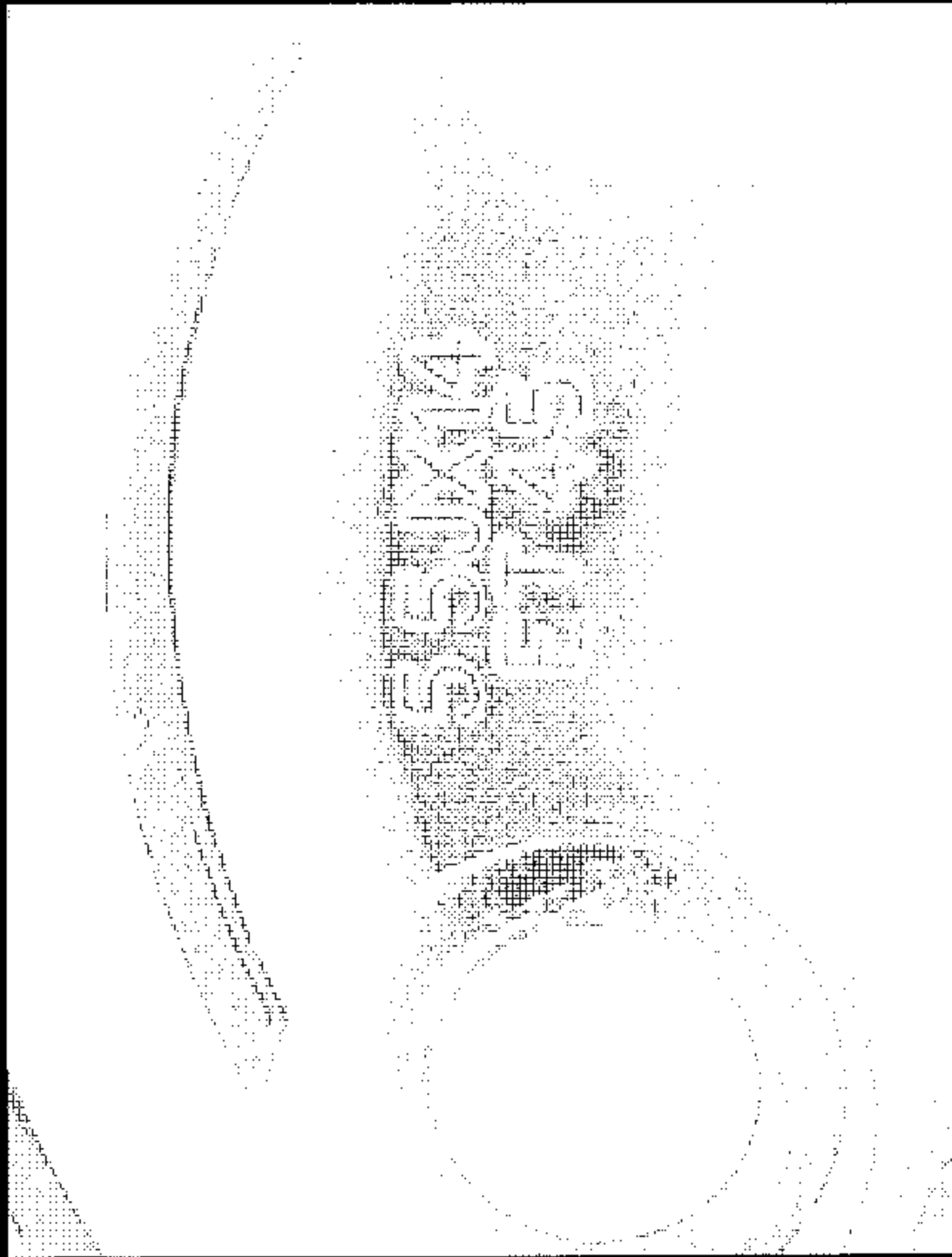


FIGURE 5.12
VIEW OF RIM CONTOUR

2004 CHEVROLET AVEO
NHTSA NO. C40110
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2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.13
RIM MARKINGS (SIZE)

