

REPORT NUMBER 124-GTL-10-003

# SAFETY COMPLIANCE TESTING FOR FMVSS 124 ACCELERATOR CONTROL SYSTEMS

DAIMLER AG STUTTGART  
2010 MERCEDES GLK 350, MPV  
NHTSA NO. CA0514

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



April 28, 2010

**FINAL REPORT**

**PREPARED FOR**

**U. S. DEPARTMENT OF TRANSPORTATION  
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION  
ENFORCEMENT  
OFFICE OF VEHICLE SAFETY COMPLIANCE  
1200 NEW JERSEY AVE., SE  
WASHINGTON, D.C. 20590**

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Approval Date: 04/28/10

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By:  \_\_\_\_\_

Acceptance Date: 4/28/2010

|  |                             |  |  |
|--|-----------------------------|--|--|
| 1. Report No.<br>124-GTL-10-003  | 2. Government Accession No. | 3. Recipient's Catalog No.   |  |
| 4. Title and Subtitle<br>Final Report of FMVSS 124 Compliance Testing of<br>2010 MERCEDES GLK 350 MPV<br>NHTSA No. CA0514  |                             | 5. Report Date<br>April 28, 2010   |  |
|  |                             | 6. Performing Organ. Code<br>GTL   |  |
| 7. Author(s)<br>Grant Farrand, Project Engineer<br>Debbie Messick, Project Manager   |                             | 8. Performing Organ. Rep#<br>GTL-DOT-10-124-003  |  |
| 9. Performing Organization Name and Address<br>General Testing Laboratories, Inc.<br>1623 Leedstown Road<br>Colonial Beach, Va 22443   |                             | 10. Work Unit No. (TRAIS)  |  |
|  |                             | 11. Contract or Grant No.<br>DTNH22-06-C-00032   |  |
| 12. Sponsoring Agency Name and Address<br>U.S. Department of Transportation<br>National Highway Traffic Safety Admin. Enforcement<br>Office of Vehicle Safety Compliance (NVS-220)<br>1200 New Jersey Ave., S.E.,<br>Washington, DC 20590  |                             | 13. Type of Report and Period Covered<br>Final Test Report<br>April 19-22, 2010  |  |
|  |                             | 14. Sponsoring Agency Code<br>NVS-221  |  |
| 15. Supplementary Notes  |                             |  |  |
| 16. Abstract<br>Compliance tests were conducted on the subject 2010 Mercedes GLK 350 4-door 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.<br><br>Test failures identified were as follows: None |                             |  |  |
| 17. Key Words<br>Compliance Testing<br>Safety Engineering<br>FMVSS 124   |                             | 18. Distribution Statement<br>Copies of this report are available from<br>NHTSA Technical Information Services (TIS)<br>Room W45-212 (NPO-411)<br>1200 New Jersey Ave., S.E.<br>Washington, DC 20590<br>Telephone No. (202) 366-4947 |  |
| 19. Security Classif. (of this report)<br>UNCLASSIFIED   | 21. No. of Pages<br>75      | 22. Price  |  |
| 20. Security Classif. (of this page)<br>UNCLASSIFIED   |                             |  |  |

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## 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 the number of 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 2010 Mercedes GLK 350 MPV, NHTSA No. CA0514 in accordance with the National Highway Traffic Safety Administration (NHTSA) Laboratory Procedure TP-124-06.

The vehicle is equipped with two throttle position sensors (TPS) on the air throttle plate shaft. Output from one of the two sensors was used to measure throttle position and data was recorded at 100 HZ with GTL' s data acquisition system. Testing was conducted to simulate the normal removal of the driver's foot from the accelerator pedal. This was performed by depressing the accelerator with a control rod which incorporated an electrical contact strip in the depressing end. The accelerator was depressed to the required amount and then the control rod was quickly removed from the pedal, releasing the accelerator and activating the contact strip for time zero. Failures (excluding spring disconnect) were induced simultaneously with release of the accelerator pedal. Testing was performed with the vehicle in drive and the engine running. Testing could not be conducted in neutral as throttle plate movement in this condition was limited upon accelerator pedal application.

Return to idle times were determined for four throttle plate positions (25%, 50%, 75% and 100%) with the accelerator control system complete and with each of the two return springs in the accelerator pedal assembly independently disconnected and disconnection of the throttle body return spring #3 and #4. With each of the wires to the APS and throttle plate position sensor disconnected and shorted to ground, return to idle times were determined at the worst case condition – wide open throttle (100%).

In addition, tests were conducted with the APS and TPS connectors disconnected.

A number of induced failures resulted in the throttle plate return to or below the idle state then shifting to a Limp-Home mode position which allows the vehicle to be removed from the roadway.

This testing was performed at mid ambient temperature of 10° C to 46° C, 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: 2010 MERCEDES GLK 350 MPV  
VEHICLE NHTSA NO.: CA0514  
VEHICLE VIN: WDCGG8HB8AF474687  
DATE OF TEST: APRIL 19-22, 2010  
TEST LAB: GENERAL TESTING LABORATORIES  
VEHICLE ENGINE TYPE: GAS GVWR: 2480 KG  
VEHICLE ENGINE SIZE: 3.5 L  
VEHICLE ACCEL. CONTROL SYSTEM (ACS) (Air or Fuel Throttled): AIR  
MAX. BHP ENGINE SPEED: 268 HP  
MFR. IDLE RPM: 600 RPM  
FUEL METERING DEVICE (Carburetor, fuel injection, etc): FUEL INJECTION

REMARKS:

RECORDED BY: G. FARRANDDATE: 04/20/10APPROVED BY: D. MESSICK



DATA SHEET 2  
NORMAL OPERATION TEST  
(fully operational system)

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 MERCEDES GLK 350 MPV  
 VEHICLE NHTSA NO.: CA0514  
 DATE OF TEST: APRIL 20, 2010

Check one:

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

SYSTEM CONDITION: COMPLETE (no modifications) Normal Operation

| GTL # | ACCELERATOR POSITION<br>% WIDE OPEN THROTTLE<br>(WOT) | THROTTLE POSITION<br>SENSOR<br>READING | RPM | TEMPERATURE (°C)  |         | THROTTLE POSITION<br>SENSOR<br>READING @<br>IDLE<br>(BASELINE) | RETURN<br>TIME TO<br>IDLE<br>(Msec) | PASS/<br>FAIL |
|-------|---|--|-----|-------------------|---------|--|-------------------------------------|---------------|
|       |   |  |     | ENGINE<br>COOLANT | AMBIENT |  |                                     |               |
| 6446  | 100%  | 100%                                   | 600 | 194               | 75      | 16%-20%  | 260                                 | P             |
| 6447  | 75%   | 76%                                    | 600 | 200               | 75      | 16%-20%  | 290                                 | P             |
| 6448  | 50%   | 38%                                    | 600 | 200               | 75      | 16%-20%  | 260                                 | P             |
| 6449  | 25%   | 24%                                    | 600 | 198               | 75      | 16%-20%  | 160                                 | 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: G. FARRAND

DATE: 04/20/10

APPROVED BY: D. MESSICK

DATA SHEET 3 (1 of 4)  
FAIL-SAFE OPERATION  
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 MERCEDES GLK 350 MPV  
 VEHICLE NHTSA NO.: CA0514  
 DATE OF TEST: APRIL 21, 2010

Check one:

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

SYSTEM CONDITION: #1 SPRING DISCONNECTED (OUTER SPRING) ON ACCELERATOR PEDAL ASSEMBLY

| GTL # | ACCELERATOR POSITION<br>% WIDE OPEN THROTTLE<br>(WOT) | THROTTLE POSITION<br>SENSOR<br>READING | RPM | TEMPERATURE (°C)  |         | THROTTLE POSITION<br>SENSOR<br>READING @<br>IDLE<br>(BASELINE) | RETURN<br>TIME TO<br>IDLE<br>(Msec) | PASS/<br>FAIL |
|-------|---|--|-----|-------------------|---------|--|-------------------------------------|---------------|
|       |   |  |     | ENGINE<br>COOLANT | AMBIENT |  |                                     |               |
| 6453  | 100%  | 100%                                   | 600 | 195               | 63      | 16%-20%  | 430                                 | P             |
| 6454  | 75%   | 75%                                    | 600 | 197               | 63      | 16%-20%  | 380                                 | P             |
| 6455  | 50%   | 57%                                    | 600 | 200               | 63      | 16%-20%  | 190                                 | P             |
| 6456  | 25%   | 24%                                    | 600 | 200               | 63      | 16%-20%  | 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: G. FARRAND

DATE: 04/21/10

APPROVED BY: D. MESSICK

DATA SHEET 3 (2 of 4)  
FAIL-SAFE OPERATION  
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 MERCEDES GLK 350 MPV  
 VEHICLE NHTSA NO.: CA0514  
 DATE OF TEST: APRIL 14, 2010

Check one:

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

SYSTEM CONDITION: #2 SPRING DISCONNECTED (INNER SPRING) ON ACCELERATOR PEDAL ASSEMBLY

| GTL # | ACCELERATOR POSITION<br>% WIDE OPEN THROTTLE<br>(WOT) | THROTTLE POSITION<br>SENSOR<br>READING | RPM | TEMPERATURE (°C)  |         | THROTTLE POSITION<br>SENSOR<br>READING @<br>IDLE<br>(BASELINE) | RETURN<br>TIME TO<br>IDLE<br>(Msec) | PASS/<br>FAIL |
|-------|---|--|-----|-------------------|---------|--|-------------------------------------|---------------|
|       |   |  |     | ENGINE<br>COOLANT | AMBIENT |  |                                     |               |
| 6457  | 100%  | 100%                                   | 600 | 198               | 63      | 16%-20%  | 260                                 | P             |
| 6458  | 75%   | 73%                                    | 600 | 200               | 63      | 16%-20%  | 380                                 | P             |
| 6459  | 50%   | 46%                                    | 600 | 200               | 63      | 16%-20%  | 160                                 | P             |
| 6460  | 25%   | %                                      | 600 | 201               | 63      | 16%-20%  | 40                                  | 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: G. FARRAND

DATE: 04/21/10

APPROVED BY: D. MESSICK

DATA SHEET 3 (3 of 4)  
FAIL-SAFE OPERATION  
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 MERCEDES GLK 350 MPV  
 VEHICLE NHTSA NO.: CA0514  
 DATE OF TEST: APRIL 22, 2010

Check one:

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

SYSTEM CONDITION: #3 SPRING DISCONNECTED (OUTER SPRING) IN THROTTLE BODY

| GTL # | ACCELERATOR POSITION<br>% WIDE OPEN THROTTLE<br>(WOT) | THROTTLE POSITION<br>SENSOR READING | RPM | TEMPERATURE (°C) |         | THROTTLE POSITION<br>SENSOR READING @<br>IDLE (BASELINE) | RETURN TIME TO<br>IDLE (Msec) | PASS/<br>FAIL |
|-------|---|-------------------------------------|-----|------------------|---------|--|-------------------------------|---------------|
|       |   |                                     |     | ENGINE COOLANT   | AMBIENT |  |                               |               |
| 6485  | 100%  | 100%                                | 600 | 195              | 66      | 16%-20%  | 330                           | P             |
| 6486  | 75%   | 75%                                 | 600 | 198              | 66      | 16%-20%  | 360                           | P             |
| 6487  | 50%   | 49%                                 | 600 | 200              | 66      | 16%-20%  | 210                           | P             |
| 6488  | 25%   | 24%                                 | 600 | 198              | 66      | 16%-20%  | 70                            | 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: G. FARRAND

DATE: 04/22/10

APPROVED BY: D. MESSICK

DATA SHEET 3 (4 of 4)  
FAIL-SAFE OPERATION  
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 MERCEDES GLK 350 MPV  
 VEHICLE NHTSA NO.: CA0514  
 DATE OF TEST: APRIL 22, 2010

Check one:

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

SYSTEM CONDITION: #4 SPRING DISCONNECTED (INNER SPRING) IN THROTTLE BODY

| GTL # | ACCELERATOR POSITION<br>% WIDE OPEN THROTTLE<br>(WOT) | THROTTLE POSITION<br>SENSOR<br>READING | RPM | TEMPERATURE (°C)  |         | THROTTLE POSITION<br>SENSOR<br>READING @<br>IDLE<br>(BASELINE) | RETURN<br>TIME TO<br>IDLE<br>(Msec) | PASS/<br>FAIL |
|-------|---|--|-----|-------------------|---------|--|-------------------------------------|---------------|
|       |   |  |     | ENGINE<br>COOLANT | AMBIENT |  |                                     |               |
| 6489  | 100%  | 97%                                    | 600 | 200               | 66      | 16%-20%  | 180                                 | P             |
| 6490  | 75%   | 69%                                    | 600 | 198               | 66      | 16%-20%  | 200                                 | P             |
| 6491  | 50%   | 42%                                    | 600 | 201               | 66      | 16%-20%  | 120                                 | P             |
| 6492  | 25%   | 24%                                    | 600 | 200               | 66      | 16%-20%  | 60                                  | 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: G. FARRAND

DATE: 04/22/10

APPROVED BY: D. MESSICK

DATA SHEET 4  
FAIL-SAFE OPERATION  
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 MERCEDES GLK 350 MPV  
 VEHICLE NHTSA NO.: CA0514  
 DATE OF TEST: APRIL 22, 2010

Check one:

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

SYSTEM CONDITION: SEVERANCE OF APS CONNECTOR

| GTL # | ACCELERATOR POSITION<br>% WIDE OPEN THROTTLE<br>(WOT) | THROTTLE POSITION<br>SENSOR<br>READING | RPM | TEMPERATURE (°C)  |         | THROTTLE POSITION<br>SENSOR<br>READING @<br>IDLE<br>(BASELINE) | RETURN<br>TIME TO<br>IDLE<br>(Msec) | PASS/<br>FAIL |
|-------|---|--|-----|-------------------|---------|--|-------------------------------------|---------------|
|       |   |  |     | ENGINE<br>COOLANT | AMBIENT |  |                                     |               |
| 6461  | 100%  | 100%                                   | 600 | 198               | 62      | 16%-20%  | 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: \*Engine stopped running when connector was removed.

RECORDED BY: G. FARRAND

DATE: 04/22/10

APPROVED BY: D. MESSICK

DATA SHEET 5  
FMVSS 124

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 MERCEDES GLK 350 MPV

VEHICLE NHTSA NO.: CA0514

DATE OF TEST: APRIL 19, 2010

| GTL # | CONNECTOR | WIRE/PIN DESCRIPTION | FAULT CONDITION | ENGINE TEMP. °F | % THROTTLE/ RETURN TIME (MS) | PASS/FAIL/NOTES |
|-------|-----------|----------------------|-----------------|-----------------|------------------------------|-----------------|
| 6462  | APS       | #1/Blue              | OPEN            | 192             | 100/450                      | P               |
| 6463  | APS       | #2/Purple/Green      | OPEN            | 195             | 100/450                      | P               |
| 6464  | APS       | #3/Brown/Yellow      | OPEN            | 198             | 100/250                      | P               |
| 6465  | APS       | #4/Brown/White       | OPEN            | 198             | 100/450                      | P               |
| 6466  | APS       | #5/Purple/Yellow     | OPEN            | 200             | 100/420                      | P               |
| 6467  | APS       | #1/Blue              | SHORT           | 201             | 100/40                       | P               |
| 6468  | APS       | #2/Purple/Green      | SHORT           | 205             | 100/400*                     | P               |
| 6469  | APS       | #3/Brown/Yellow      | SHORT           | 206             | 100/260                      | P               |
| 6470  | APS       | #4/Brown/White       | SHORT           | 209             | 100/410                      | P               |
| 6471  | APS       | #5/Purple/Yellow     | SHORT           | 202             | 100/420                      | P               |
| 6472  | TPS       | #1/Pink/Purple       | OPEN            | 200             | 100/<200*                    | P               |
| 6473  | TPS       | #2/Pink/Black        | OPEN            | 201             | 100/<200*                    | P               |
| 6474  | TPS       | #3/Orange            | OPEN            | 200             | 100/40**                     | P               |
| 6475  | TPS       | #4/Pink/Blue         | OPEN            | 202             | 100/150**                    | P               |
| 6476  | TPS       | #5/Pink/Green        | OPEN            | 200             | 100/<200***                  | P               |
| 6477  | TPS       | #6/Pink/Gray         | OPEN            | 198             | 100/430                      | P               |
| 6478  | TPS       | #1/Pink/Purple       | SHORT           | 198             | 100/160**                    | P               |
| 6479  | TPS       | #2/Pink/Blue         | SHORT           | 200             | 100/50*                      | P               |
| 6480  | TPS       | #3/Orange            | SHORT           | 201             | 100/540                      | P               |
| 6481  | TPS       | #4/Pink/Blue         | SHORT           | 200             | 100/710**                    | P               |
| 6482  | TPS       | #5/Pink/Gray         | SHORT           | 200             | 100/<200***                  | P               |
| 6483  | TPS       | #6/Pink/Gray         | SHORT           | 205             | 100/450                      | P               |
| 6484  | TPS       | Pins 1-6             | DISCONNECT      | 204             | 100/60**                     | P               |

\*Engine stopped running when fault was induced.

\*\*Limp Home Mode at 950 RPM.

\*\*\*Engine went to idle in the time frames indicated based on laboratory judgment even though output for throttle position sensor which was instrumented went to 150%. The actual position of the air plate did not correspond to the TPS output which was measured.

REMARKS:

RECORDED BY: G. FARRAND

DATE: 04/19/10

APPROVED BY: D. MESSICK

SECTION 4  
TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

| EQUIPMENT           | DESCRIPTION  | MODEL/<br>SERIAL NO. | CAL. DATE     | NEXT CAL.<br>DATE |
|---------------------|--------------|----------------------|---------------|-------------------|
| THERMOCOUPLES       | OMEGA        | 43P136P              | 08/09         | 08/10             |
| ENGINE<br>RECORDING | GTL COMPUTER | CPU1                 | BEFORE<br>USE | BEFORE<br>USE     |
| TACHOMETER          | MONARCH      | 1444664              | 05/09         | 05/10             |



SECTION 5  
PHOTOGRAPHS



2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.1  
FRONT VIEW OF VEHICLE



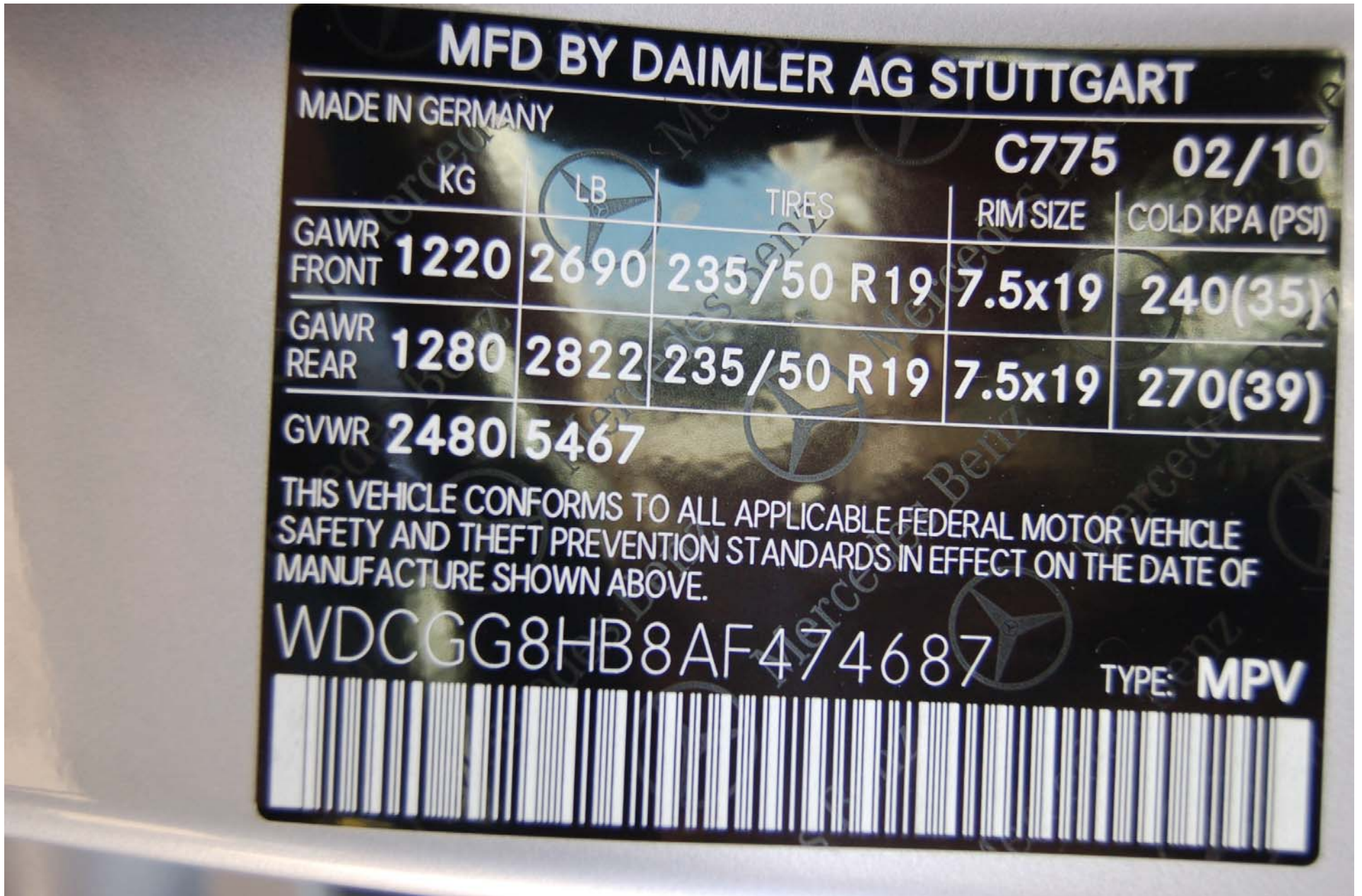
2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.2  
LEFT SIDE VIEW OF VEHICLE