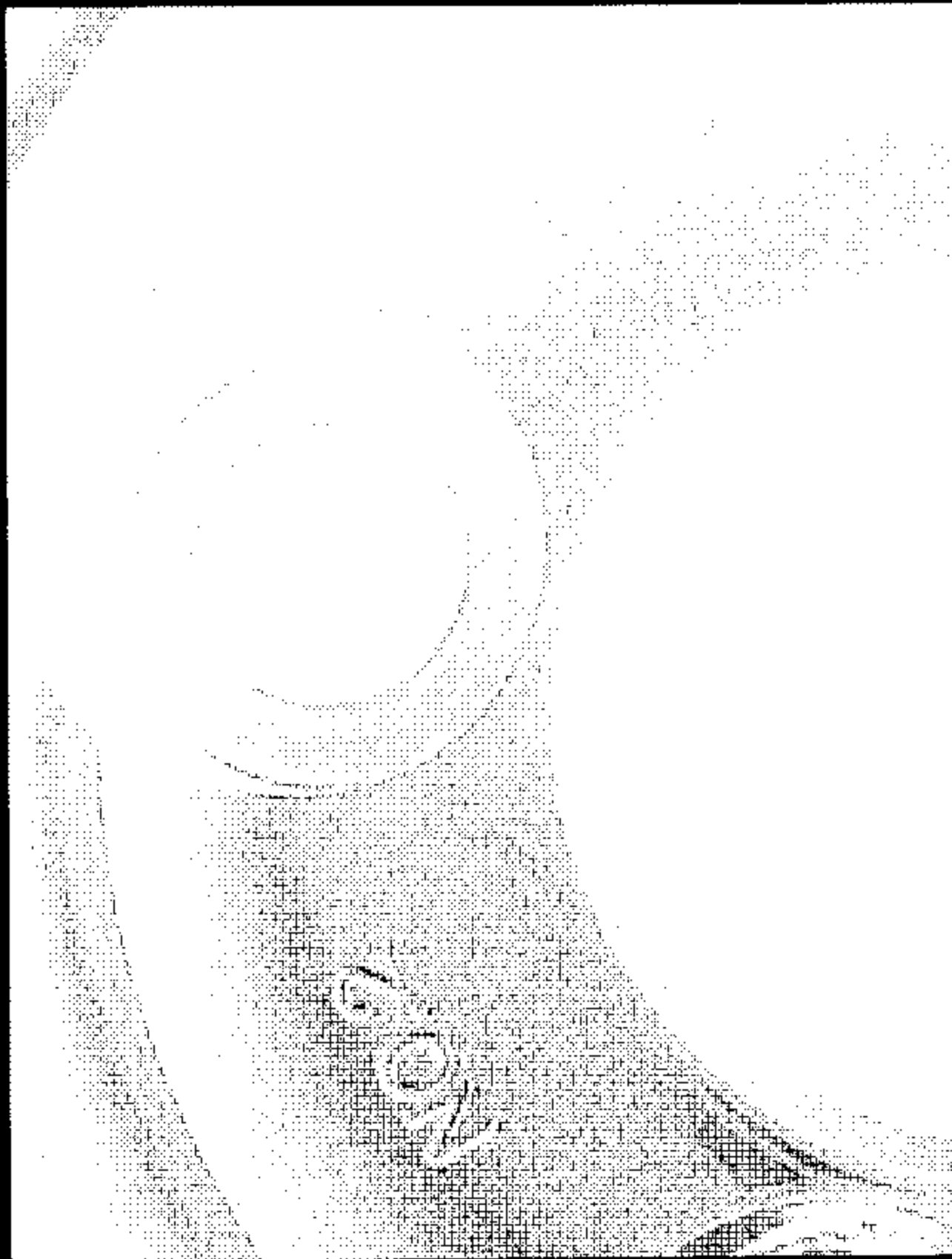
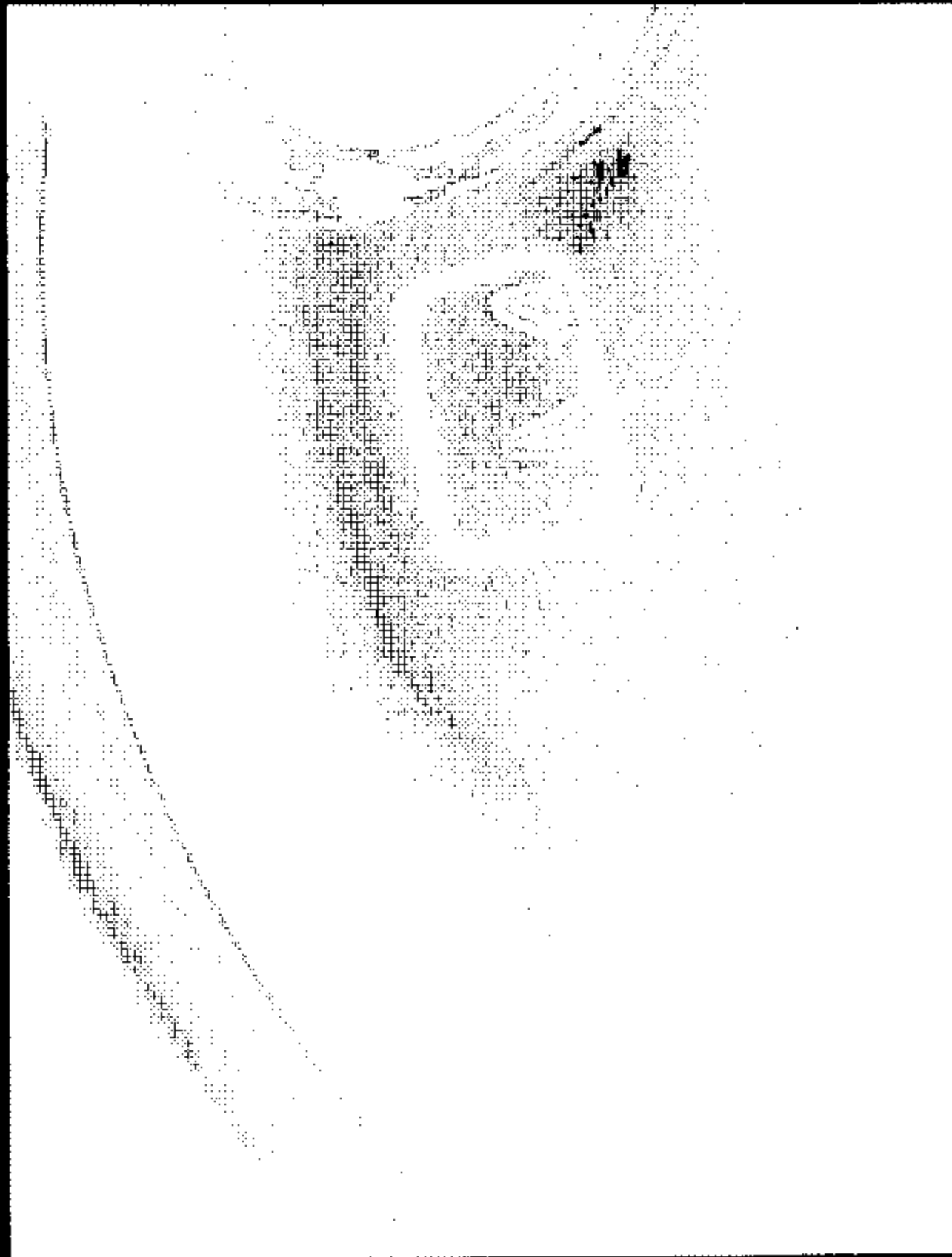


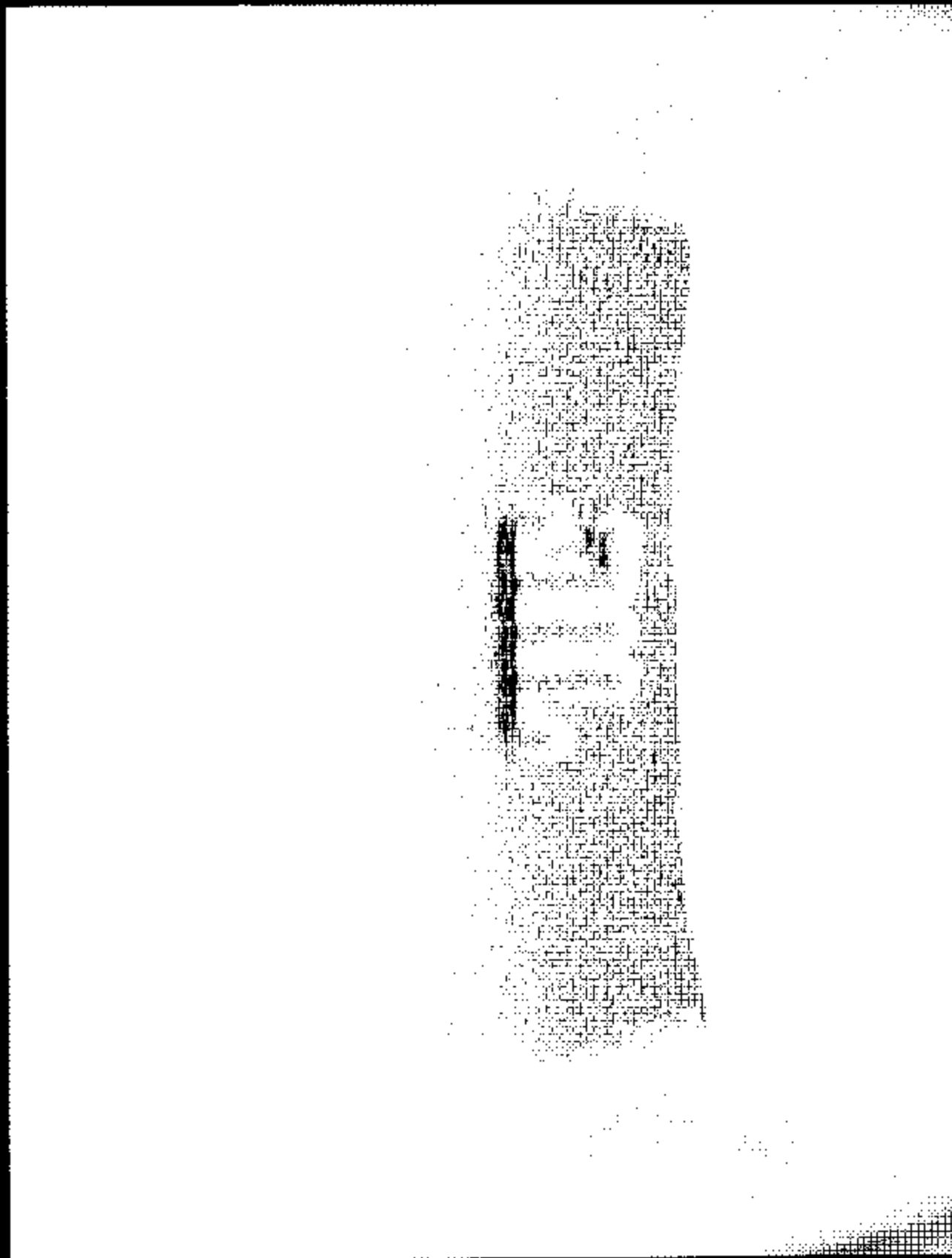
FIGURE 5.14
RIM MARKINGS

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.15
RIM MARKINGS



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.16
RIM MARKINGS

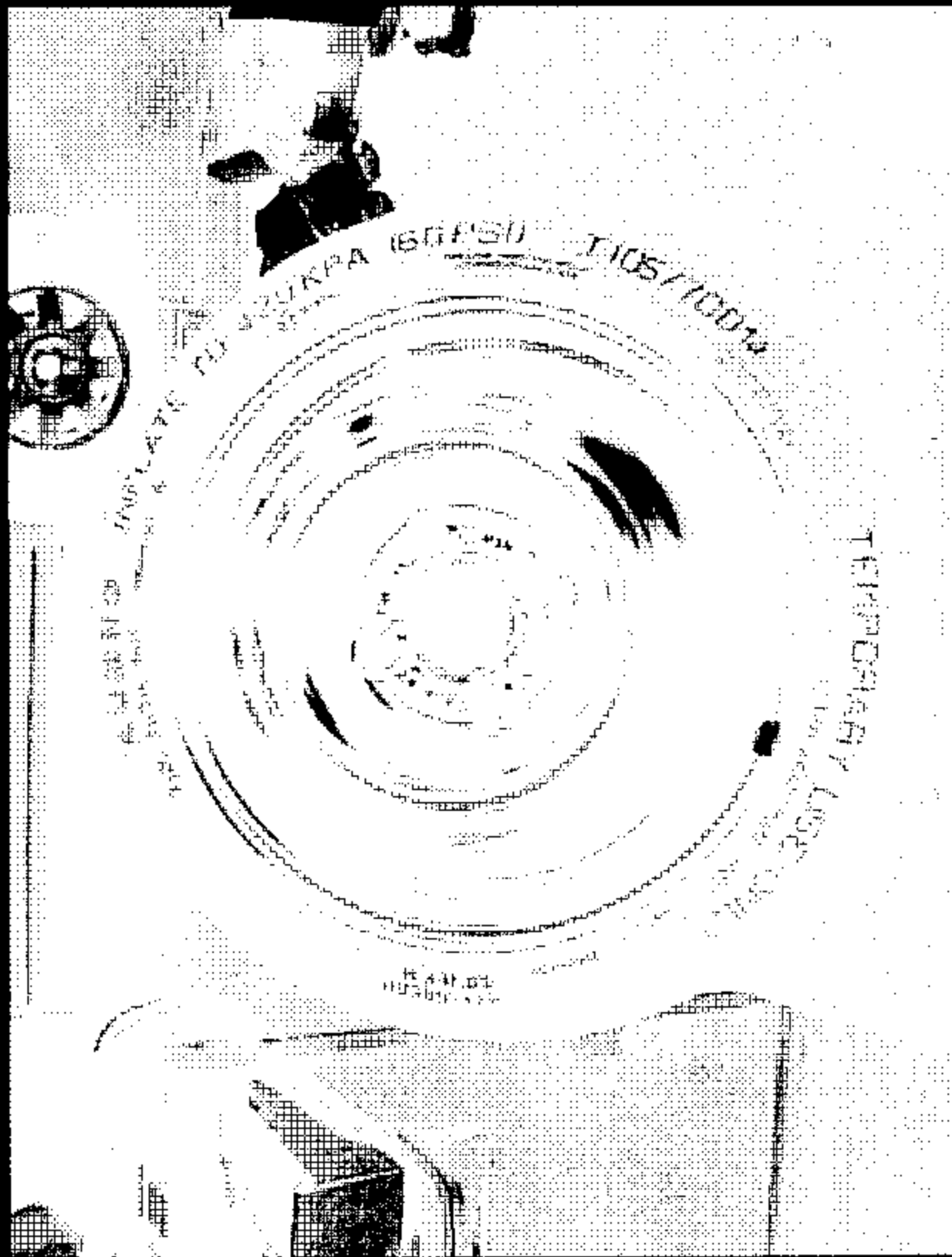
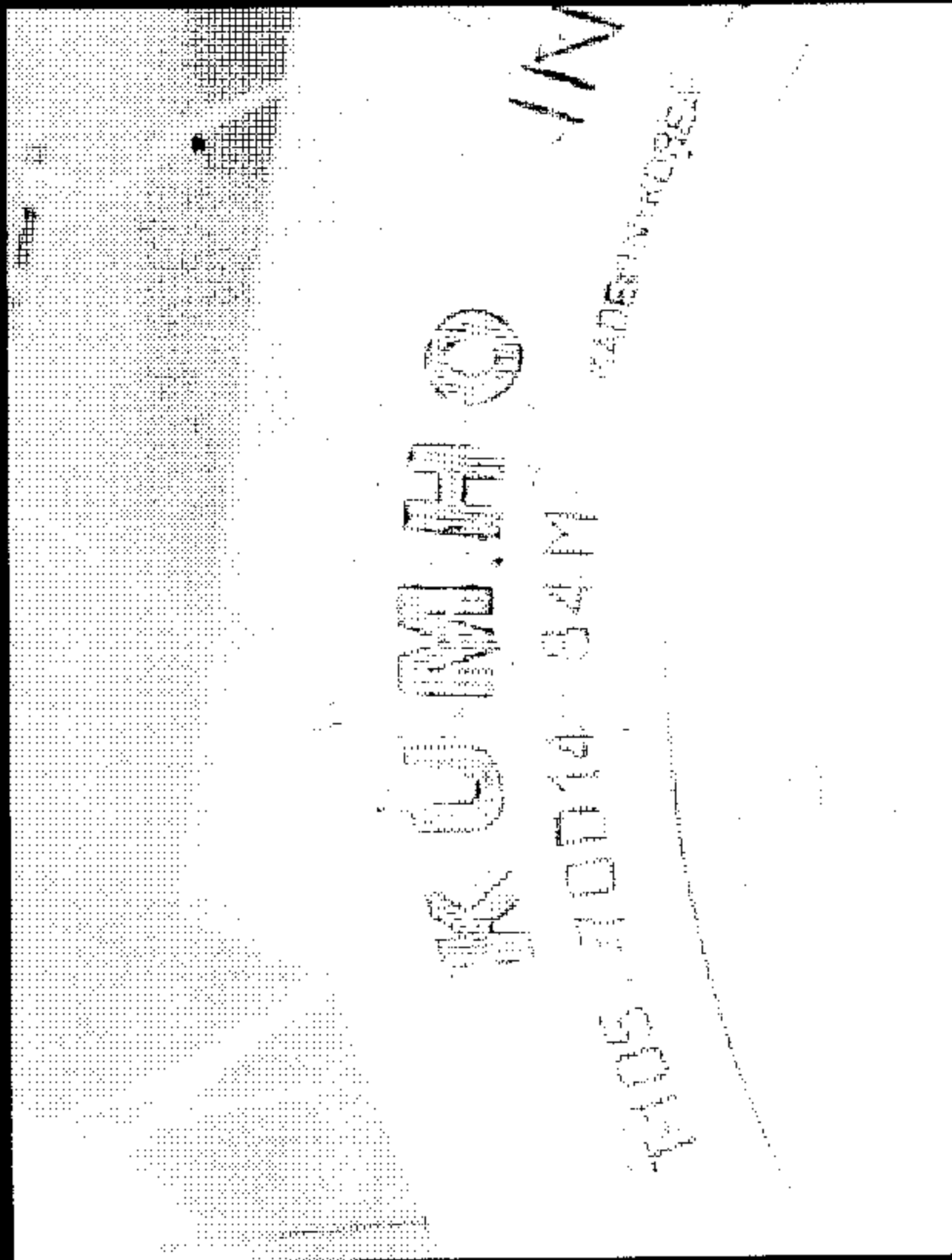