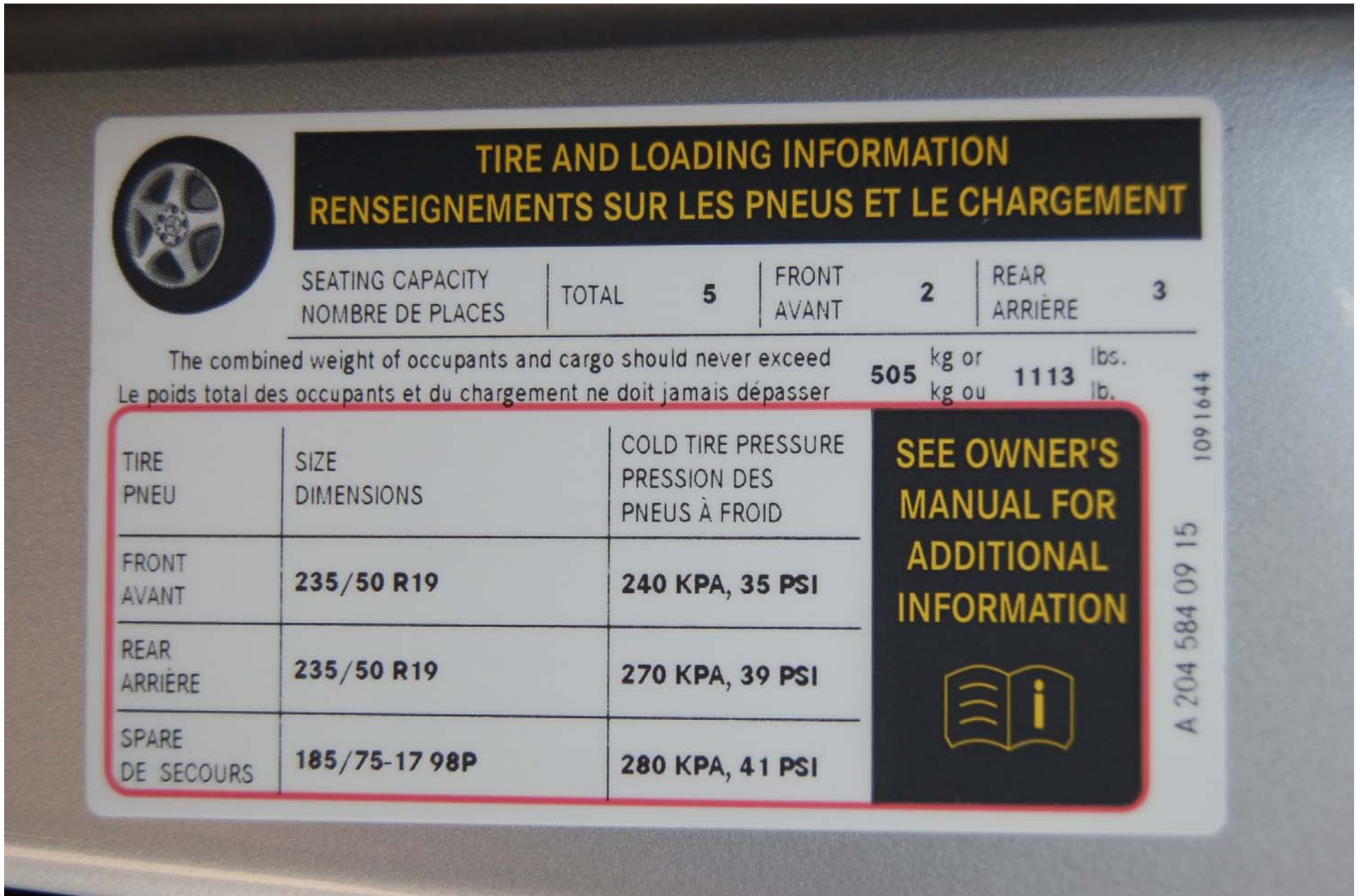
2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.3  
RIGHT SIDE VIEW OF VEHICLE



2010 MERCEDES GLK 350  
 NHTSA NO. CA0514  
 FMVSS NO. 124

FIGURE 5.4  
 CLOSE-UP VIEW OF VEHICLE CERTIFICATION LABEL



**TIRE AND LOADING INFORMATION**  
**RENSEIGNEMENTS SUR LES PNEUS ET LE CHARGEMENT**



SEATING CAPACITY | TOTAL **5** | FRONT **2** | REAR **3**  
 NOMBRE DE PLACES | AVANT | ARRIÈRE

The combined weight of occupants and cargo should never exceed **505** kg or **1113** lbs.  
 Le poids total des occupants et du chargement ne doit jamais dépasser **505** kg ou **1113** lb.

| TIRE<br>PNEU        | SIZE<br>DIMENSIONS   | COLD TIRE PRESSURE<br>PRESSION DES<br>PNEUS À FROID |
|---------------------|----------------------|---|
| FRONT<br>AVANT      | <b>235/50 R19</b>    | <b>240 KPA, 35 PSI</b>                              |
| REAR<br>ARRIÈRE     | <b>235/50 R19</b>    | <b>270 KPA, 39 PSI</b>                              |
| SPARE<br>DE SECOURS | <b>185/75-17 98P</b> | <b>280 KPA, 41 PSI</b>                              |

**SEE OWNER'S  
 MANUAL FOR  
 ADDITIONAL  
 INFORMATION**

1091644  
 A 204 584 09 15

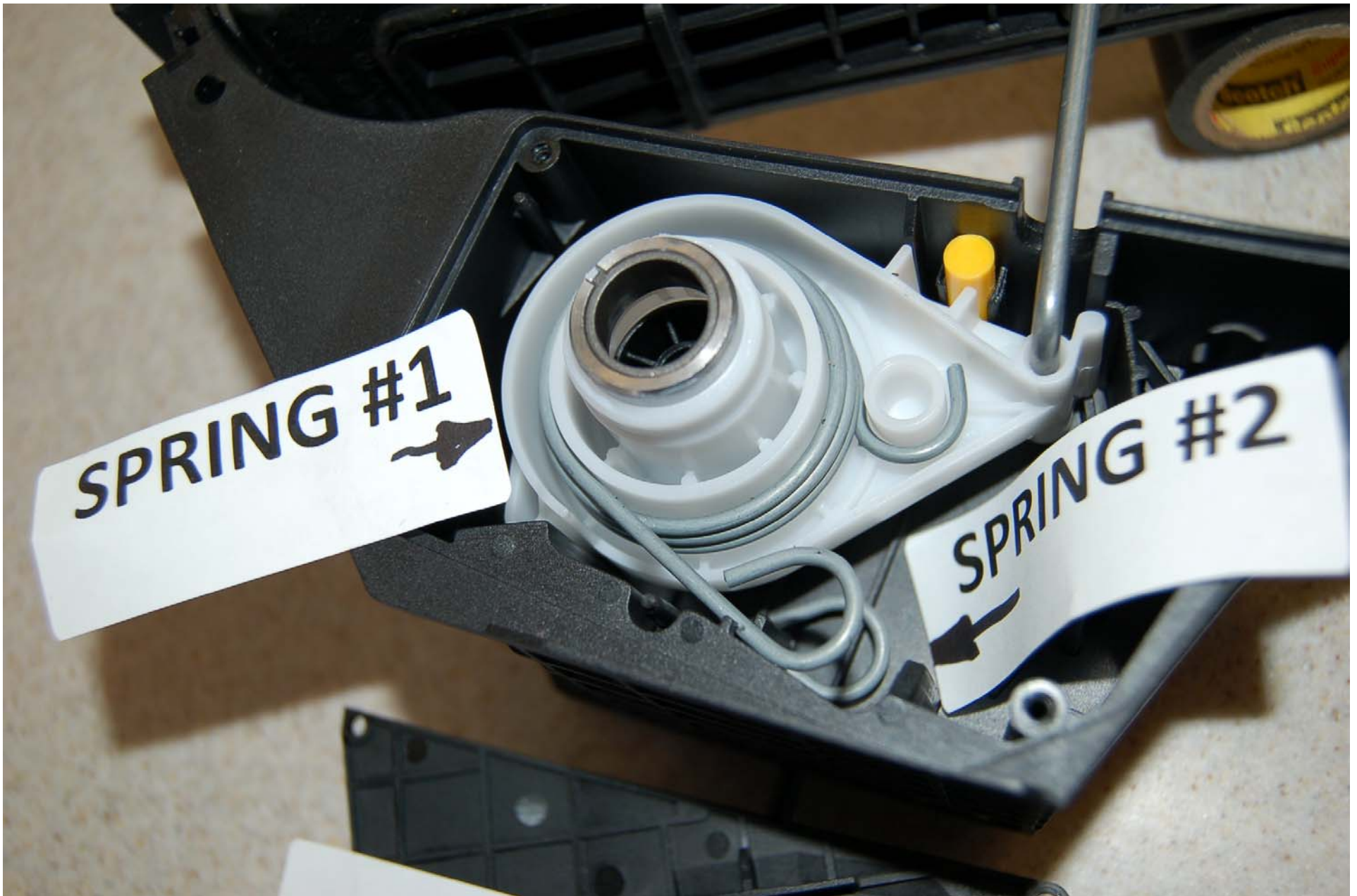
2010 MERCEDES GLK 350  
 NHTSA NO. CA0514  
 FMVSS NO. 124

FIGURE 5.5  
 CLOSE-UP VIEW OF VEHICLE PLACARD



2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.6  
ACCELERATOR PEDAL ASSEMBLY SHOWING SPRING  
1 & 2



2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.7  
CLOSE-UP OF SPRINGS 1 & 2





2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.8  
TEST SET-UP



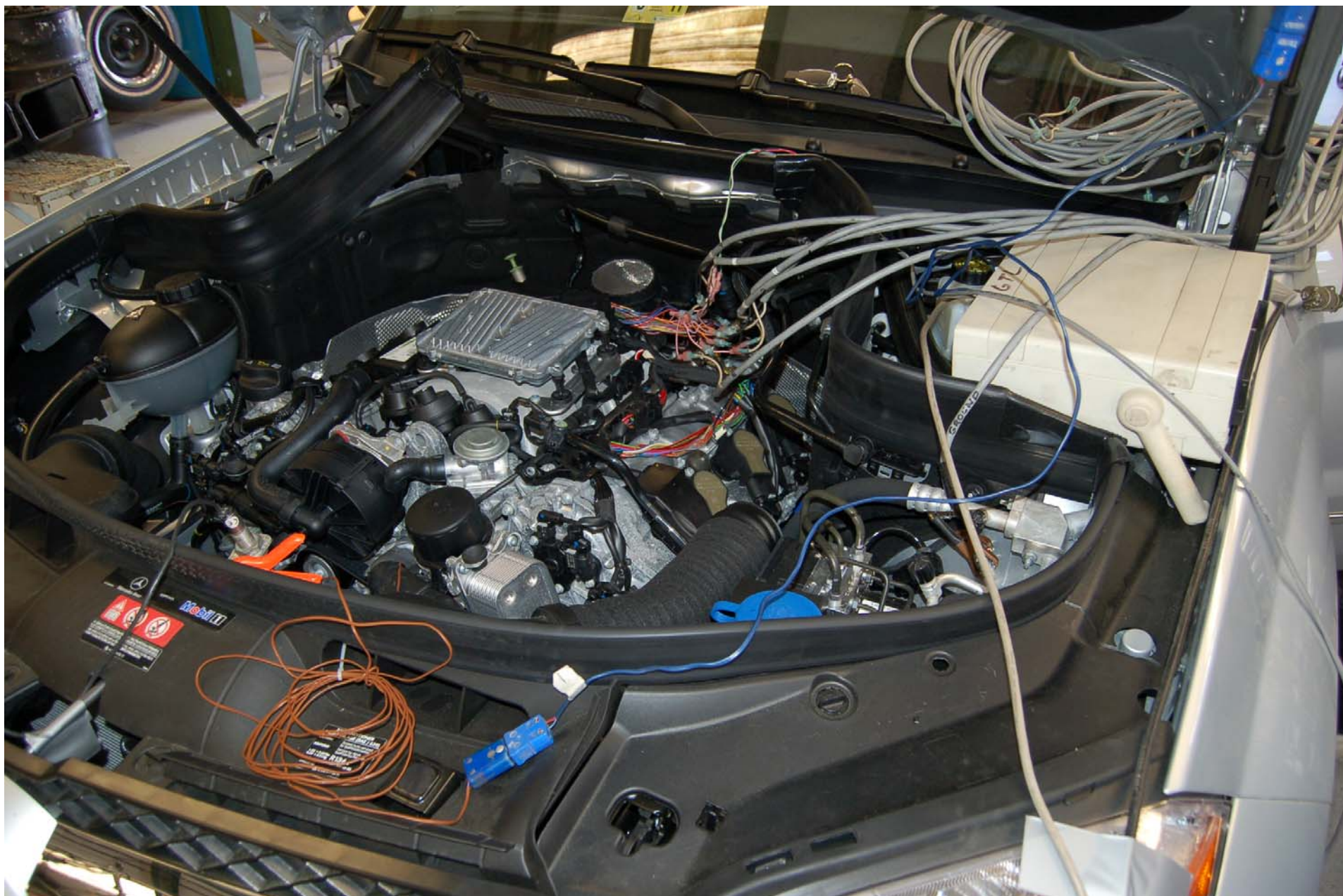
2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.9  
ACCELERATOR TEST SET-UP



2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.10  
WIRE OPEN/SHORTING SYSTEM



2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.11  
ENGINE INSTRUMENTATION SET-UP



2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.12  
THROTTLE BODY

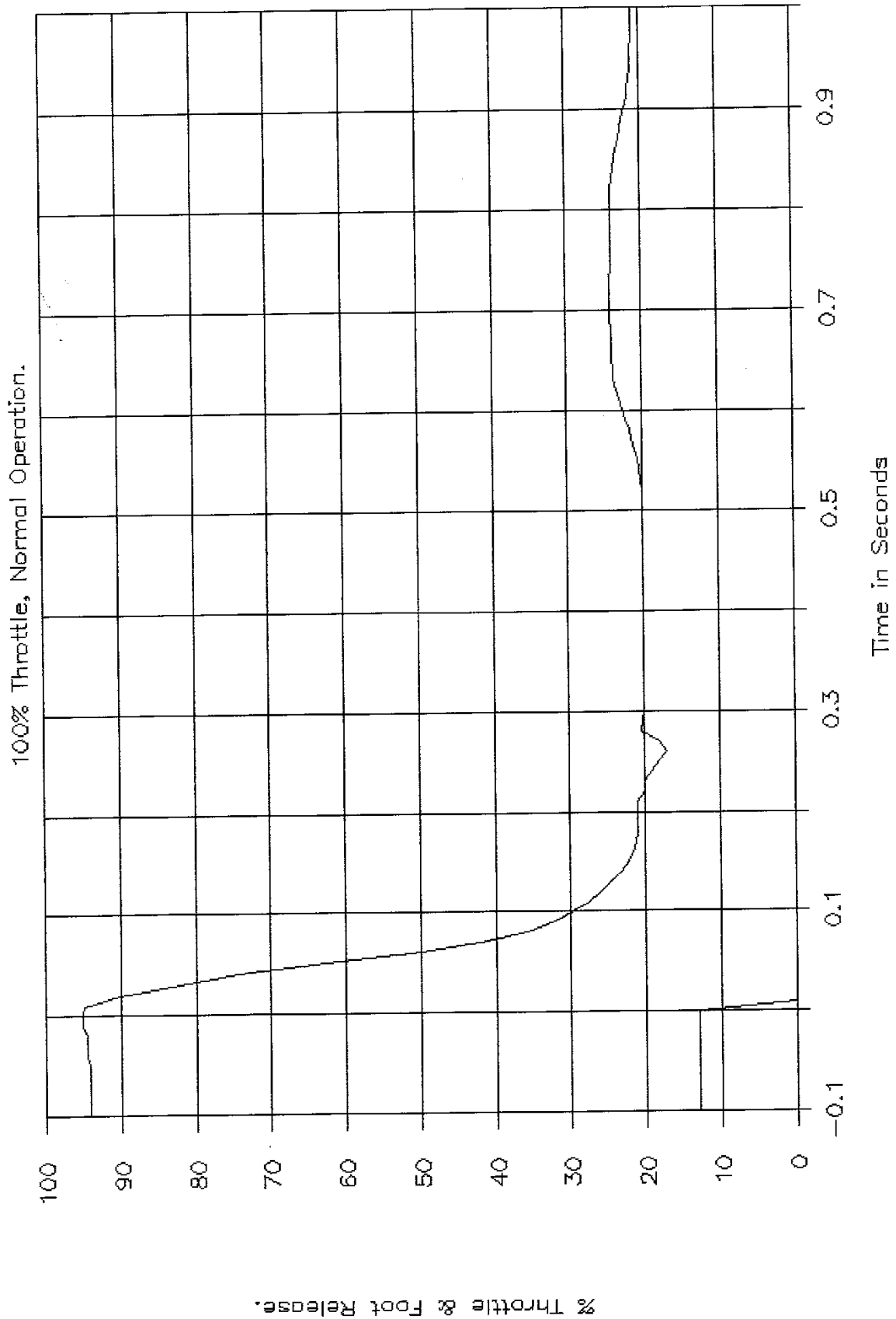


2010 MERCEDES GLK 350  
NHTSA NO. CA0514  
FMVSS NO. 124

FIGURE 5.13  
THROTTLE BODY SHOWING SPRINGS 3 & 4

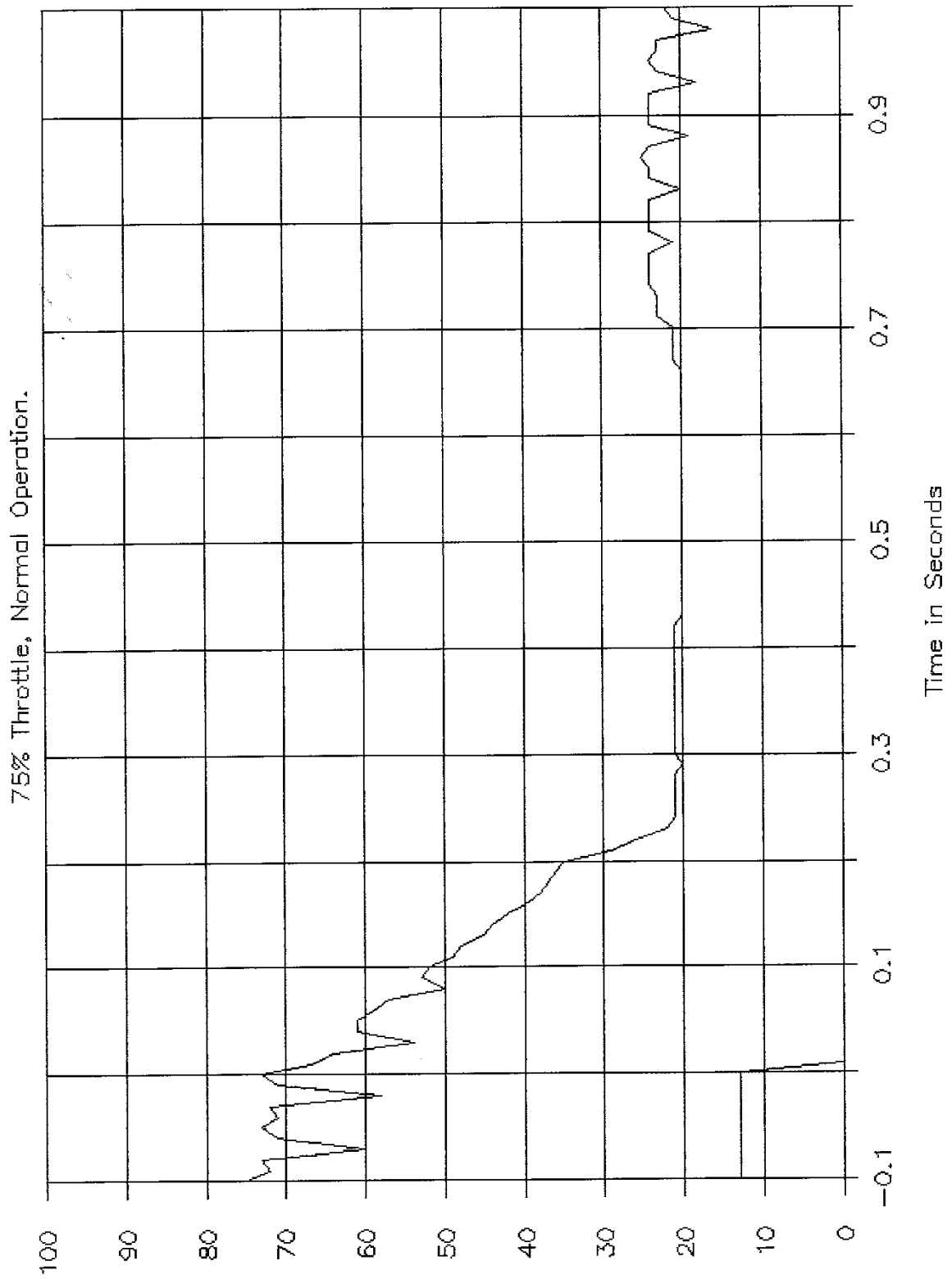
SECTION 6  
PLOTS

GTL 6446, NHTSA CA0514, FMVSS 124.



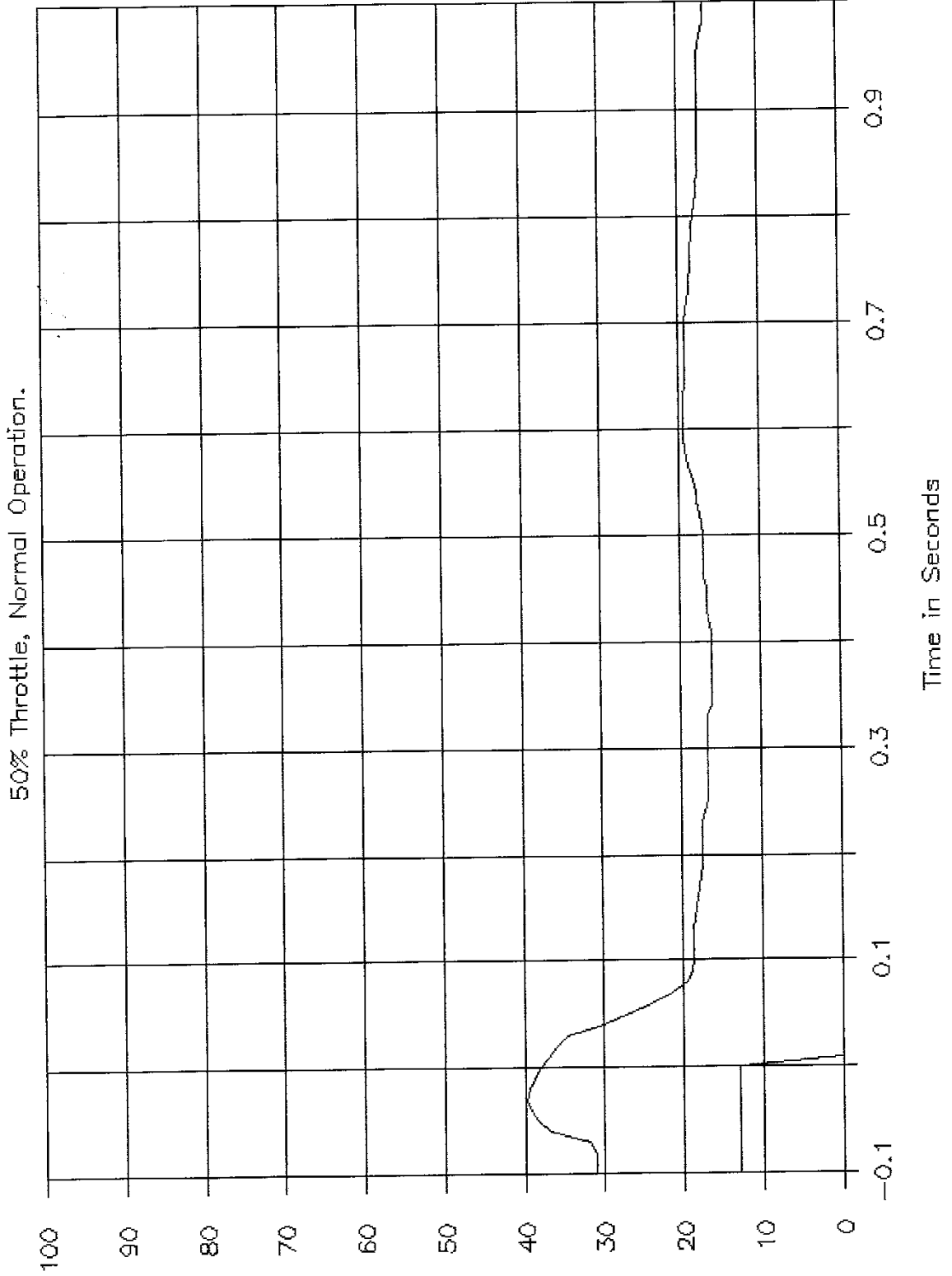


GTL 6447, NHTSA CA0514, FMVSS 124.

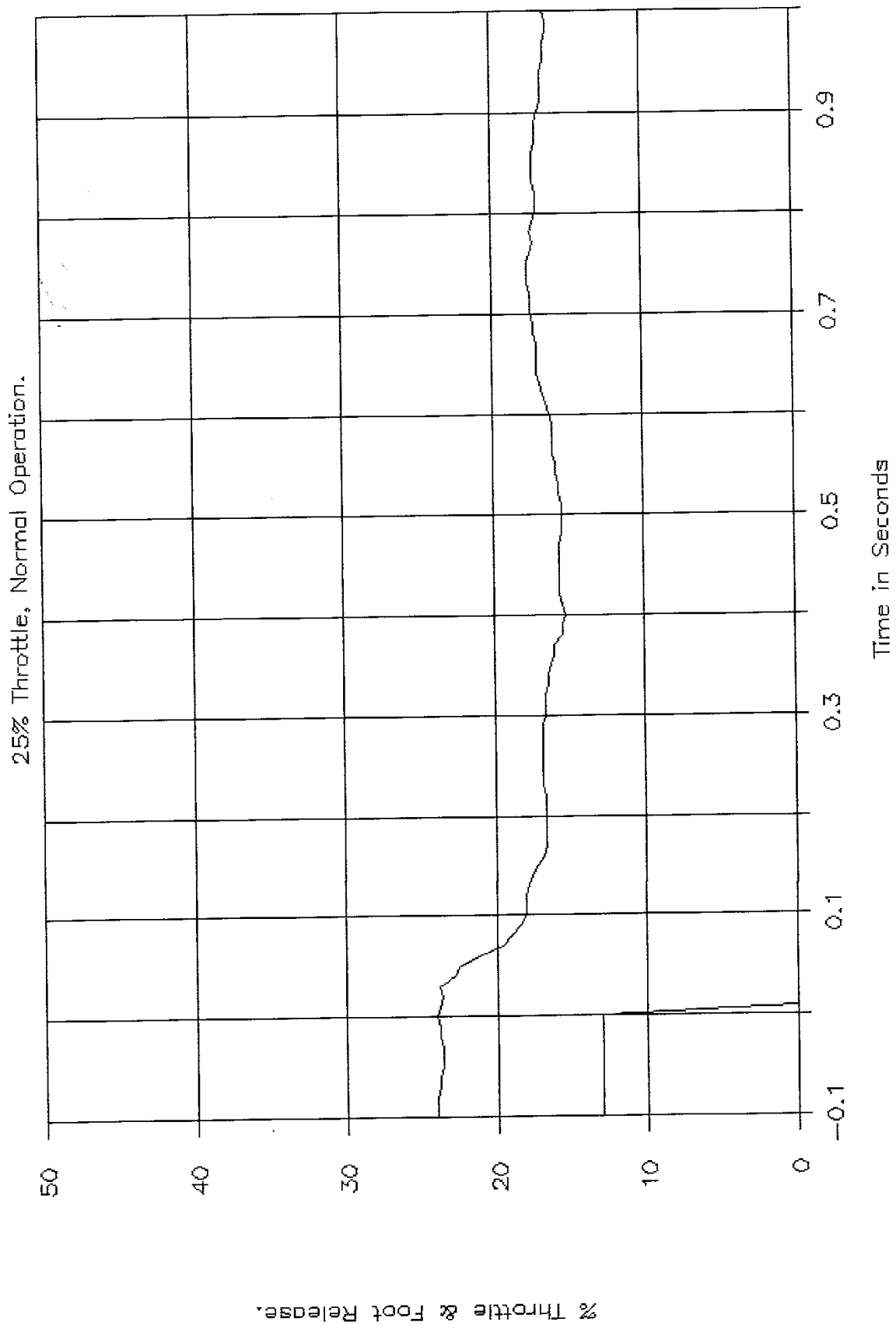


% Throttle & Foot Release.

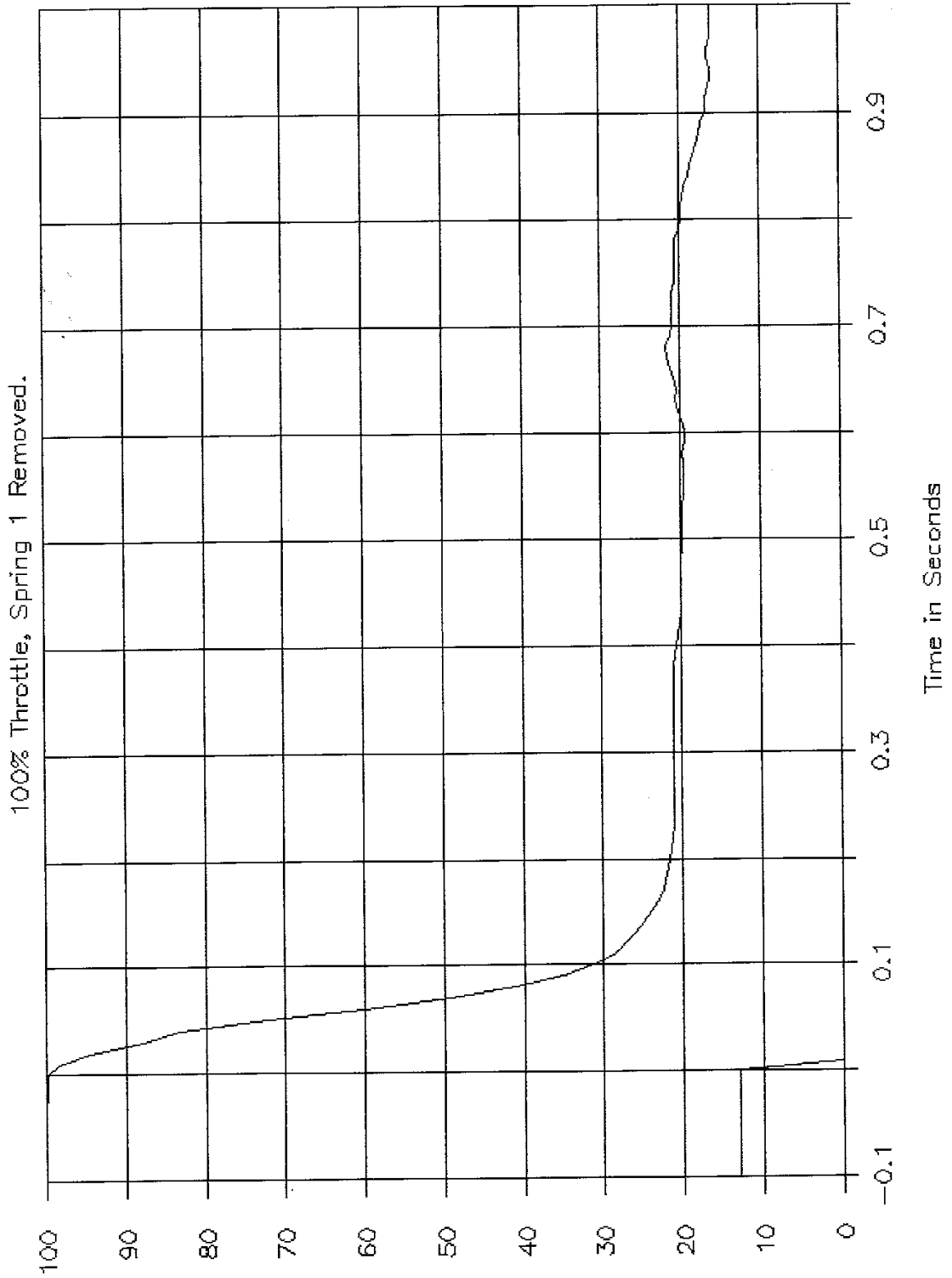
GTL 6448, NHTSA CA0514, FMVSS 124.



GTL 6449, NHTSA CA0514, FMVSS 124.



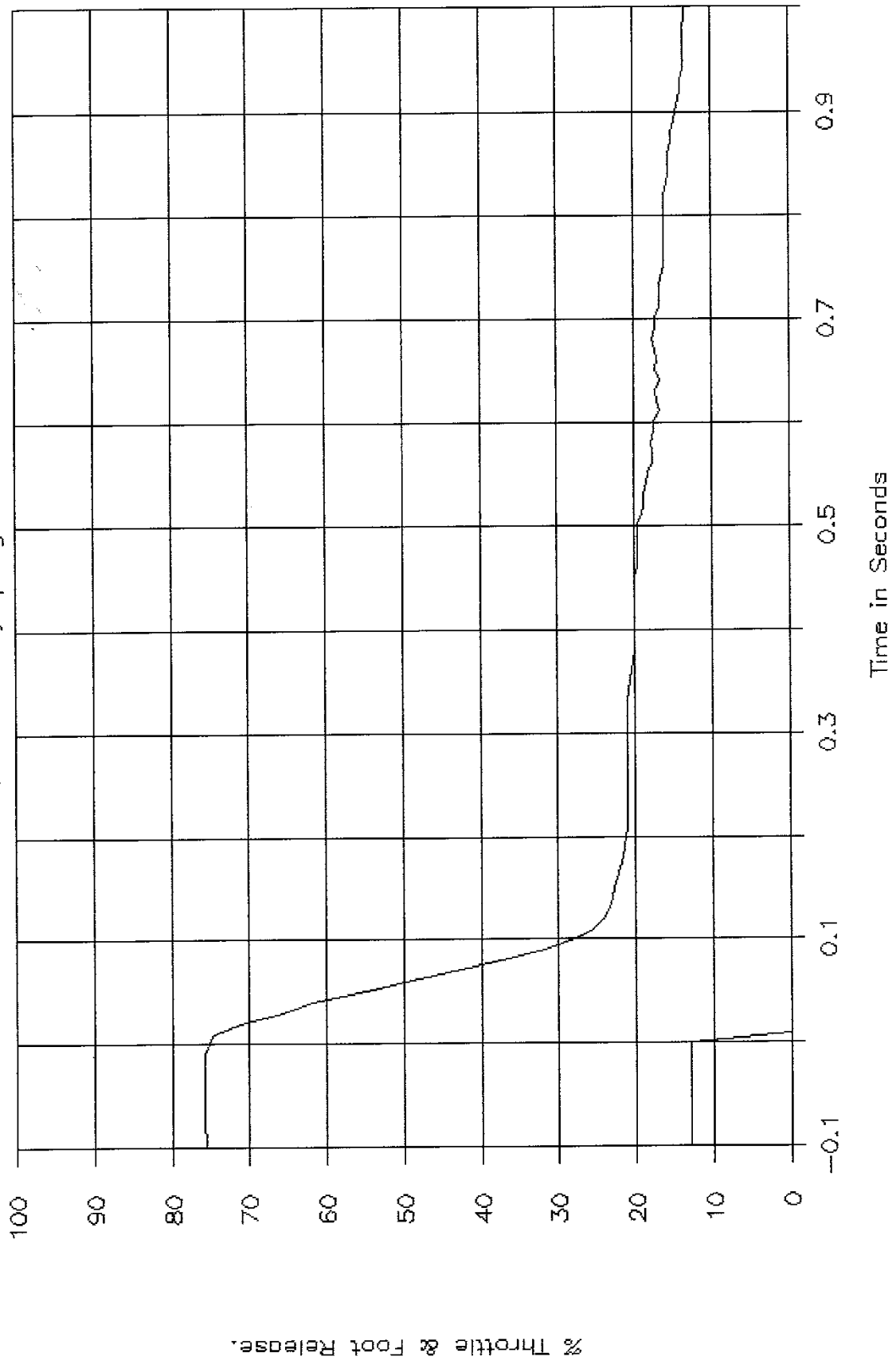
GTL 6453, NHTSA CA0514, FMVSS 124.



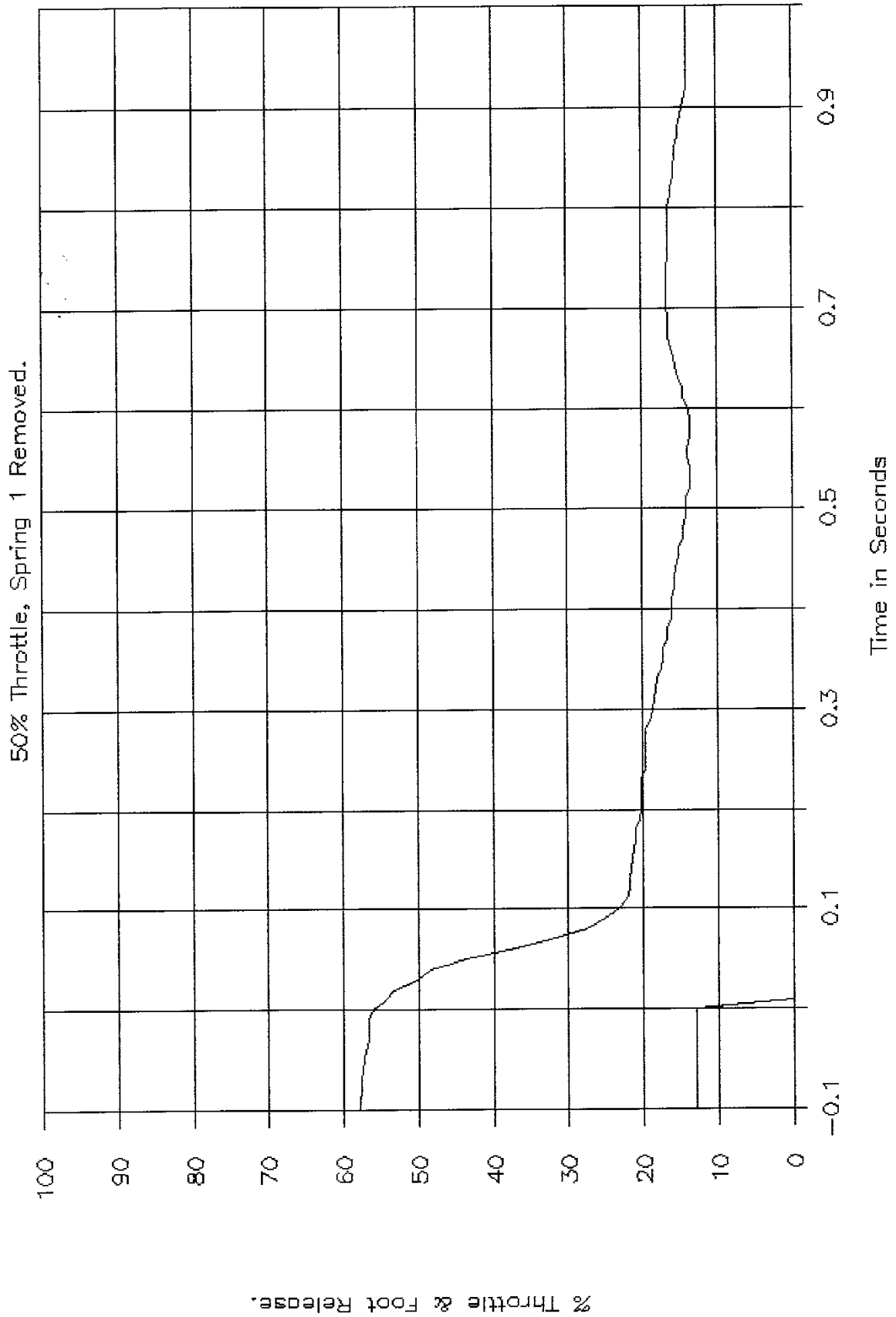
% Throttle & Foot Release.

GTL 6454, NHTSA CA0514, FMVSS 124.

75% Throttle, Spring 1 Removed.

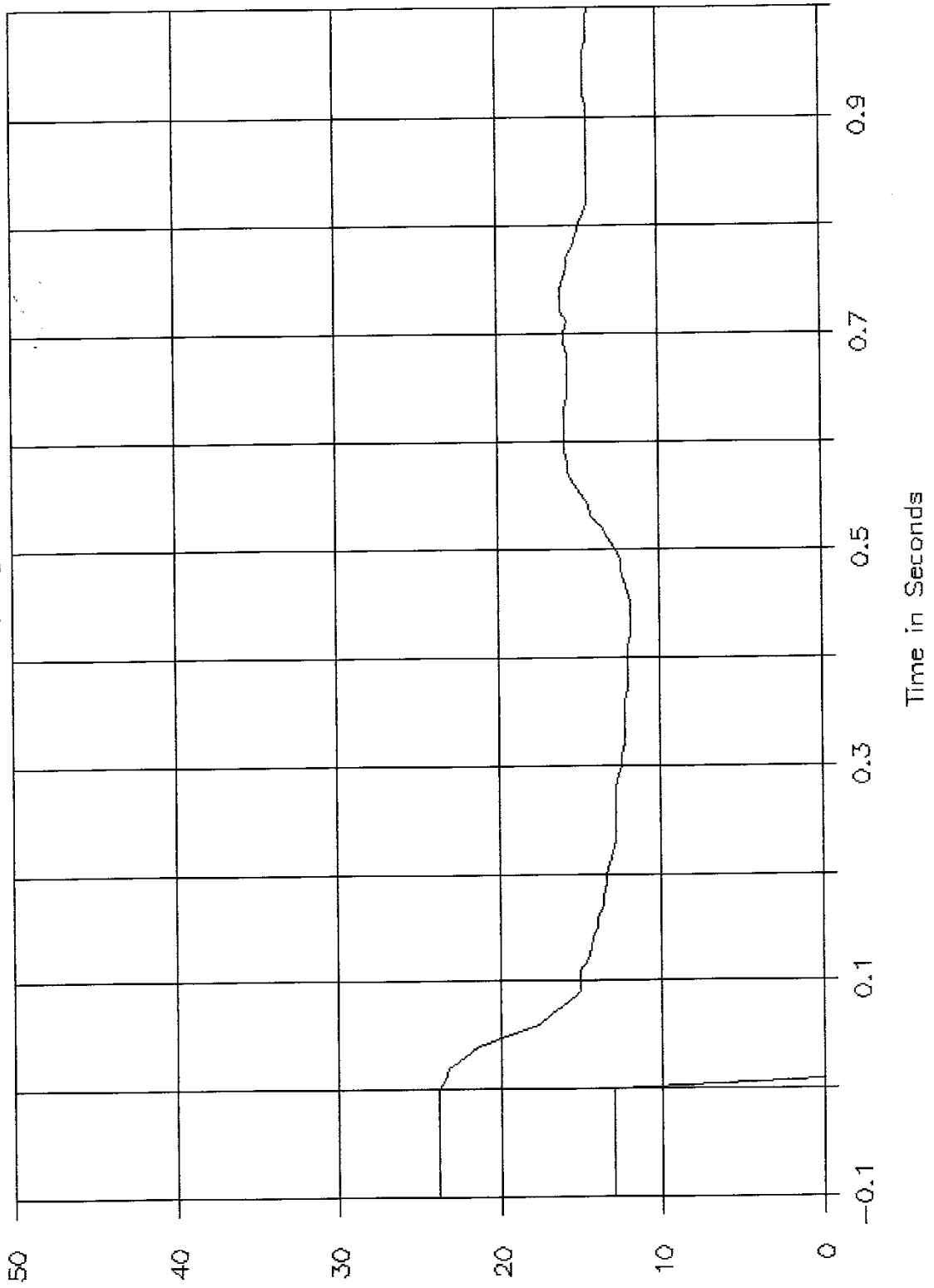


GTL 6455, NHTSA CA0514, FMVSS 124.



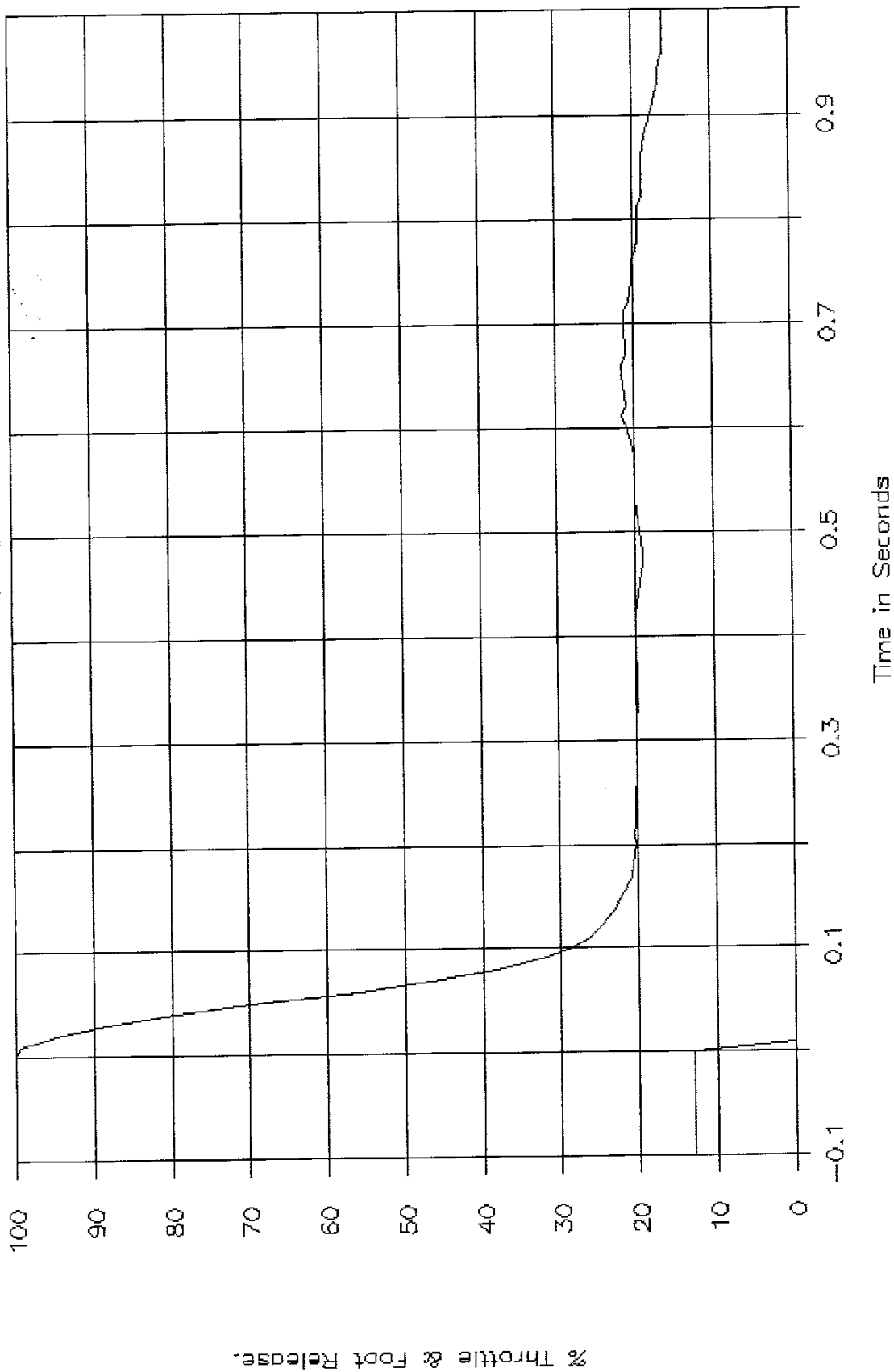
GTL 6456, NHTSA CA0514, FMVSS 124.

25% Throttle, Spring 1 Removed.



GTL 6457, NHTSA CA0514, FMVSS 124.