FIGURE 5.17
SPARE TIRE AND MARKINGS

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.18
SPARE TIRE NAME AND SERIAL NUMBER

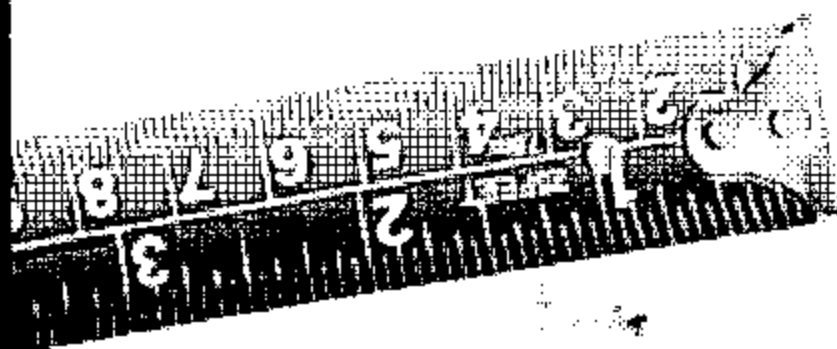
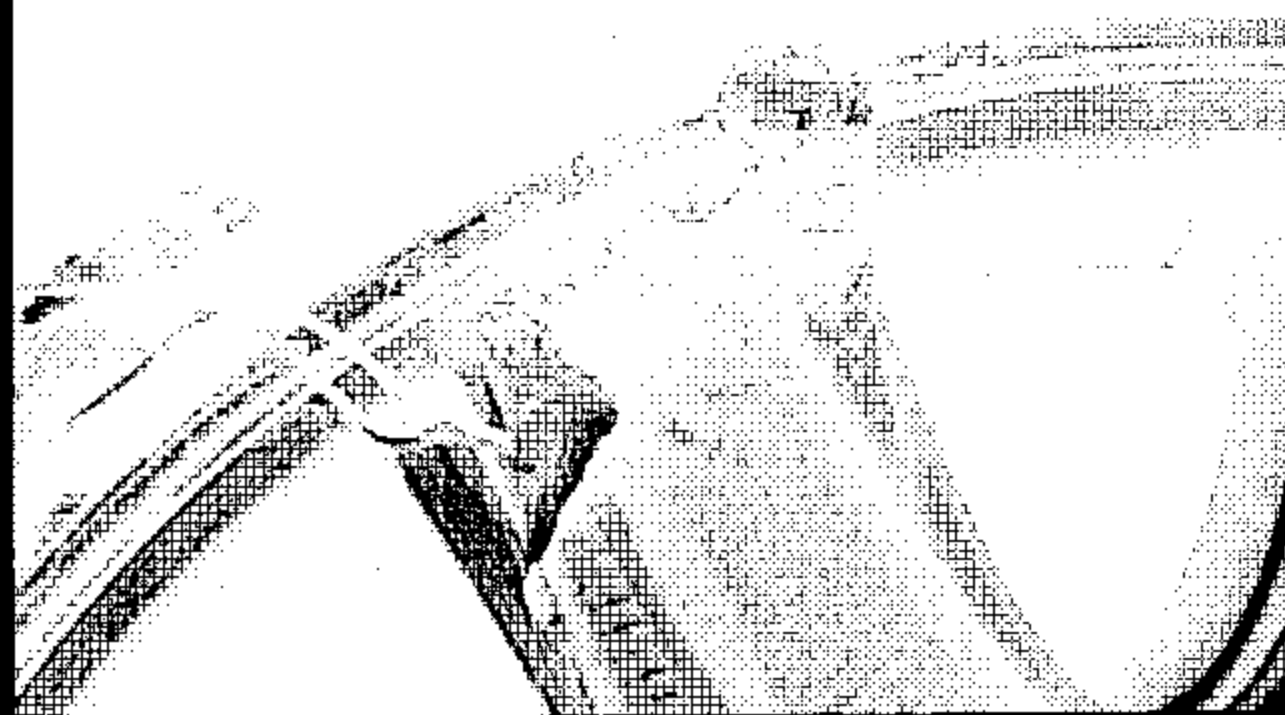
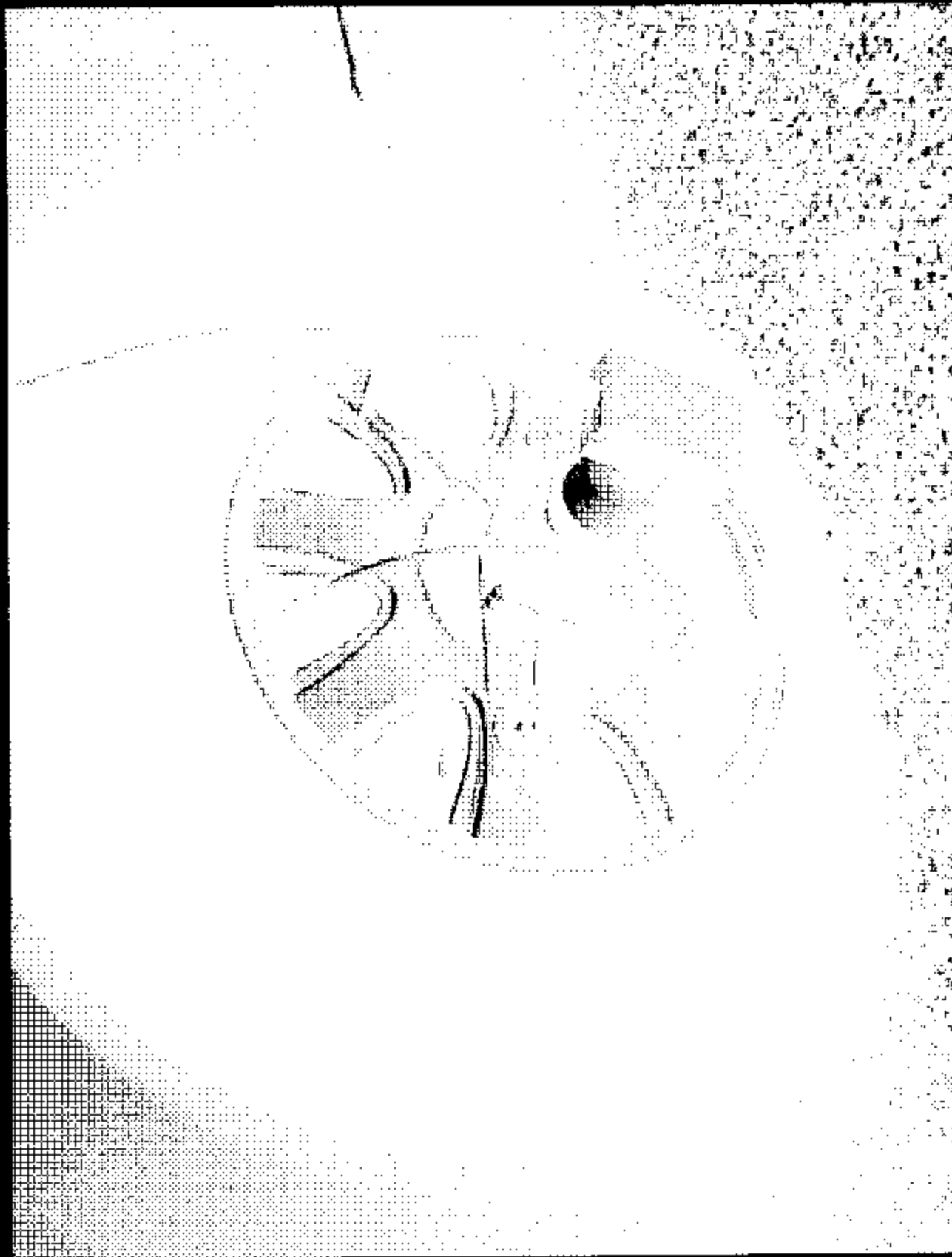