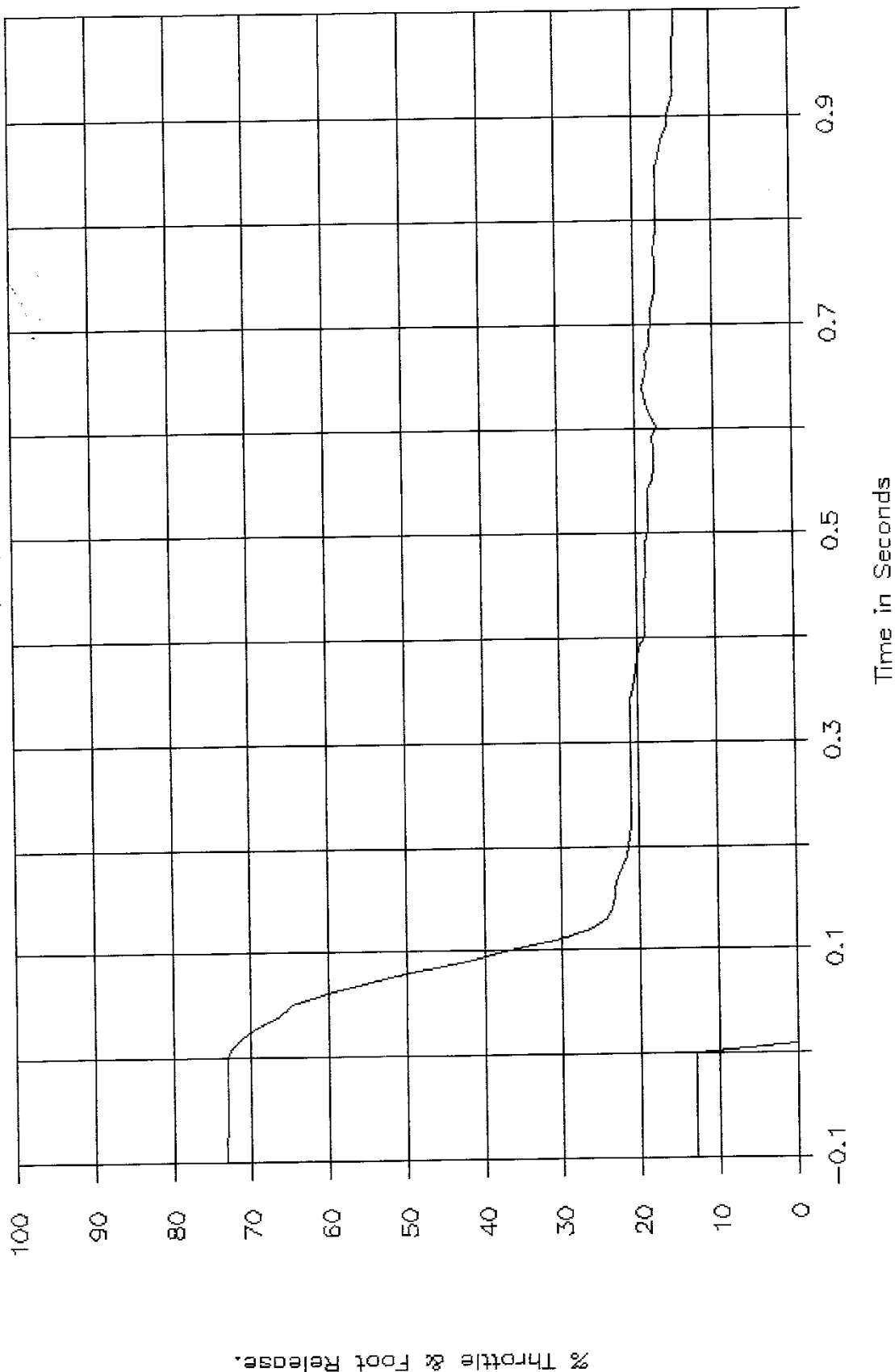
100% Throttle, Spring 2 Removed.





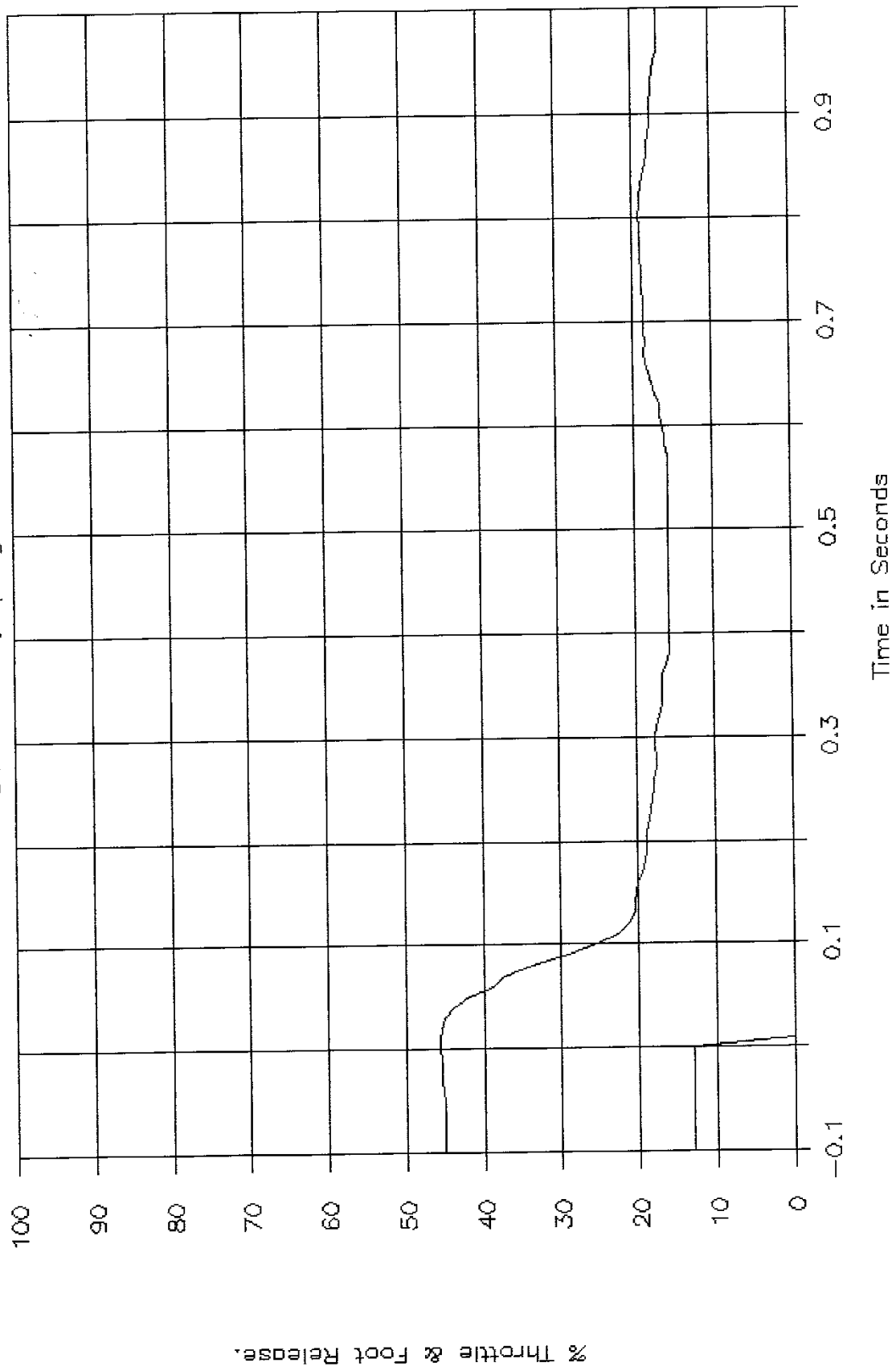
GTL 6458, NHTSA CA0514, FMVSS 124.

75% Throttle, Spring 2 Removed.



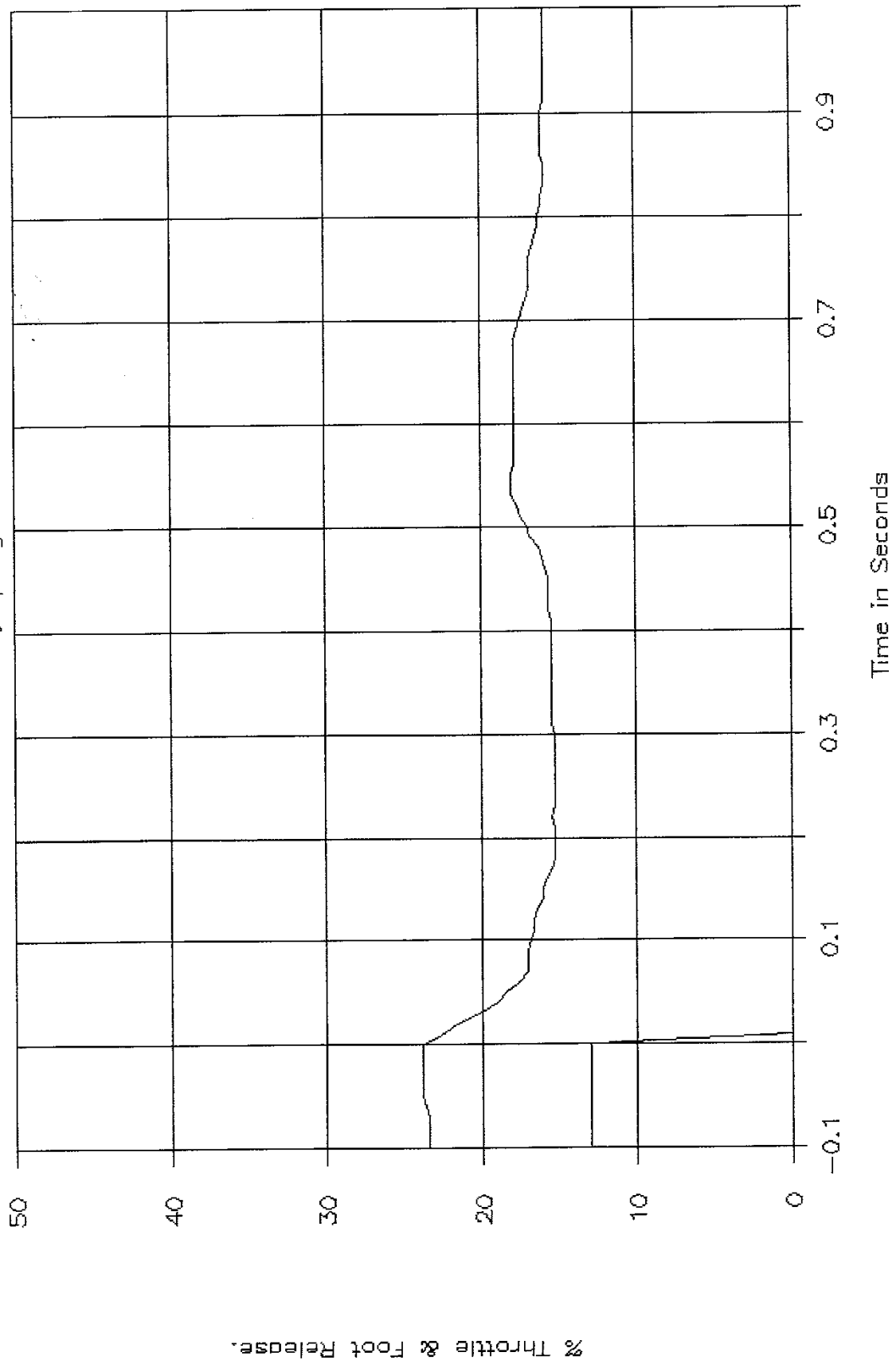
GTL 6459, NHTSA CA0514, FMVSS 124.

50% Throttle, Spring 2 Removed.

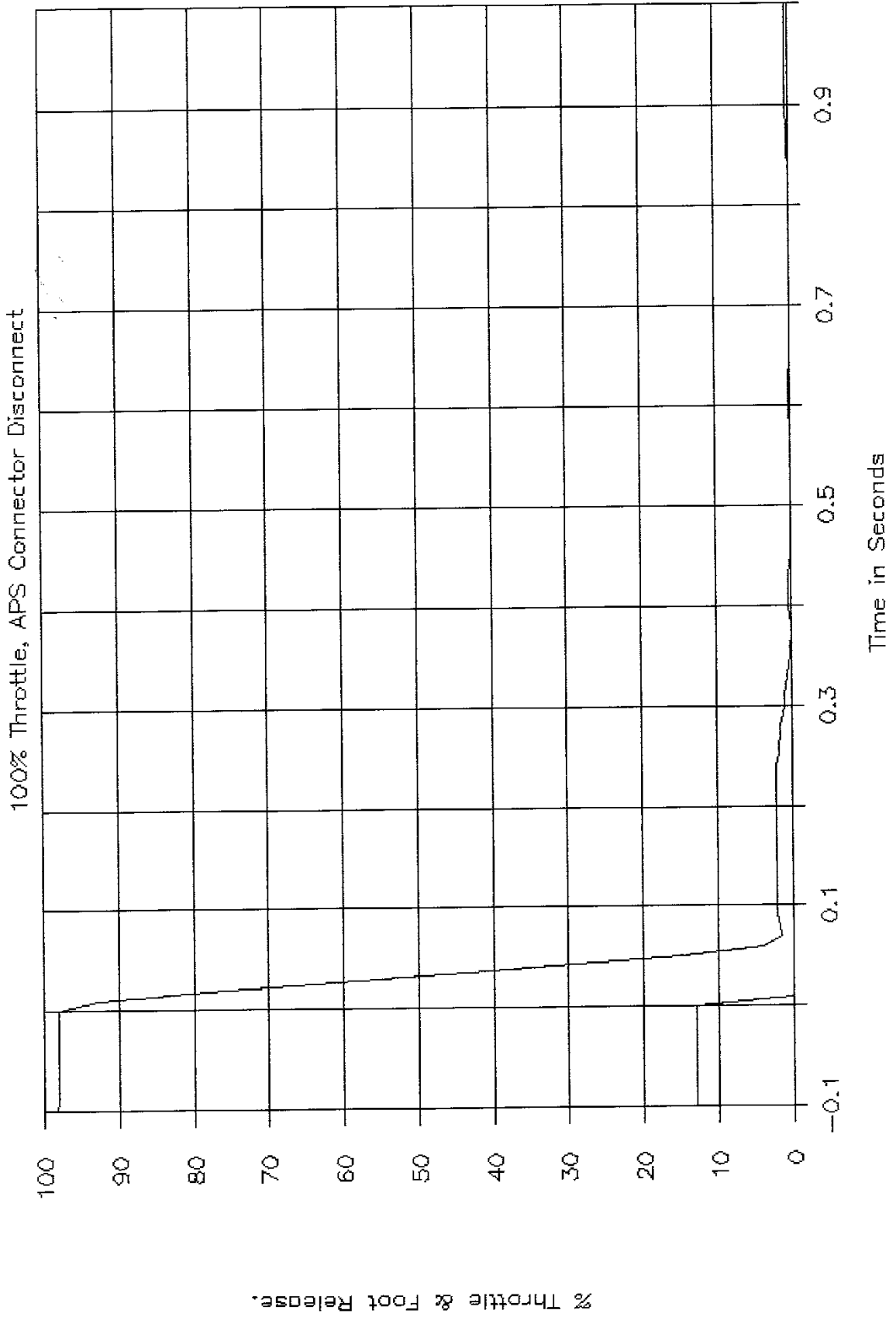


GTL 6460, NHTSA CA0514, FMVSS 124.

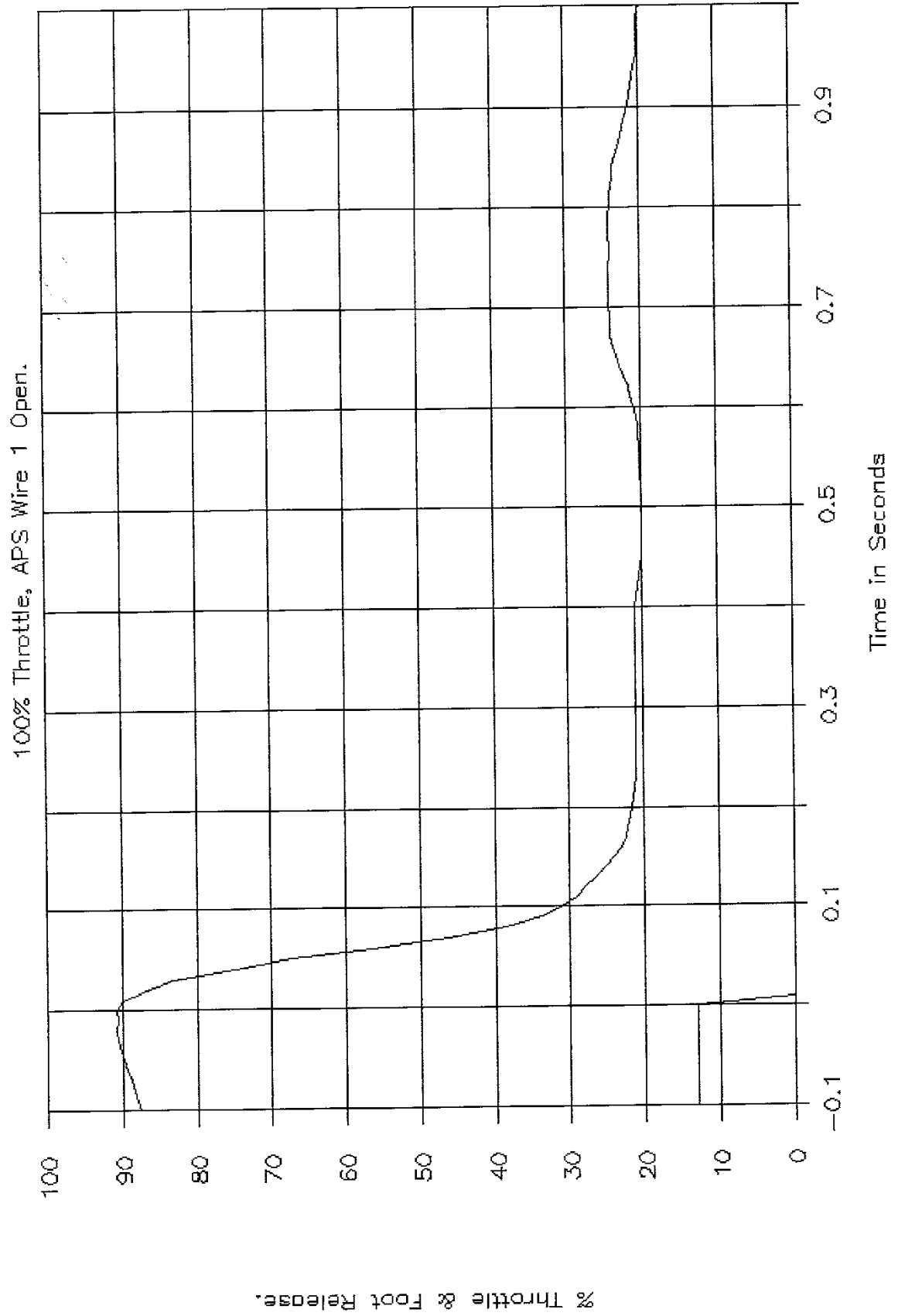
25% Throttle, Spring 2 Removed.



GTL 6461, NHTSA CA0514, FMVSS 124.

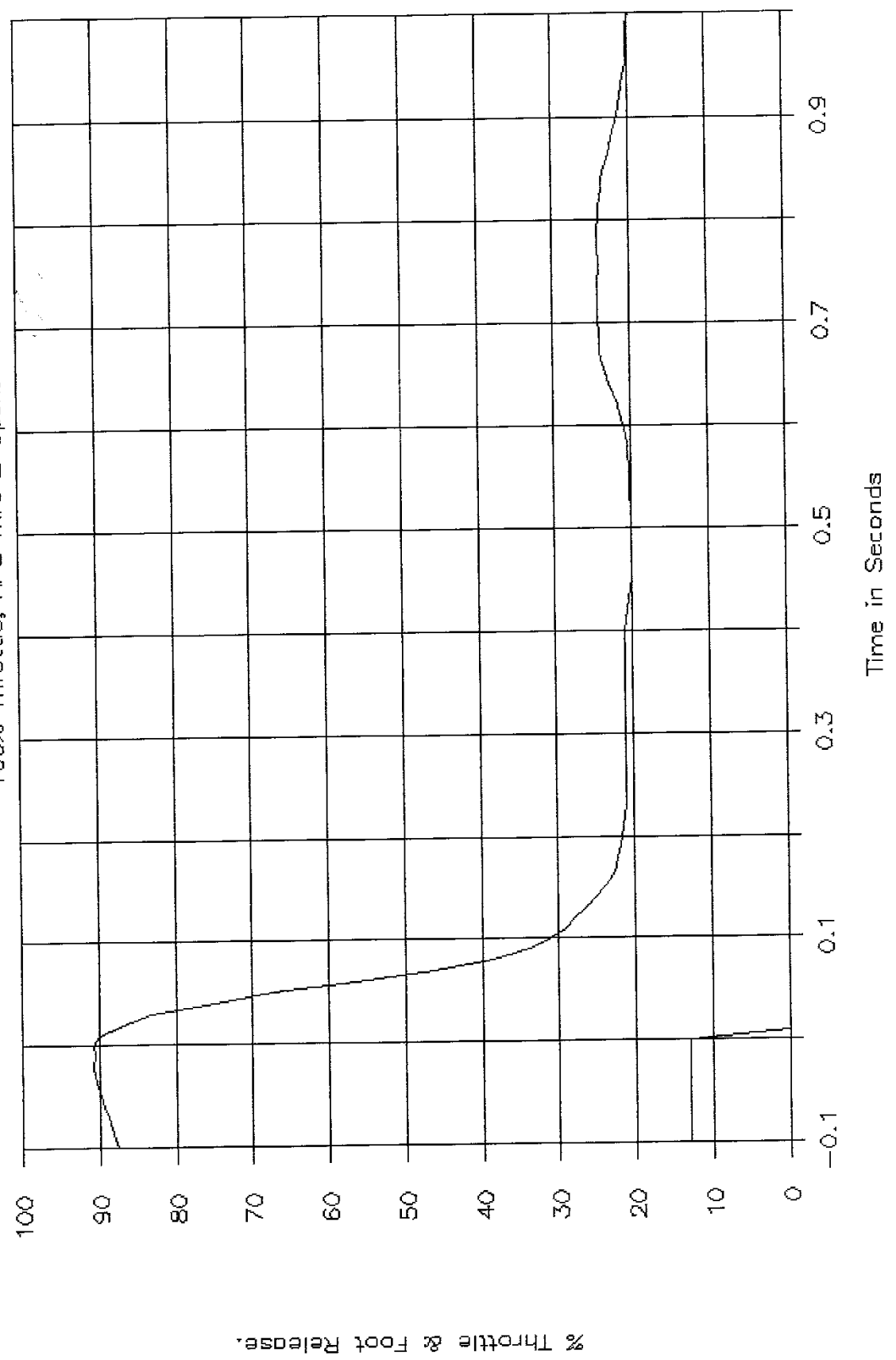


GTL 6462, NHTSA CAD514, FMVSS 124.



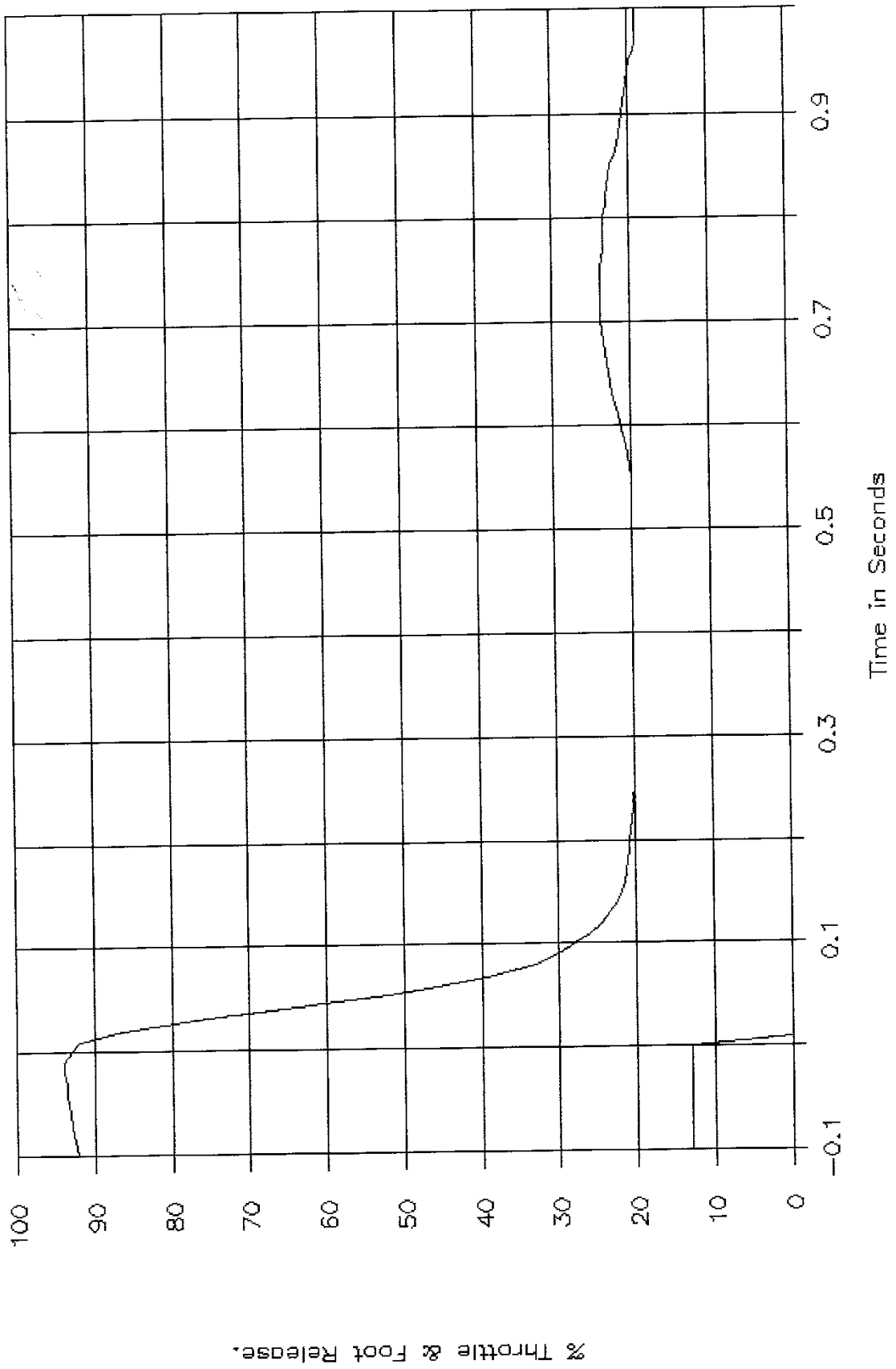
GTL 6463, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 2 Open.



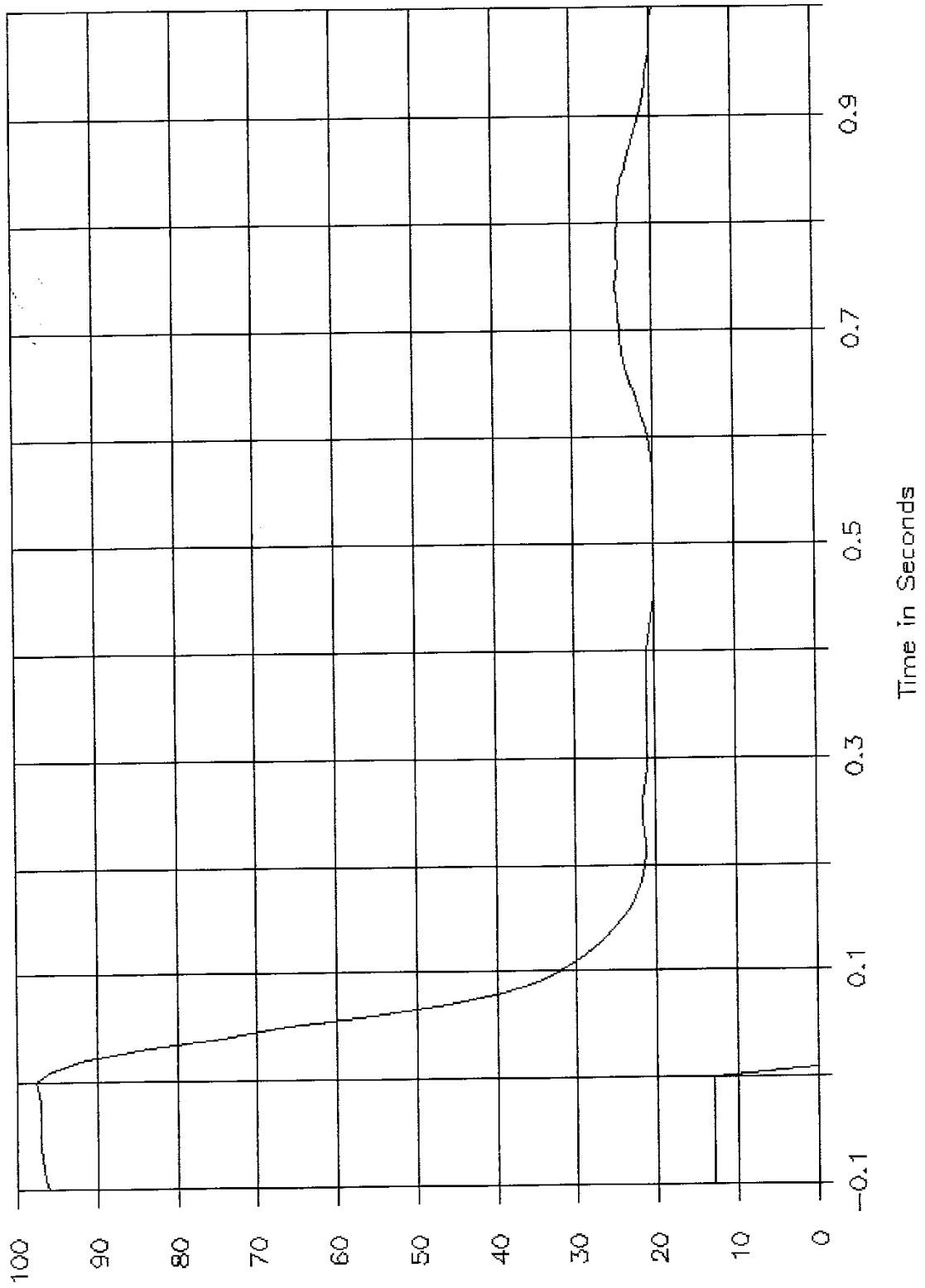
GTL 6464, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 3 Open.



GTL 6465, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 4 Open.

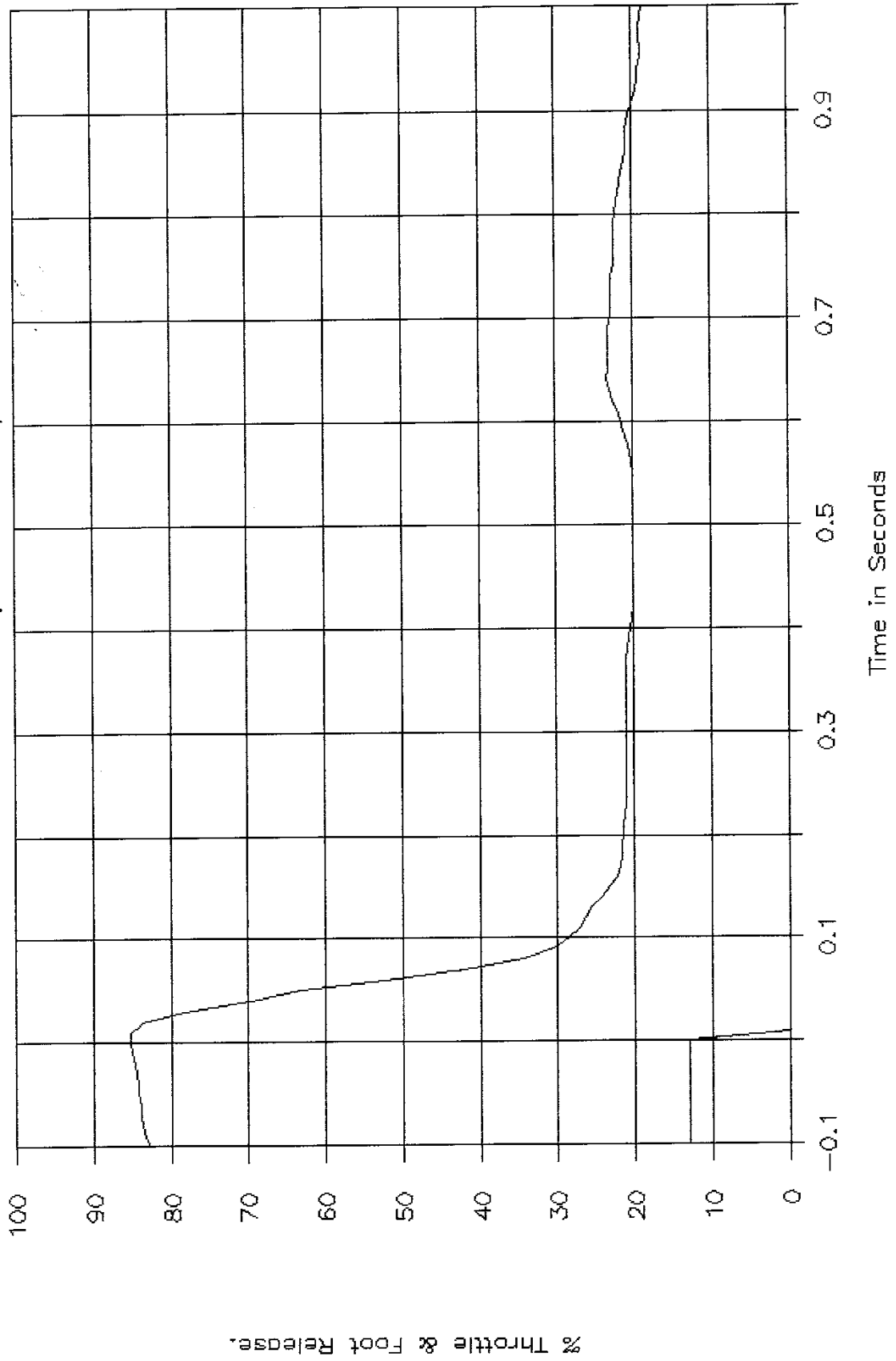


% Throttle & Foot Release.



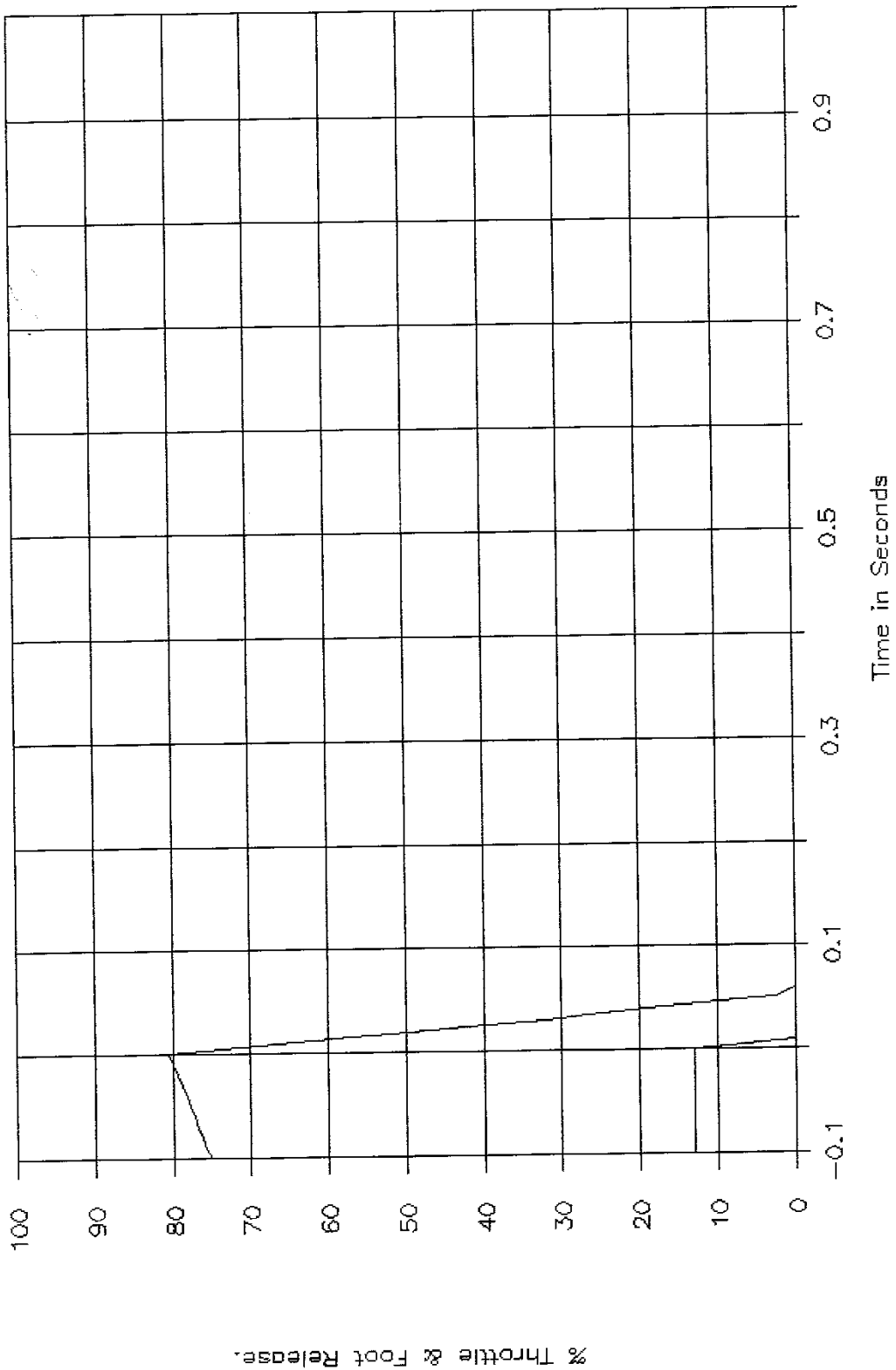
GTL 6466, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 5 Open.



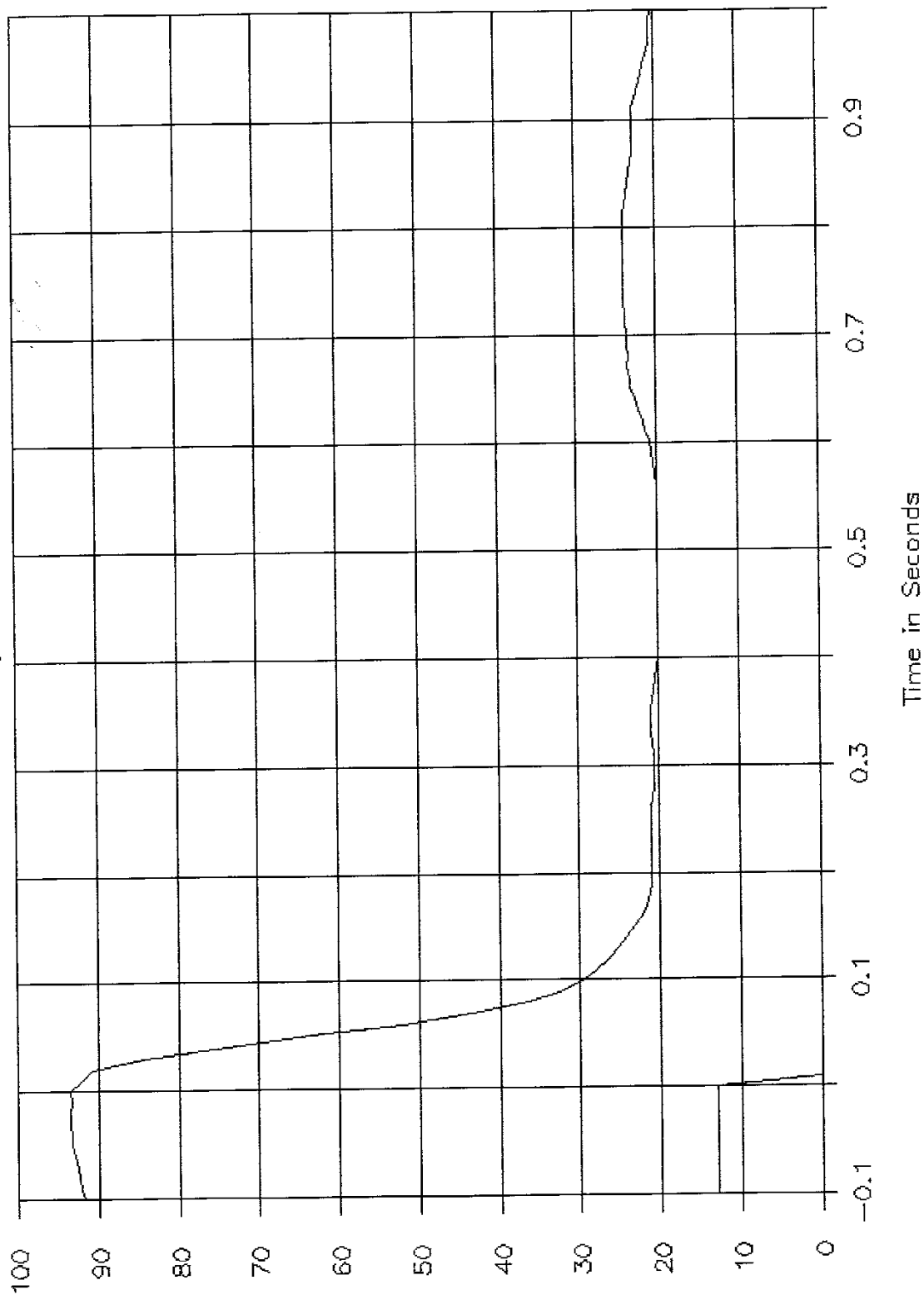
GTL 6467, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 1 Shorted.



GTL 6468, NHTSA CA0514, FMVSS 124.

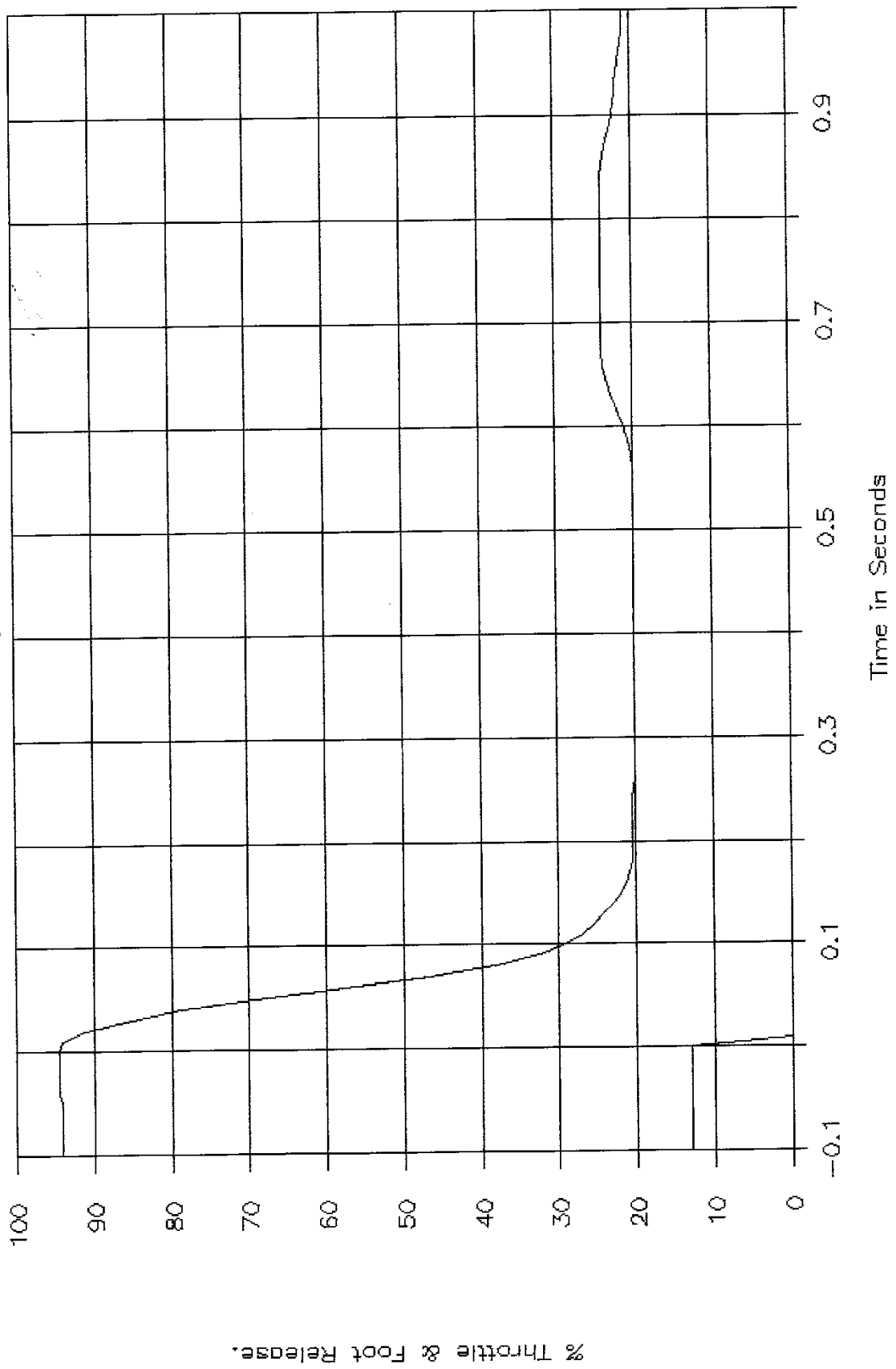
100% Throttle, APS Wire 2 Shorted.



% Throttle & Foot Release.

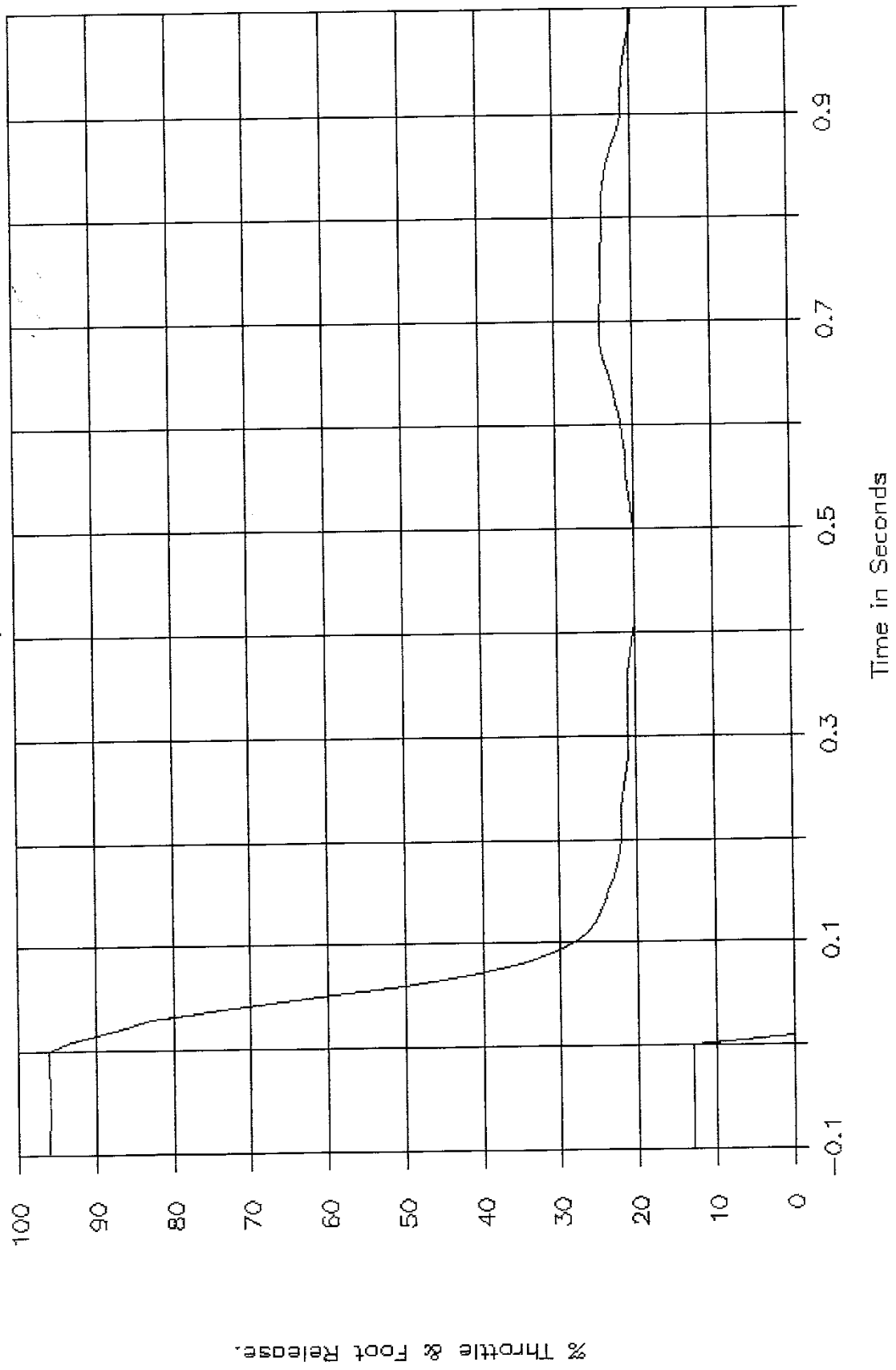
GTL 6469, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 3 Shorted.