FIGURE 5.19
LEFT FRONT TIRE AFTER BLOW-OUT WITH
RULER NEXT TO HOLE

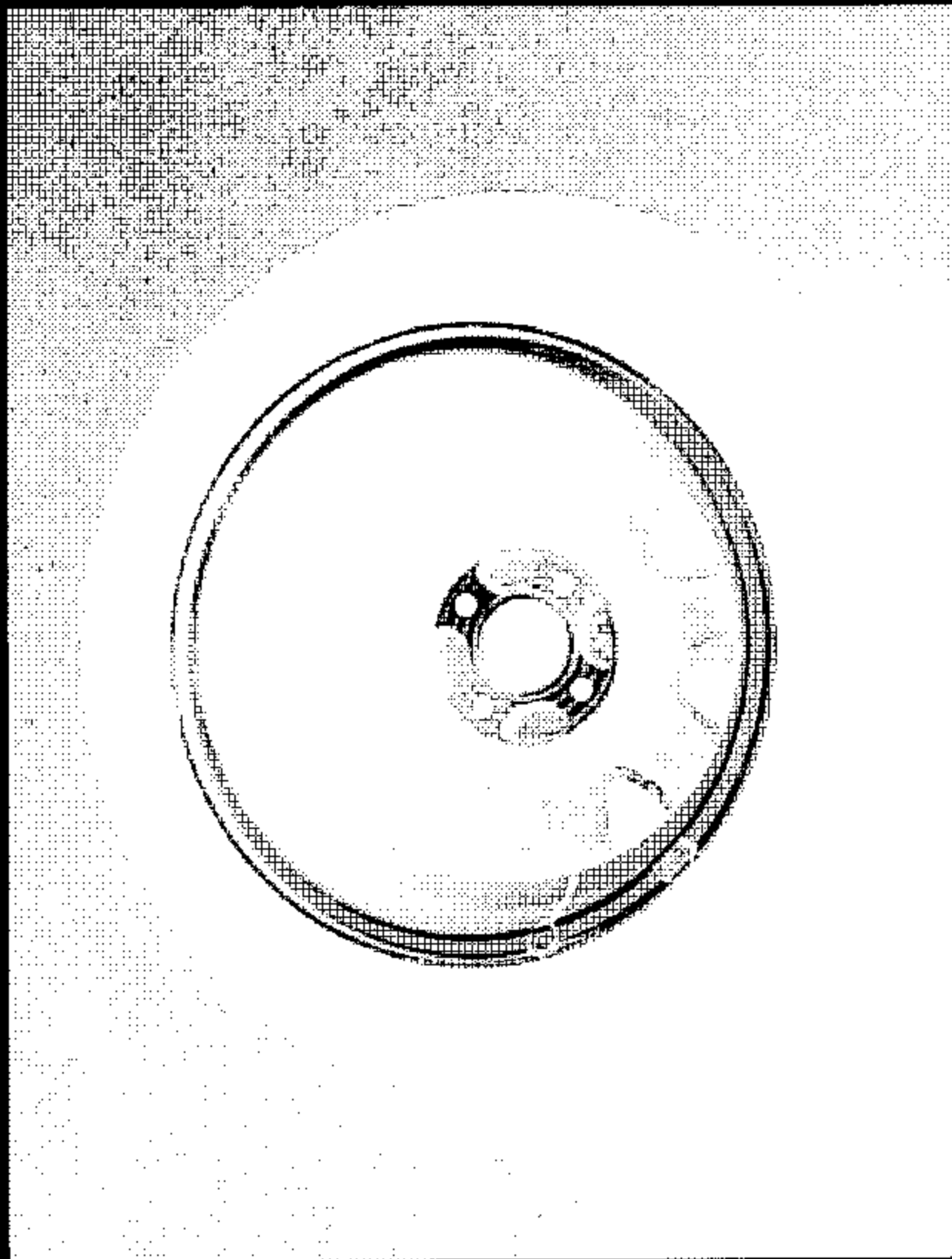


2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.20
OUTSIDE VIEW OF LEFT FRONT TIRE AFTER
BLOW-OUT



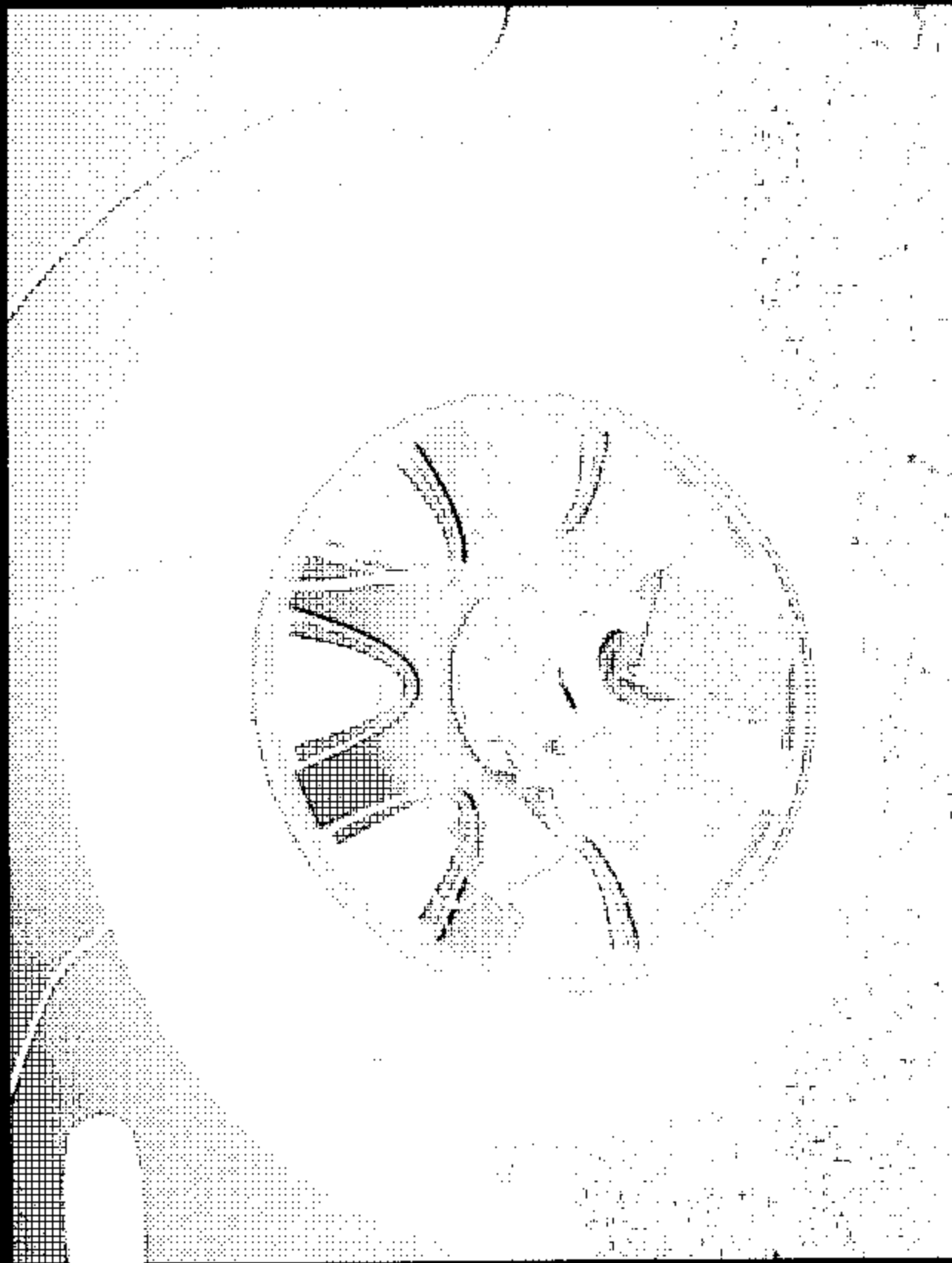
2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.21
INSIDE VIEW OF LEFT FRONT TIRE AFTER
BLOW-OUT