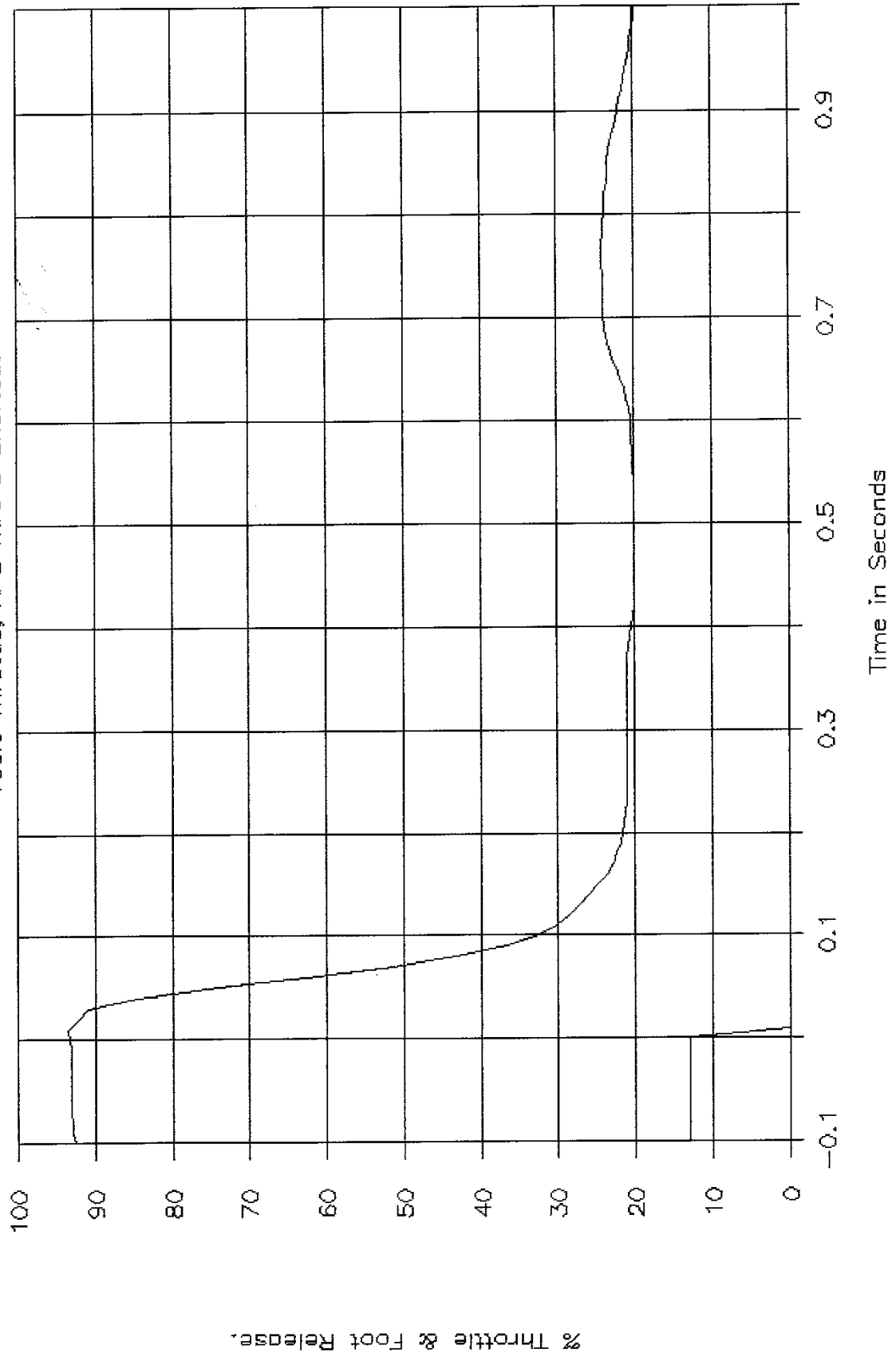
GTL 6470, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 4 Shorted.

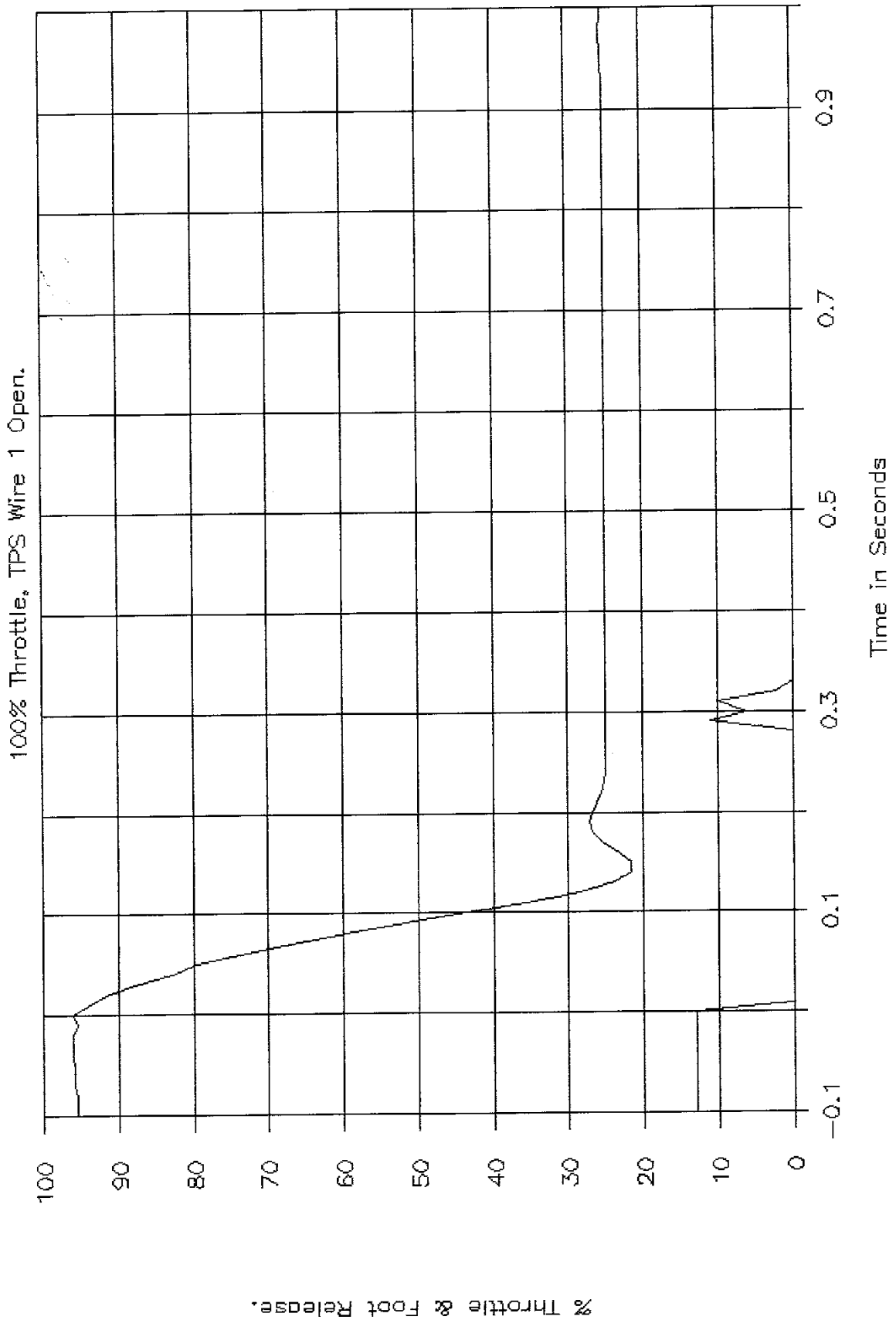


GTL 6471, NHTSA CA0514, FMVSS 124.

100% Throttle, APS Wire 5 Shorted.

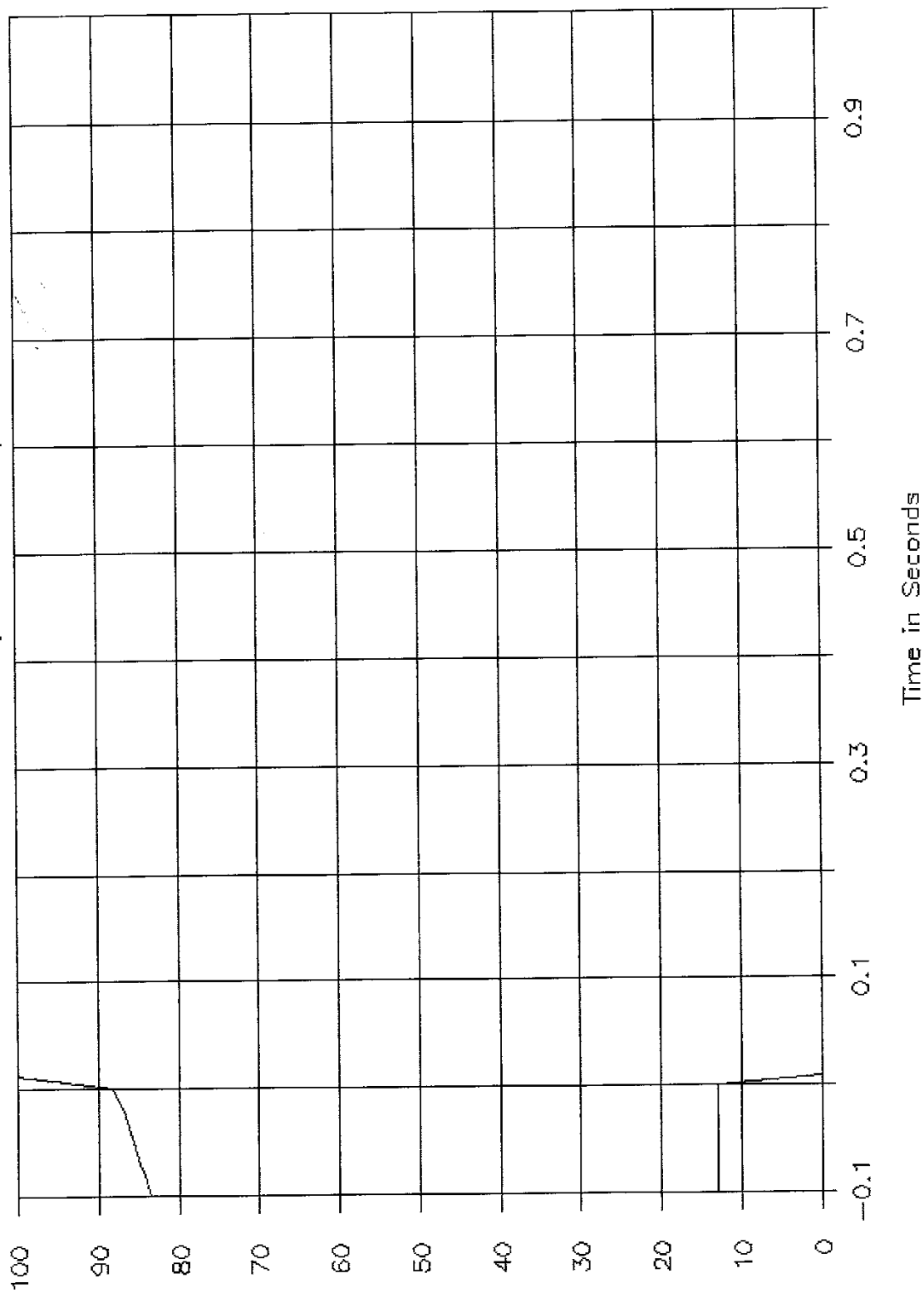


GTL 6472, NHTSA CA0514, FMVSS 124.



GTL 6473, NHTSA CA0514, FMVSS 124.

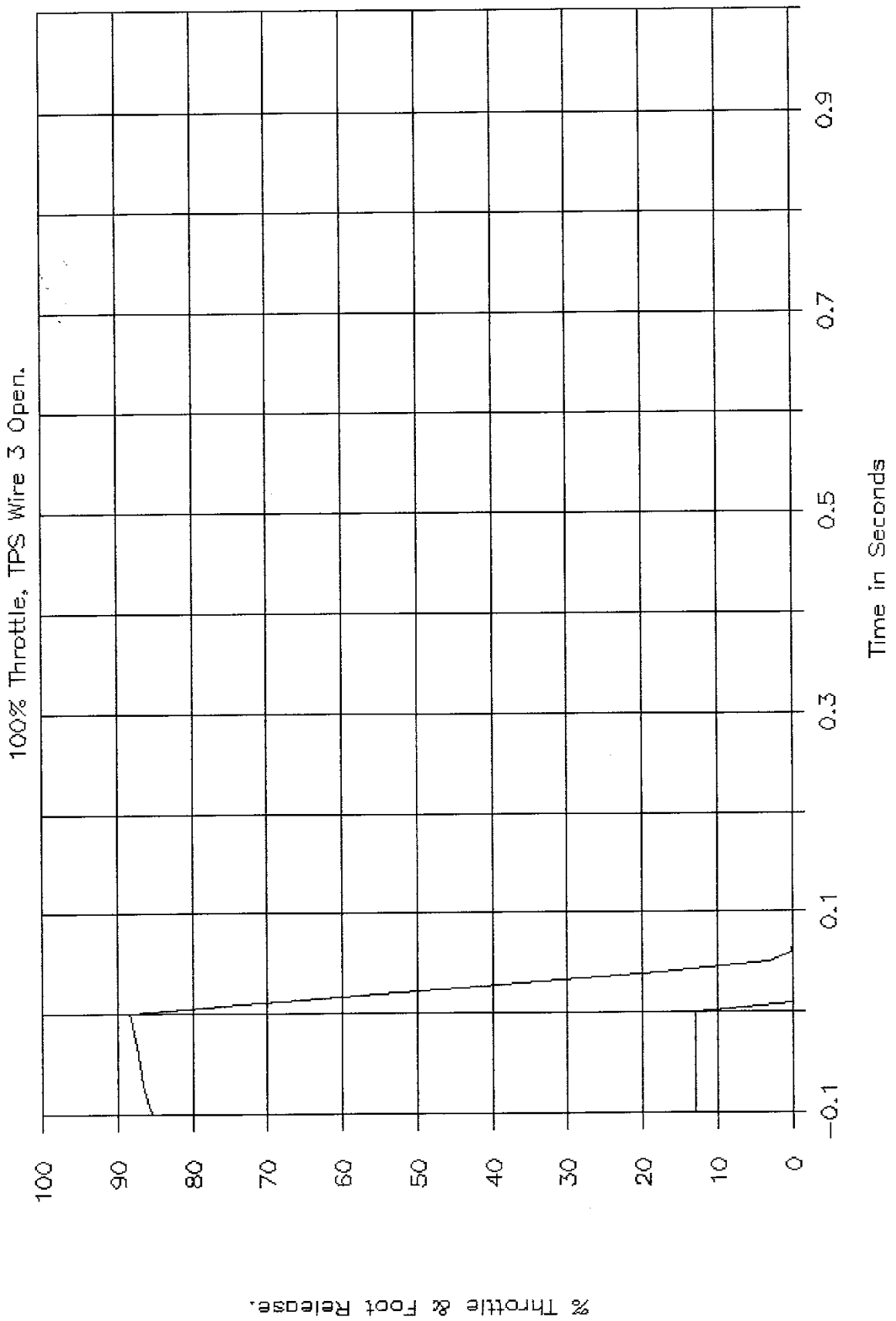
100% Throttle, TPS Wire 2 Open.



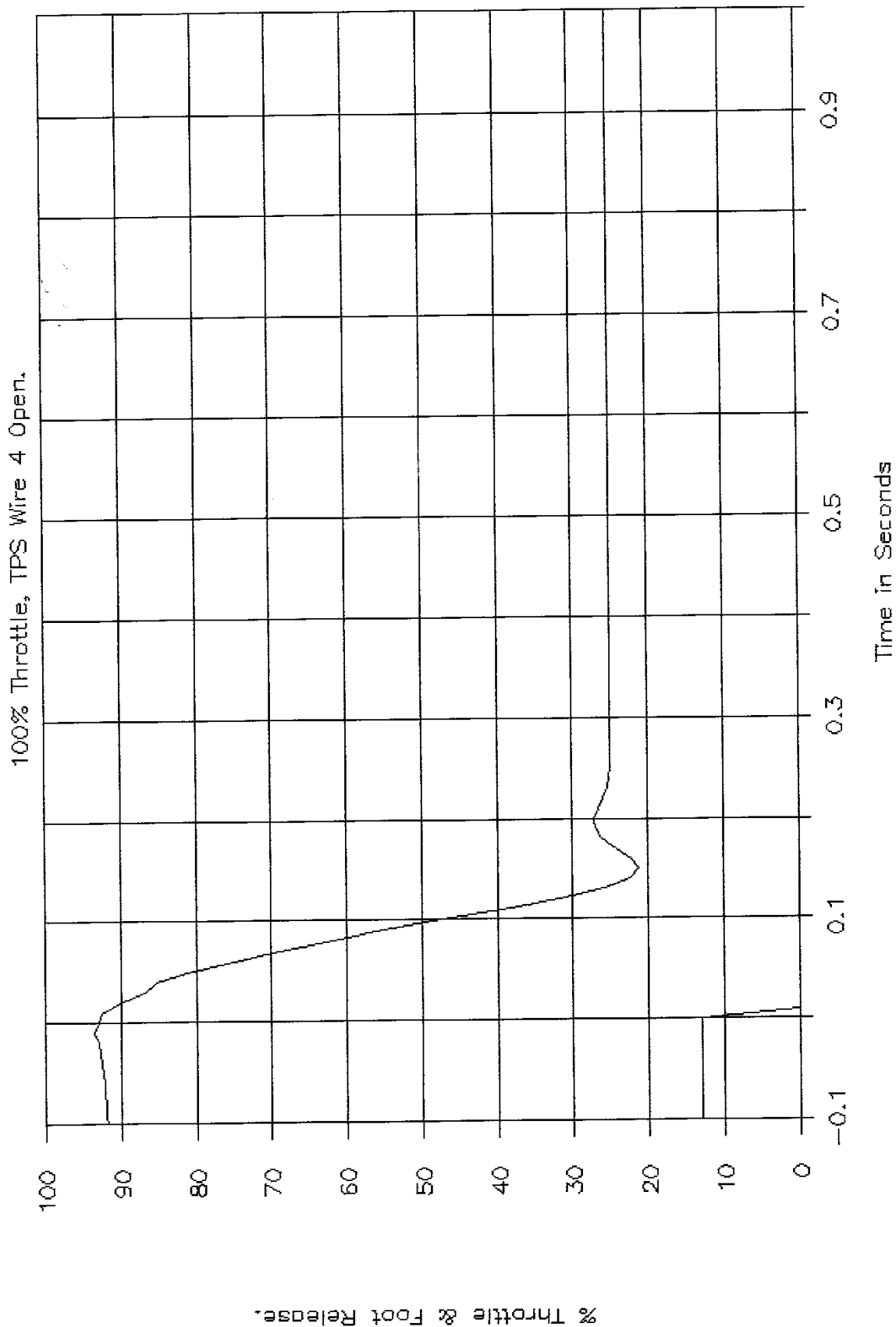
% Throttle & Foot Release.



GTL 6474, NHTSA CA0514, FMVSS 124.

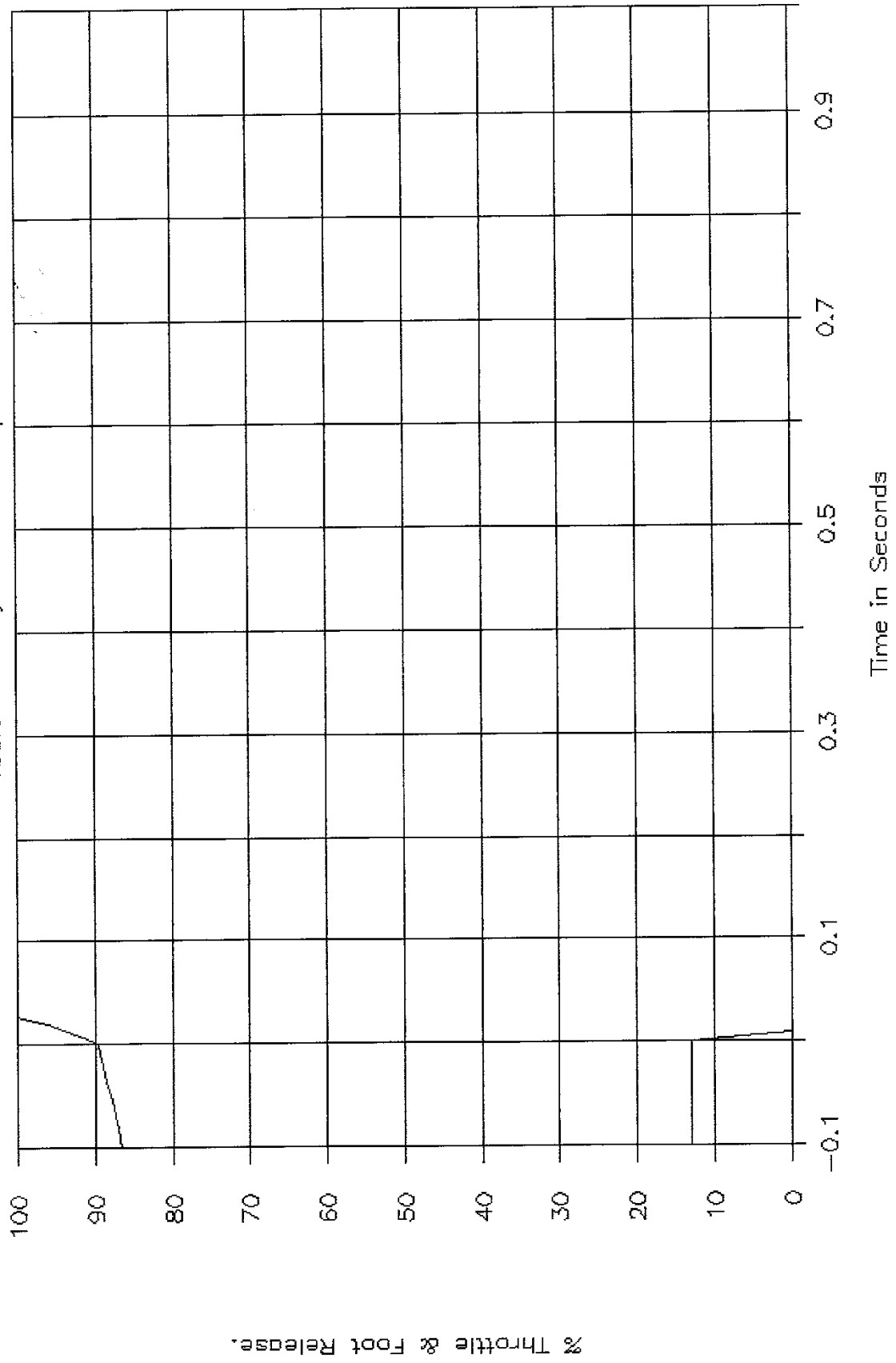


GTL 6475, NHTSA CA0514, FMVSS 124.

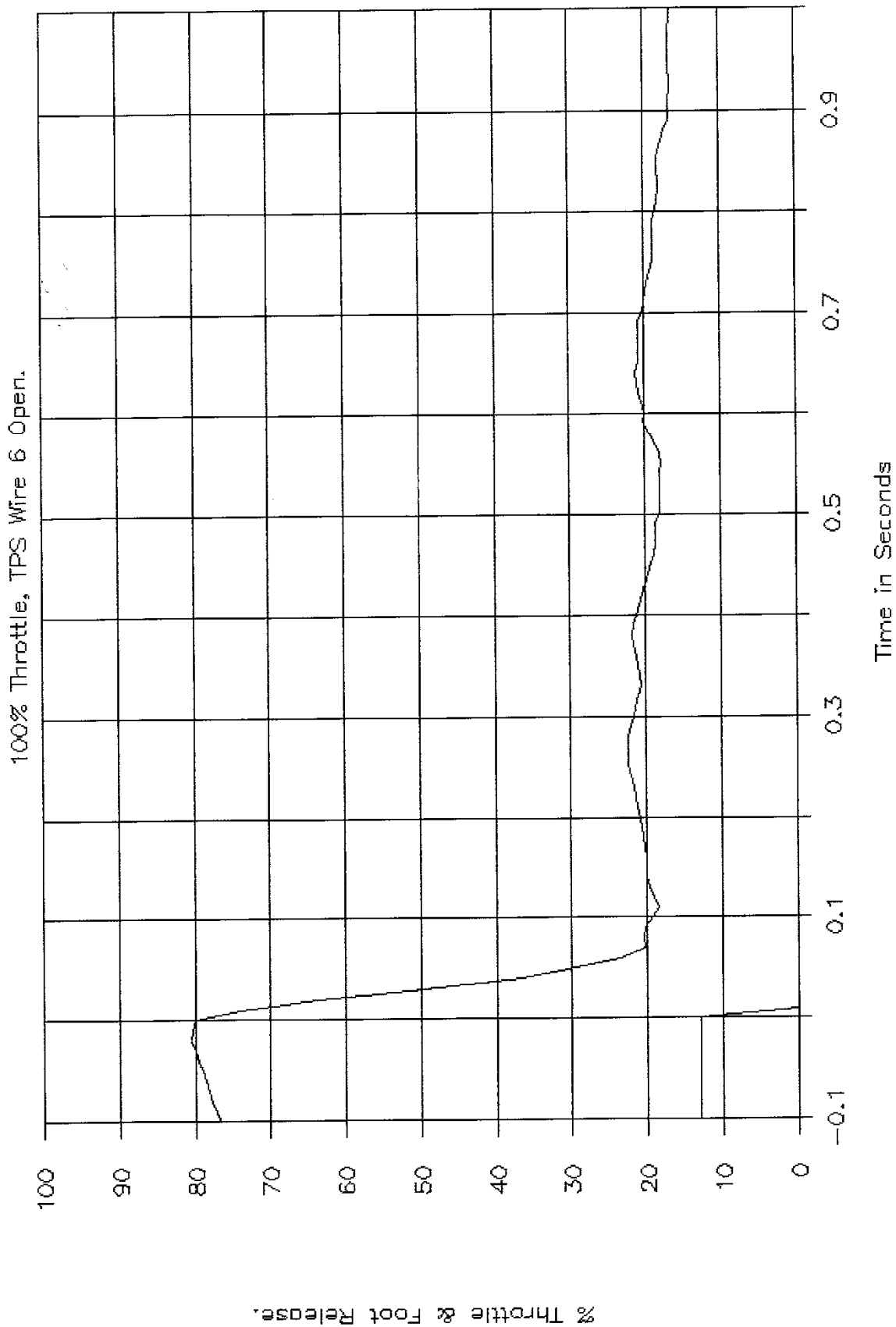


GTL 6476, NHTSA CA0514, FMVSS 124.

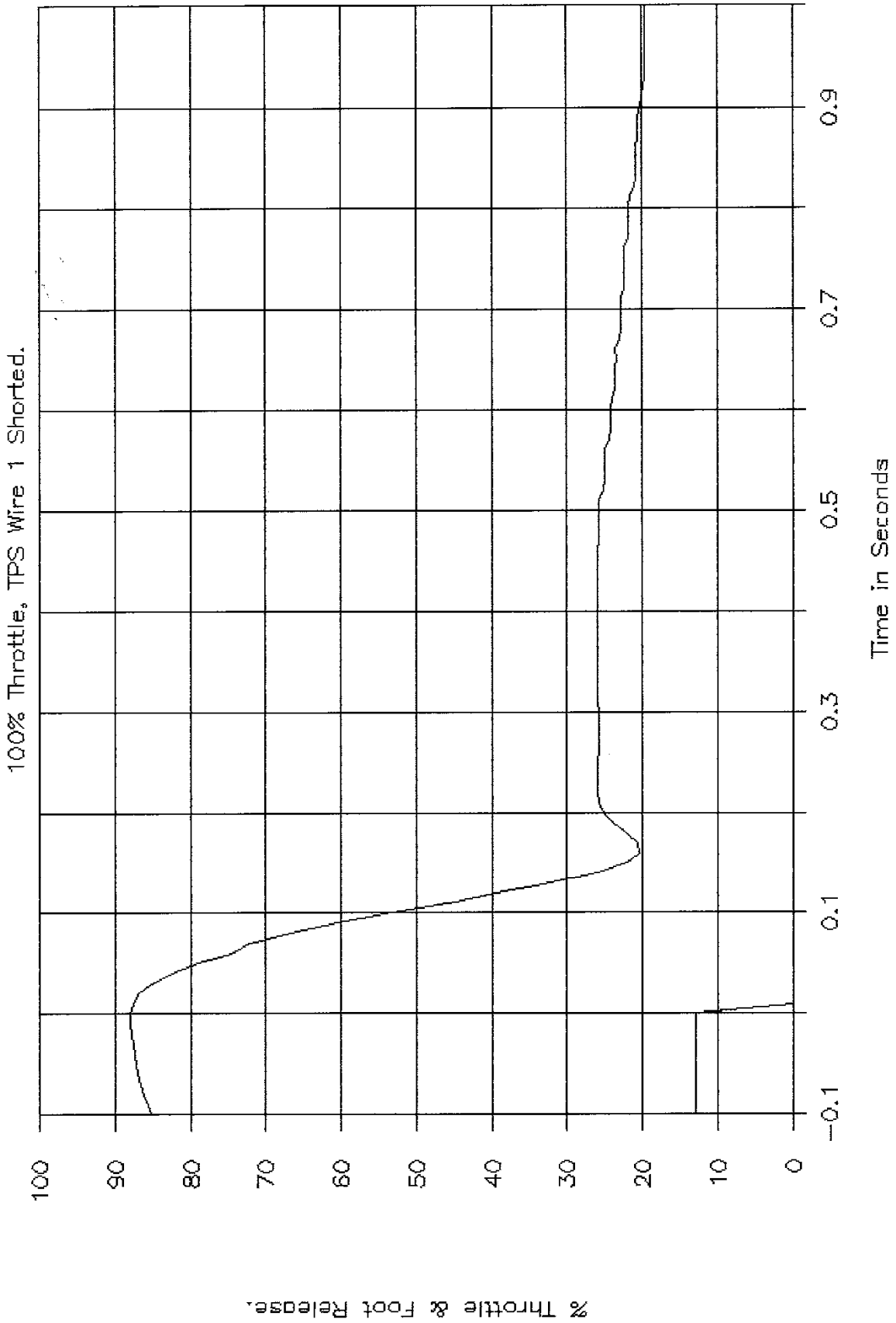
100% Throttle, TPS Wire 5 Open.



GTL 6477, NHTSA CA0514, FMVSS 124.

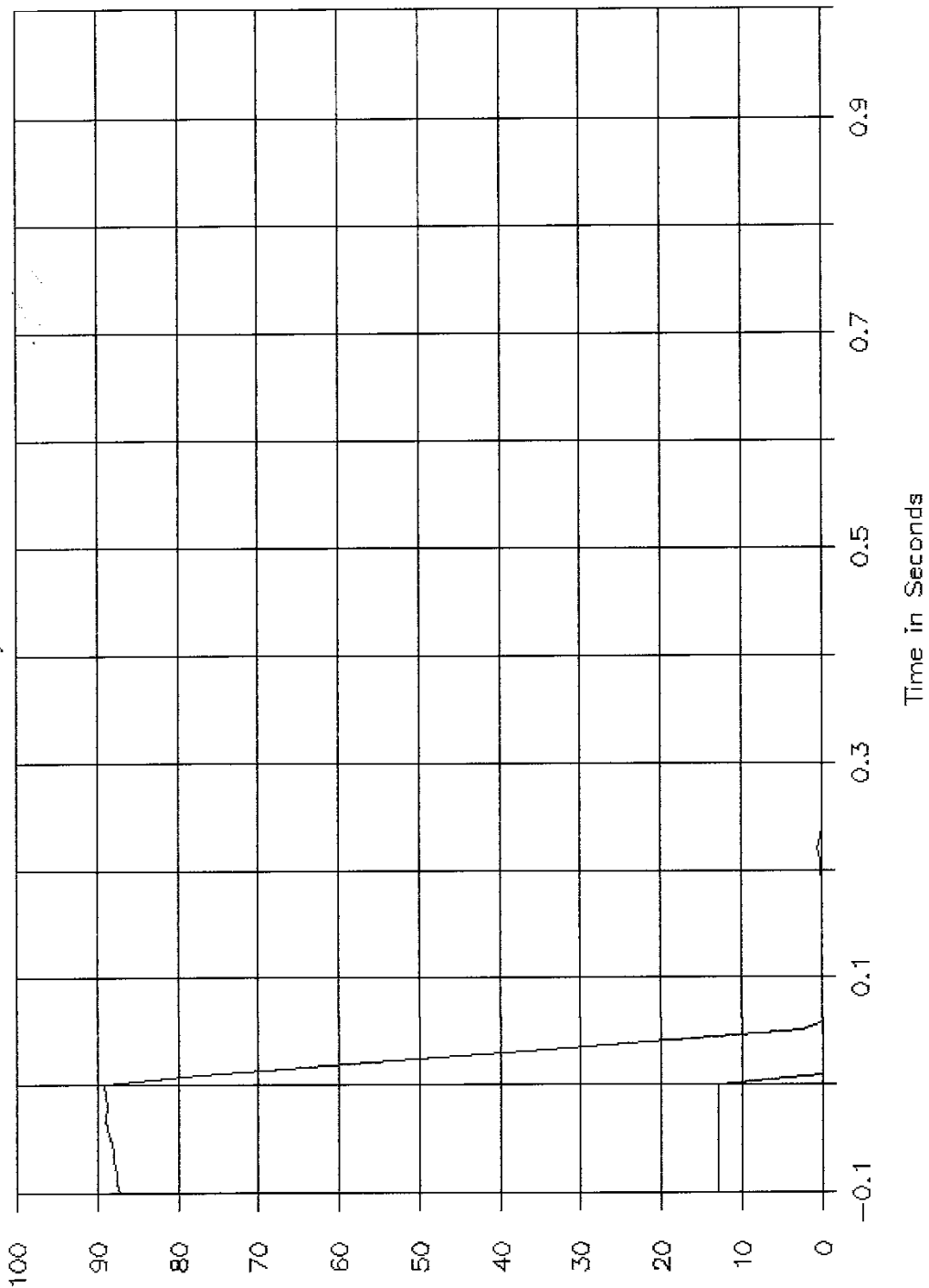


GTL 6478, NHTSA CA0514, FMVSS 124.



GTL 6479, NHTSA CA0514, FMVSS 124.

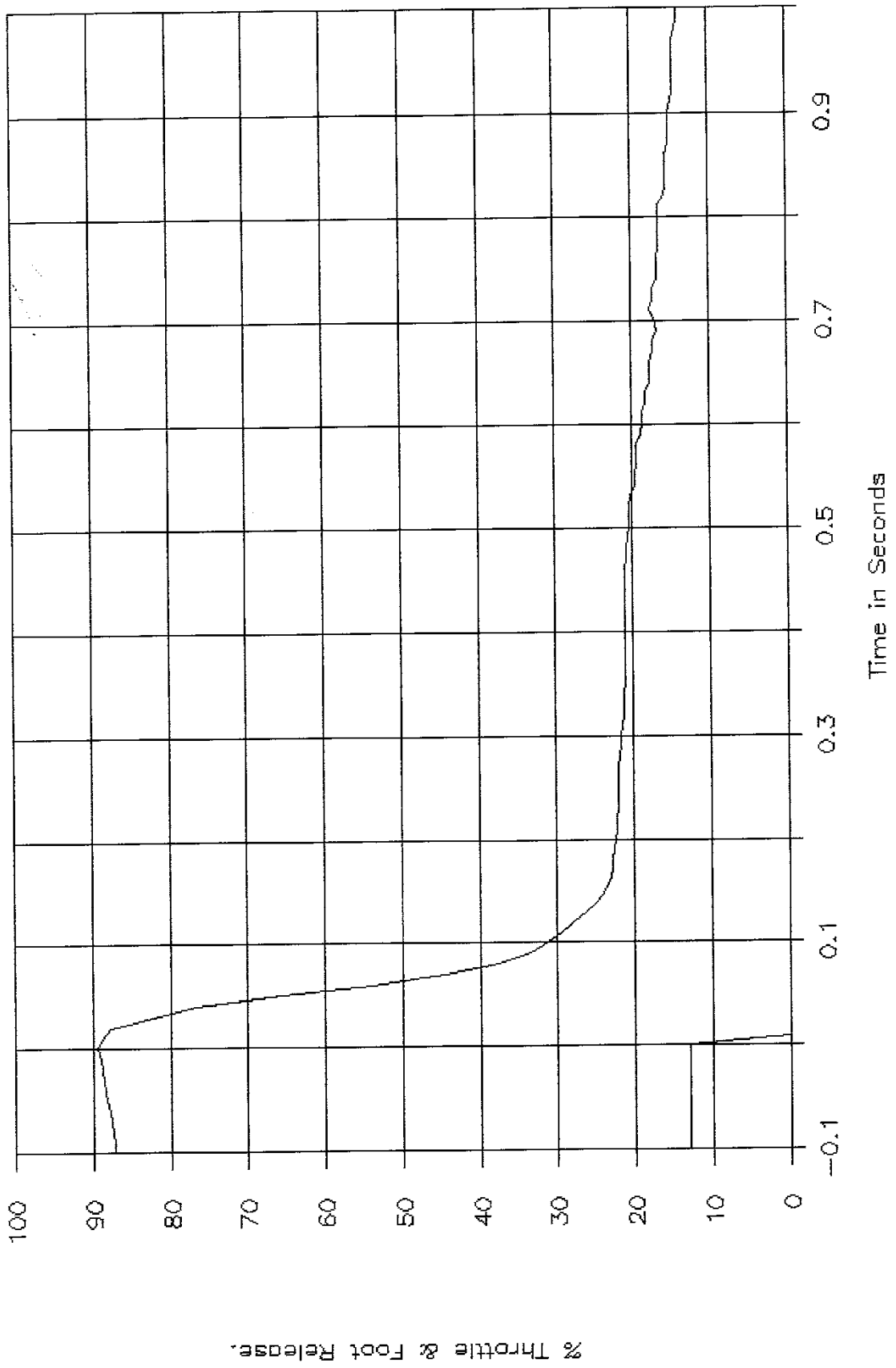
100% Throttle, TPS Wire 2 Shorted.



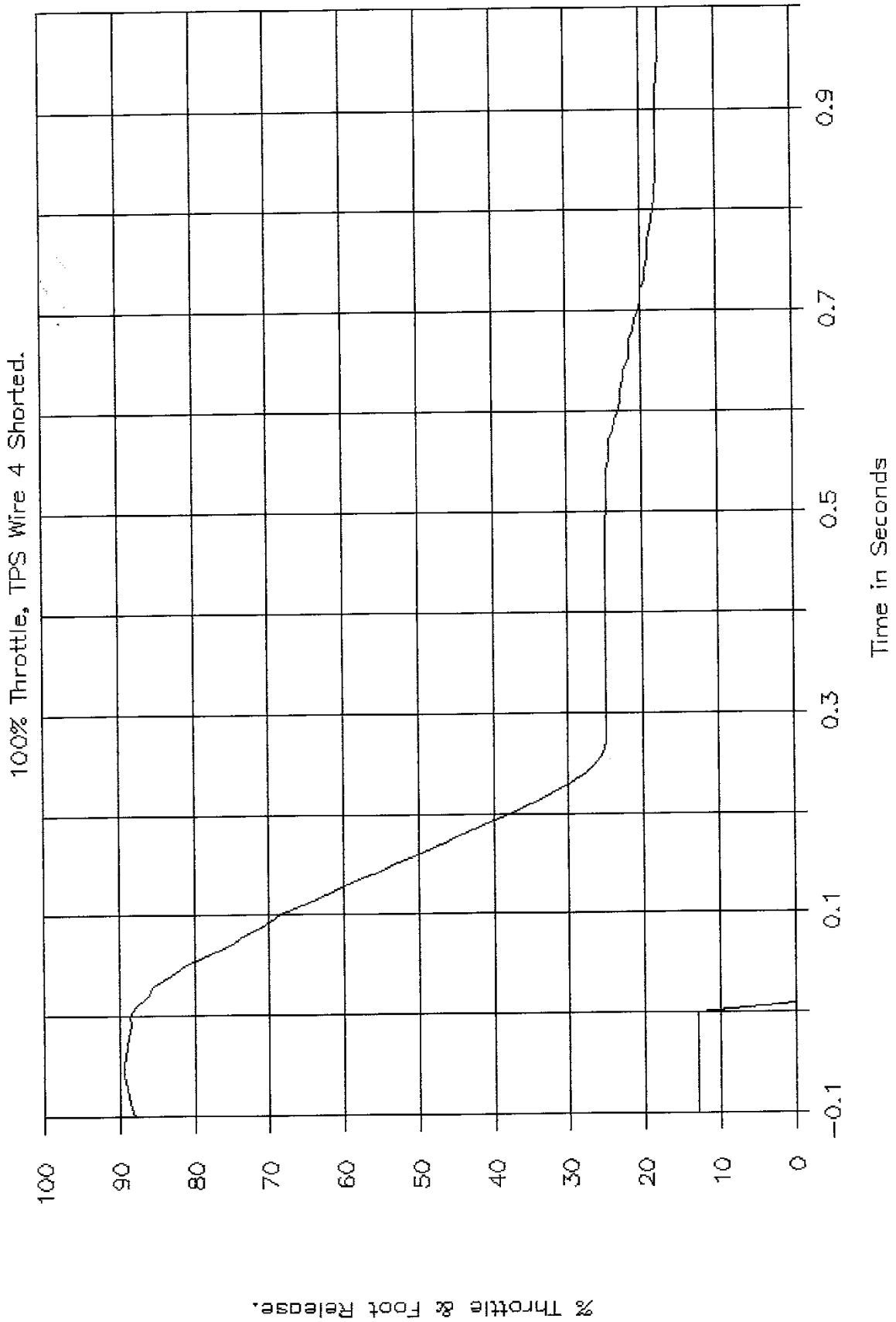
% Throttle & Foot Release.

GTL 6480, NHTSA CA0514, FMVSS 124.

100% Throttle, TPS Wire 3 Shorted.



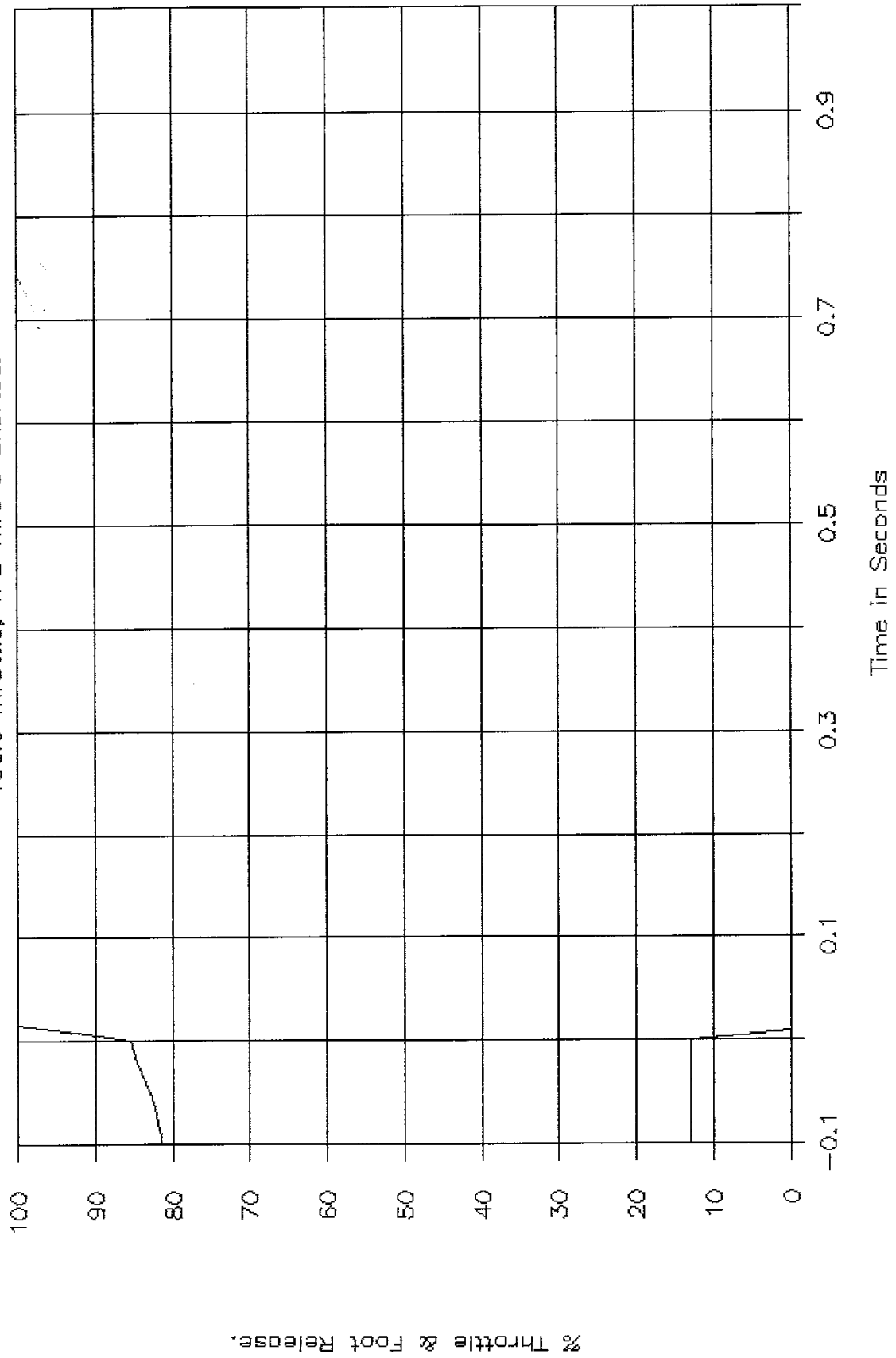
GTL 6481, NHTSA CA0514, FMVSS 124.