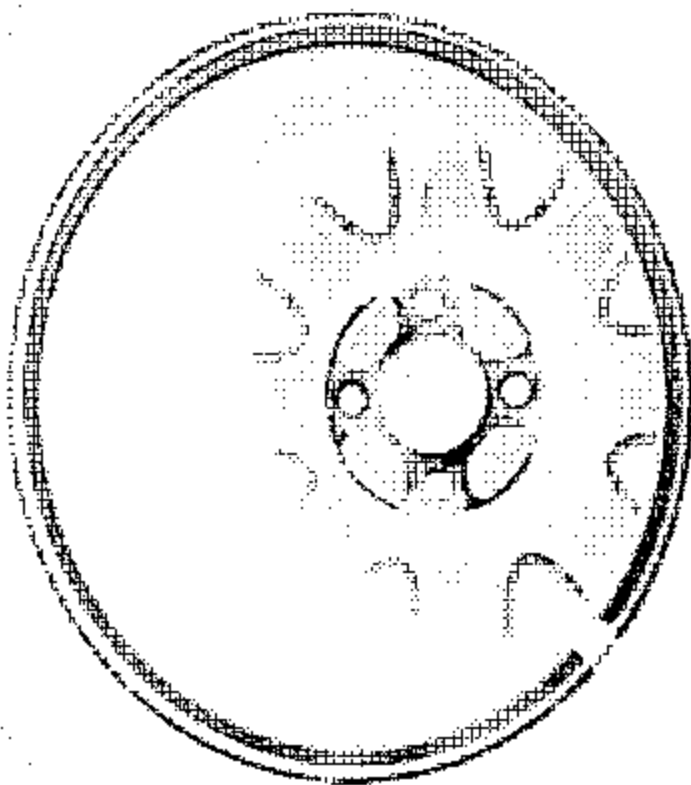
FIGURE 5.22
RIGHT REAR TIRE AFTER BLOW-OUT WITH
RULER NEXT TO HOLE

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.23
OUTSIDE VIEW OF RIGHT REAR TIRE AFTER
BLOW-OUT



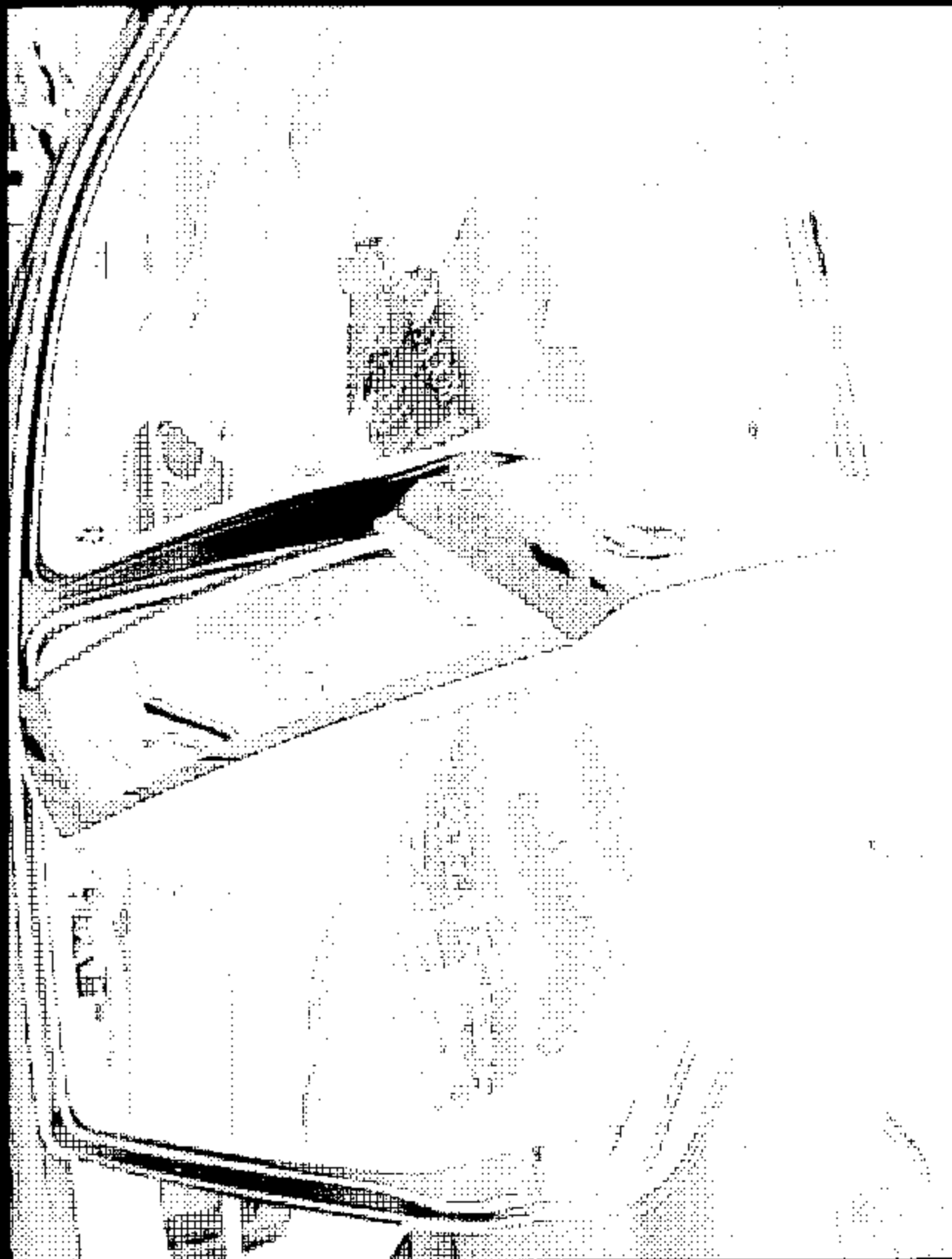
2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.24
INSIDE VIEW OF RIGHT REAR TIRE AFTER
BLOW-OUT



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.25
VEHICLE BALLASTED FOR NORMAL LOAD



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

FIGURE 5.26
VEHICLE BALLASTED FOR MAXIMUM LOAD



FIGURE 5.27
VEHICLE BALLASTED FOR CARGO

2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110



2004 CHEVROLET AVEO
NHTSA NO. C40110
FMVSS NO. 110

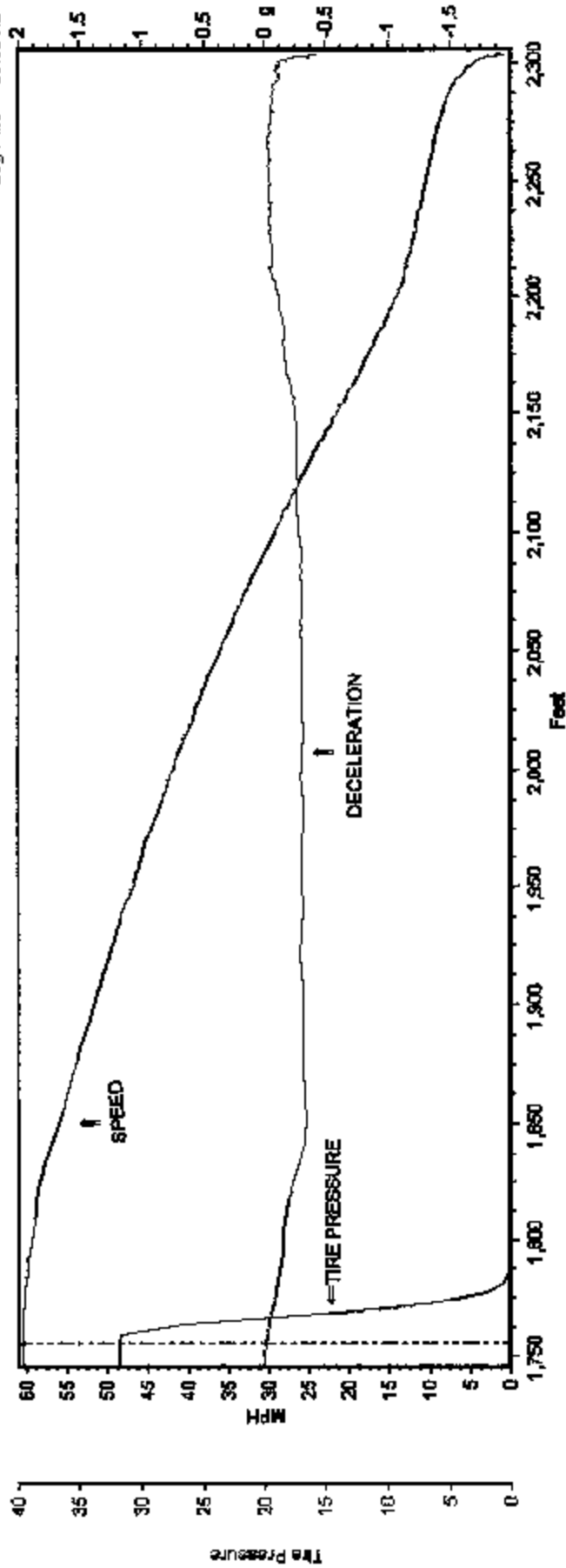
FIGURE 5.28
VIEW OF VEHICLE ON SCALES

SECTION 6
TEST PLOTS

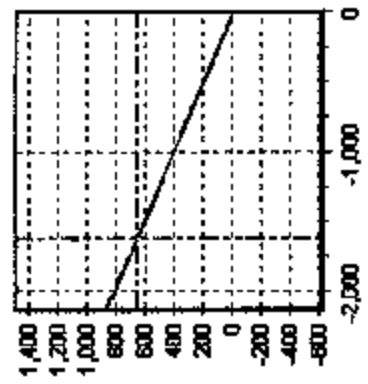


CHEVAVEO,C40110,L,F,110 BLOW-OUT

Log Rate = 20.00 Hz

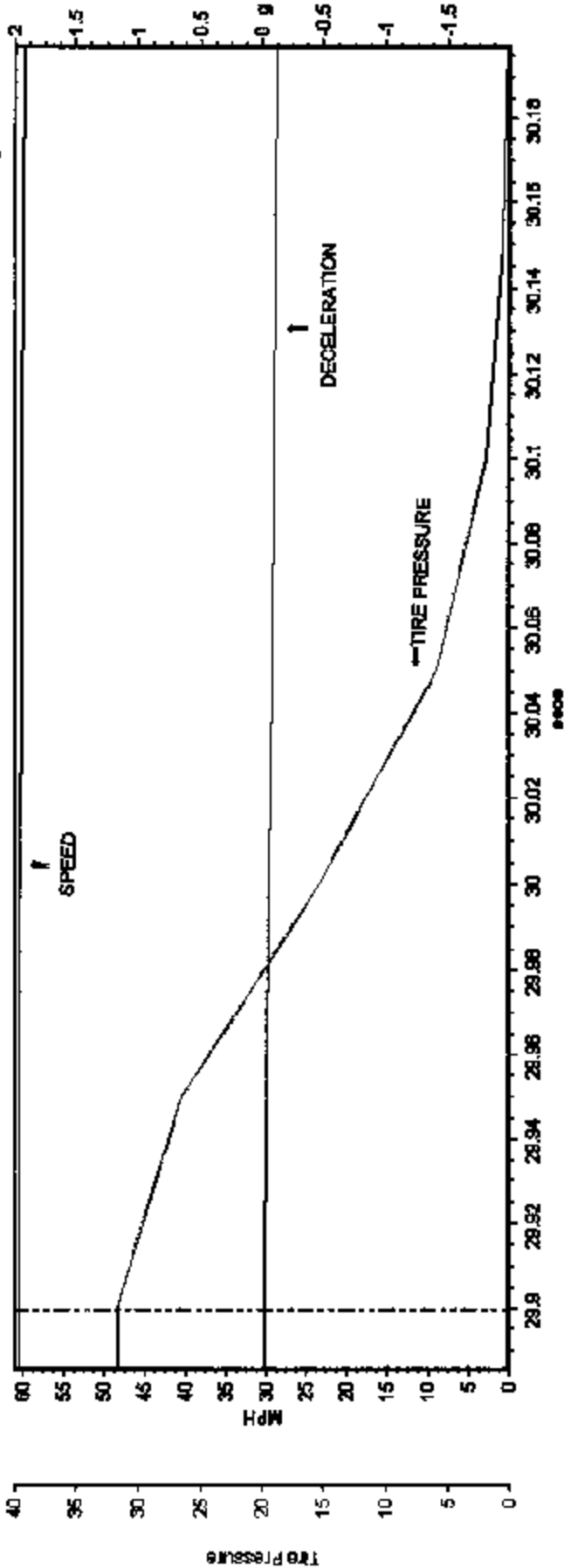


Run Time	WBOX_001.V80 (run 1)
Cursor (Feet)	0 minutes 45.95 secs
Speed (MPH)	1755.35
Tire Press (PSI)	60.50
Longitudinal Acceleration (g)	31.730
Lateral Acceleration (g)	-0.016
Height (Feet)	-0.011
Vertical Velocity (ft/sec)	-102.979
Satellites (Number of)	0.000
	10

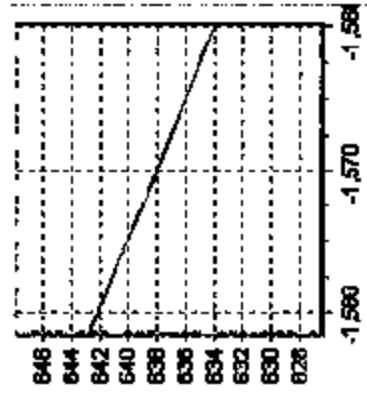


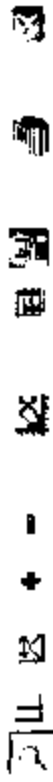
CHEVAVEO.C40110.L.F.110 BLOW-OUT

Log Rate = 20.00 Hz



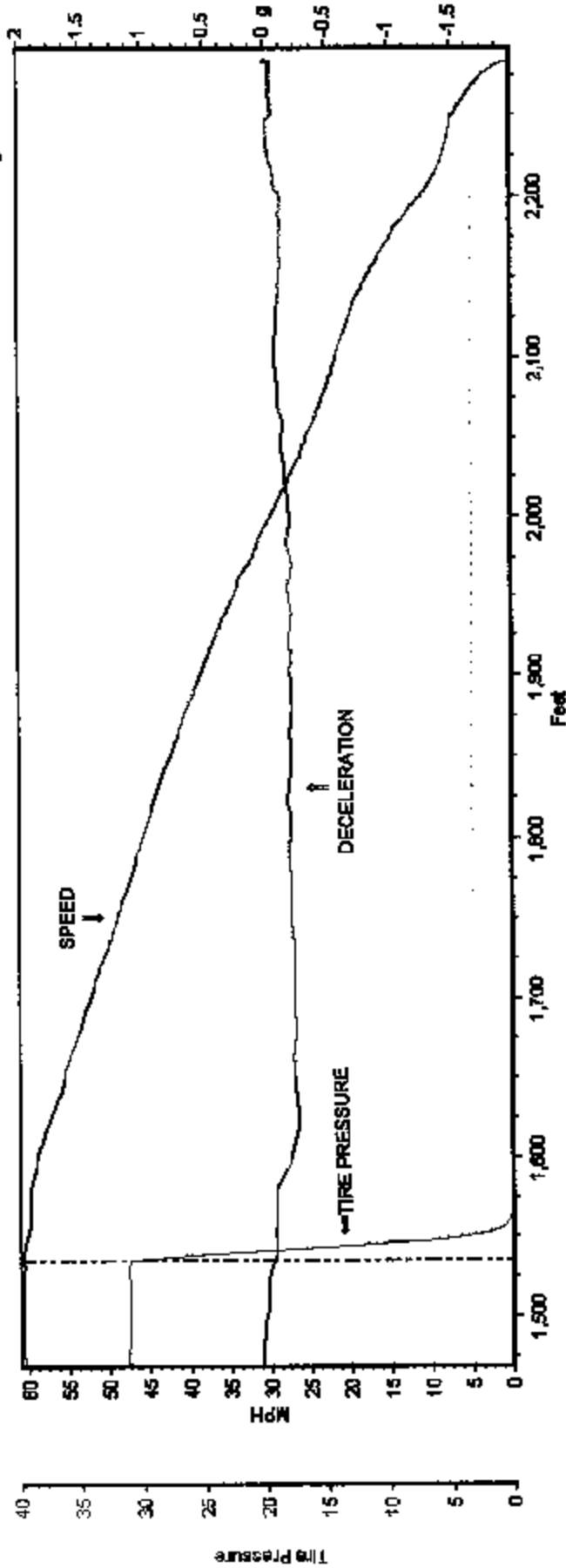
Run Time	180X 001.180 run 1
Cursor (secs)	0 minute 45.95 secs
Speed (MPH)	29.89
Tire Press (PSI)	60.49
Longitudinal Acceleration (g)	31.677
Lateral Acceleration (g)	-0.028
Height (Feet)	-0.017
Vertical Velocity (MPH)	-102.953
Satellites (Number of)	9.000
	10



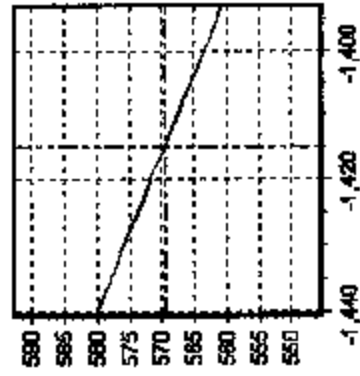


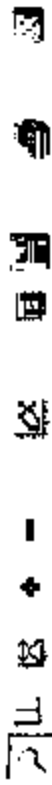
CHEV.AVE0,C40110,R.R.,110 BLOW-OUT

Log Rate = 20.00 Hz



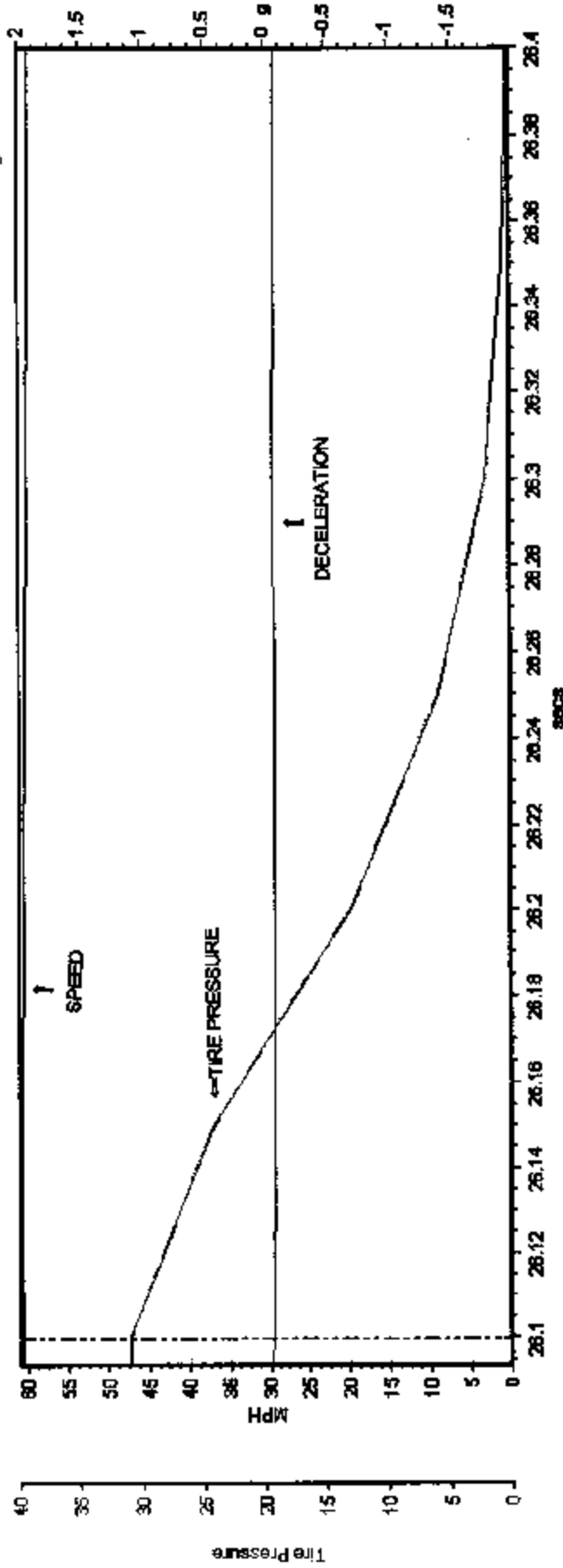
Run Time	VBOX_001.VBO
Cursor (Feet)	0 minute 52.25 secs
Speed (MPH)	1534.54
Tire Press (PSI)	60.56
Longitudinal Acceleration (g)	31.001
Lateral Acceleration (g)	-0.062
Height (Feet)	0.033
Vertical Velocity (MPH)	-113.895
Satellites (Number of)	9.000
	10





CHEV AVEO, C40110, R.R., 110 BLOW-OUT

Log Rate = 20.36 Hz



Run Time	VEBOX_001.VBO
Cursor (secs)	0 minute 52.25 secs
Speed (MPH)	26.09
Tire Press (PSI)	60.56
Longitudinal Acceleration (g)	30.995
Lateral Acceleration (g)	-0.053
Height (Feet)	0.633
Vertical Velocity (MPH)	-118.898
Scaleless (Number of)	0.090
Scaleless (Number of)	10