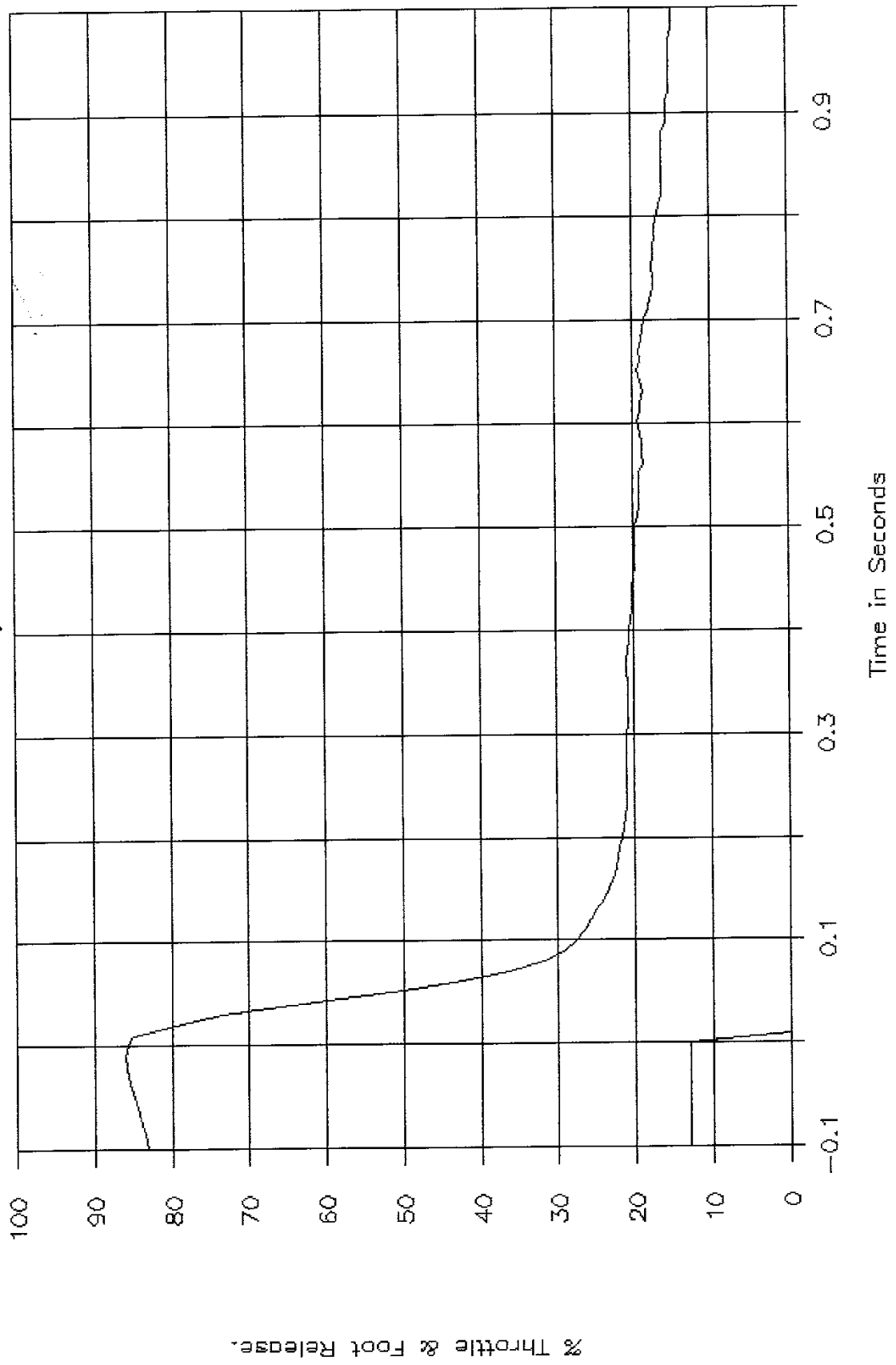
GTL 6482, NHTSA CA0514, FMVSS 124.

100% Throttle, TPS Wire 5 Shorted.

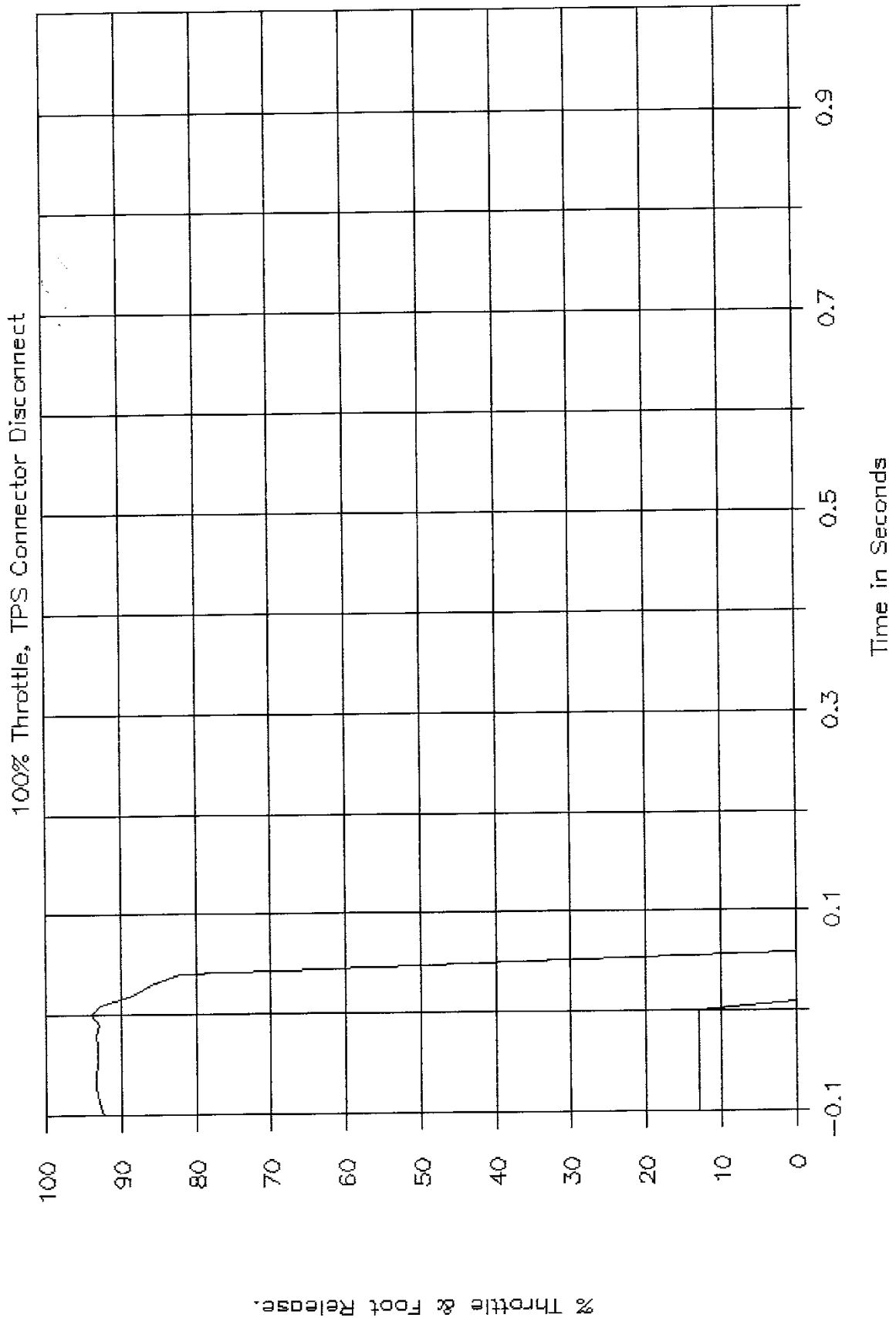


GTL 6483, NHTSA CA0514, FMVSS 124.

100% Throttle, TPS Wire 6 Shorted.

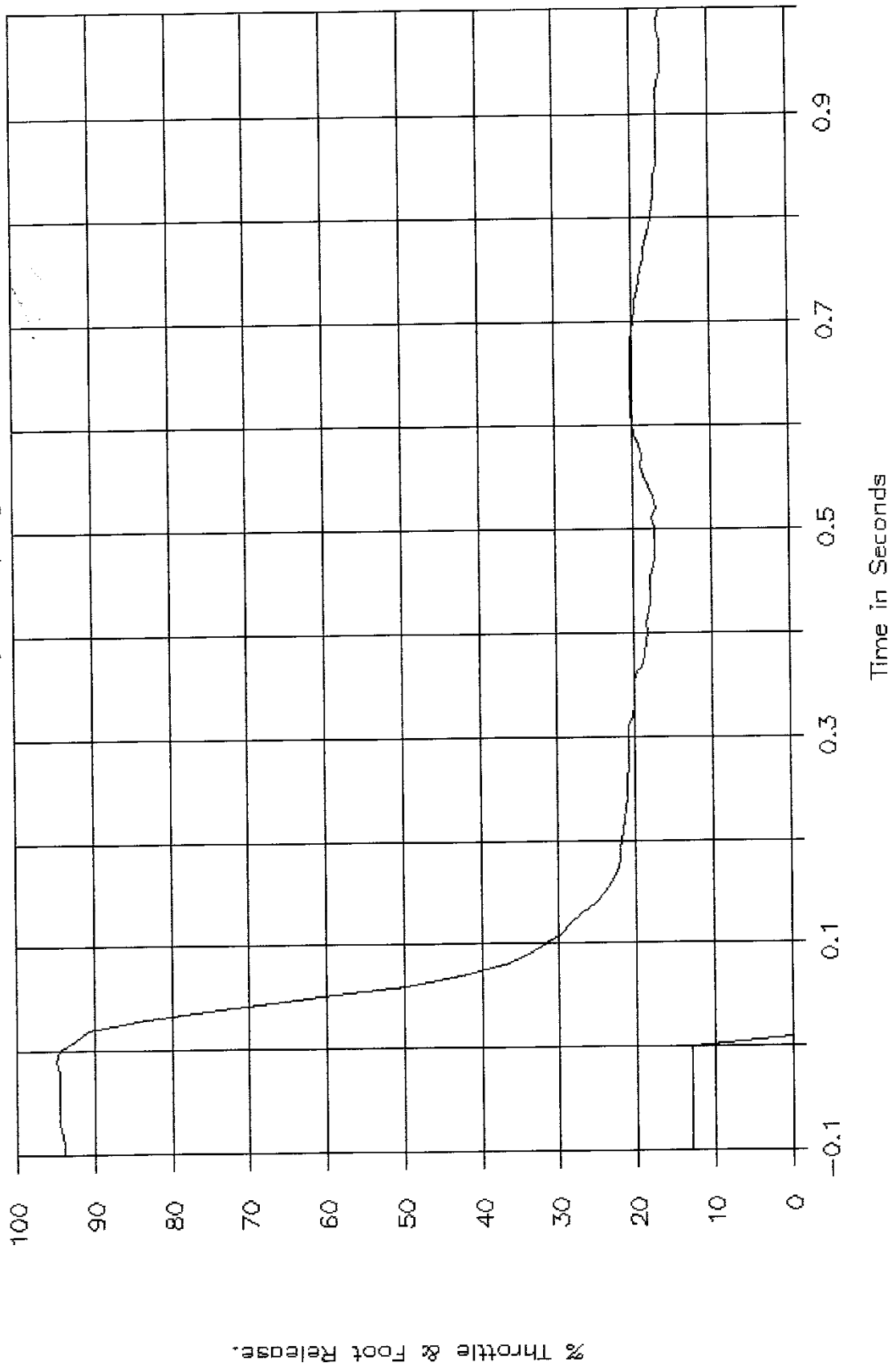


GTL 6484, NHTSA CA0514, FMVSS 124.



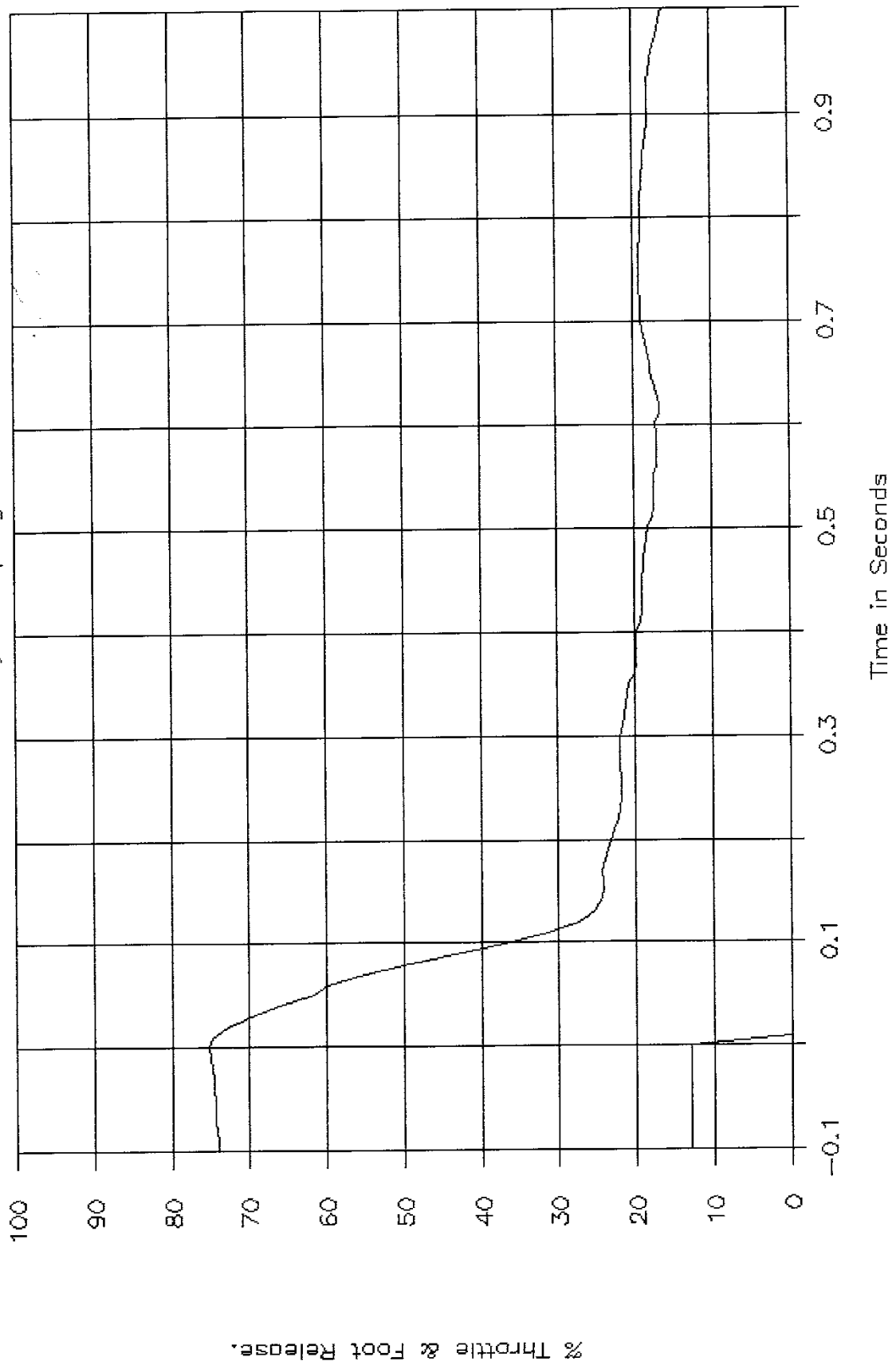
GTL 6485, NHTSA CA0514, FMVSS 124.

100% Throttle, TPS Spring 3 Removed.



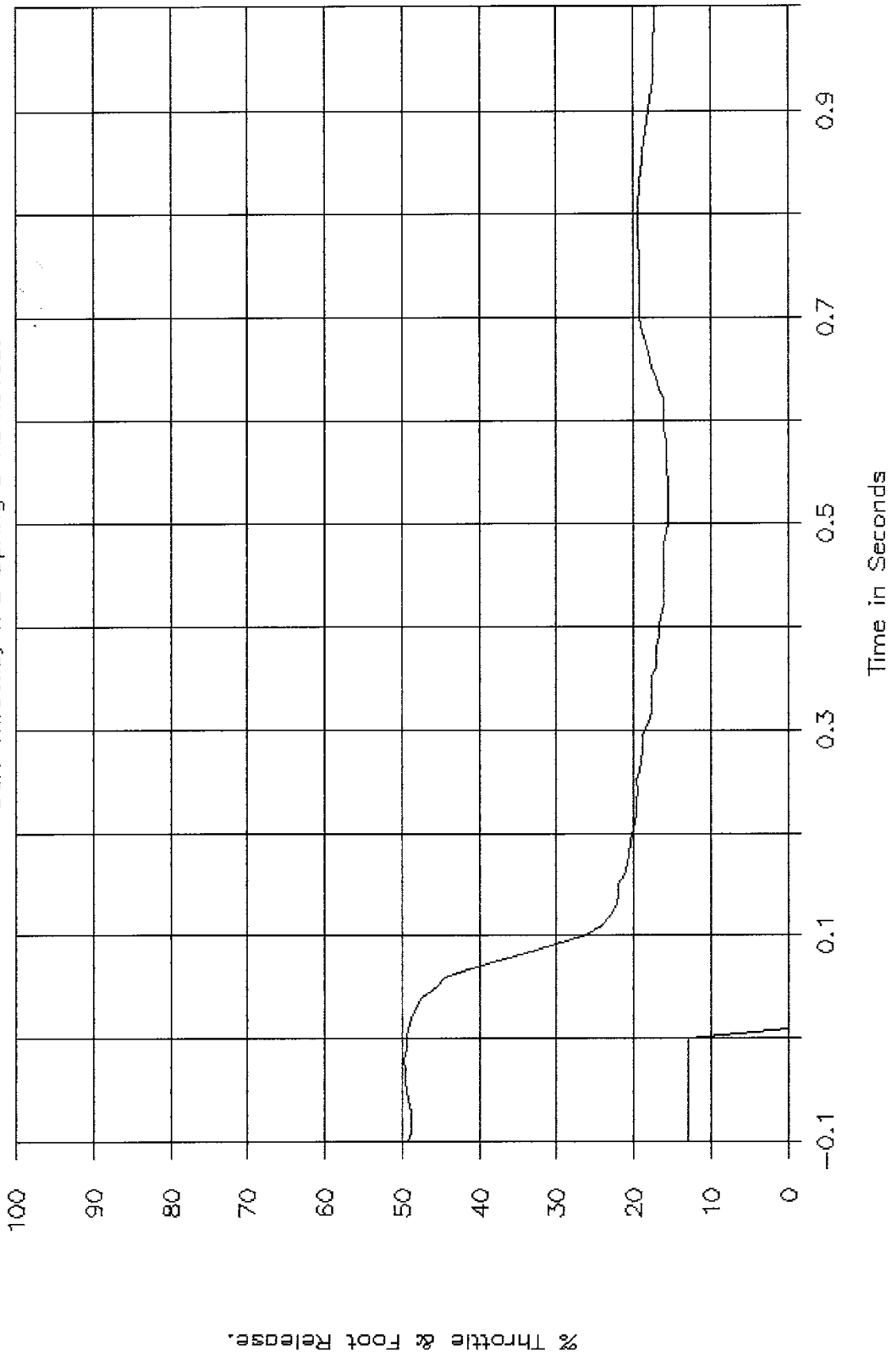
GTL 6486, NHTSA CA0514, FMVSS 124.

75% Throttle, TPS Spring 3 Removed.



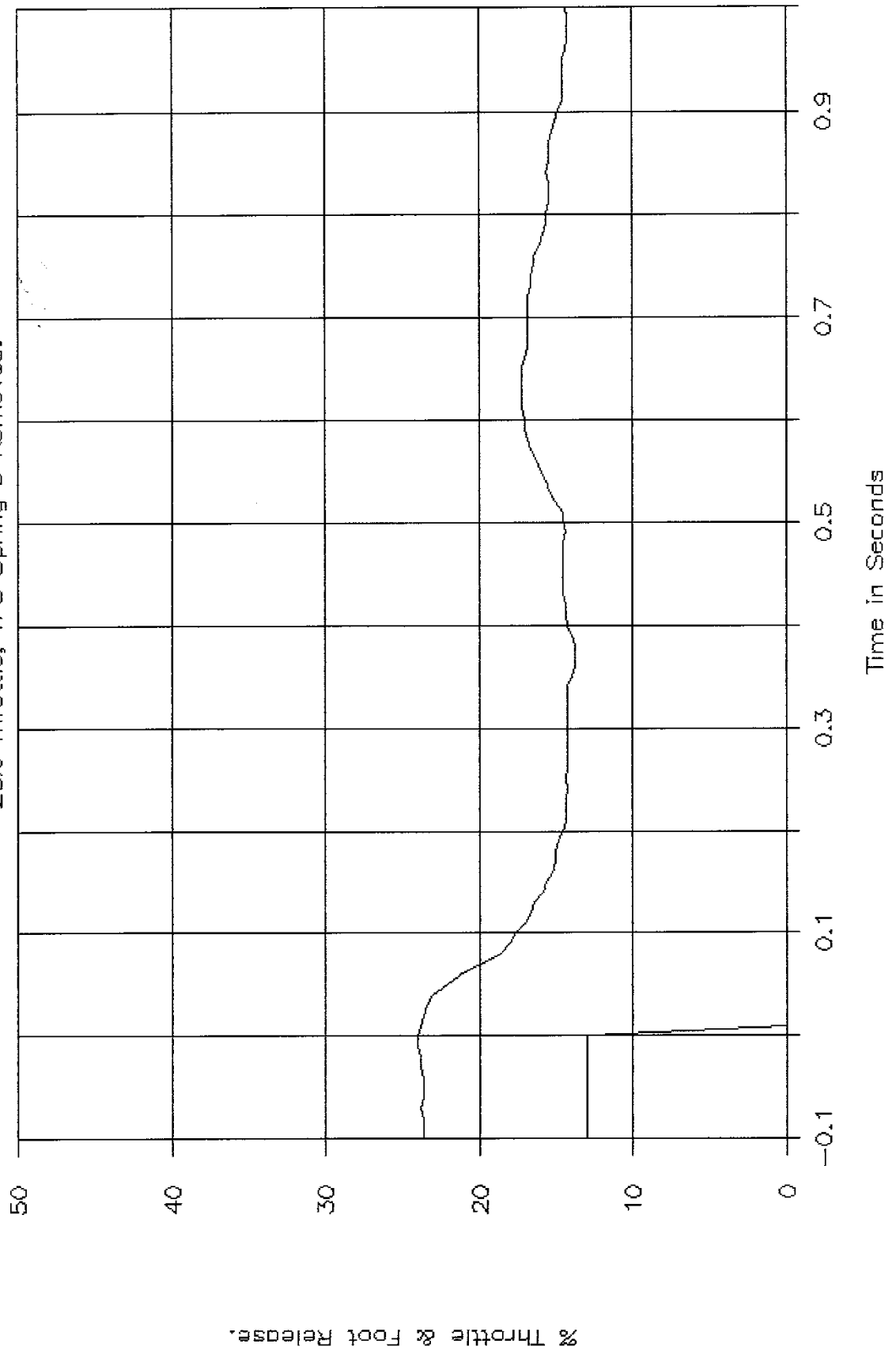
GTL 6487, NHTSA CA0514, FMVSS 124.

50% Throttle, TPS Spring 3 Removed.

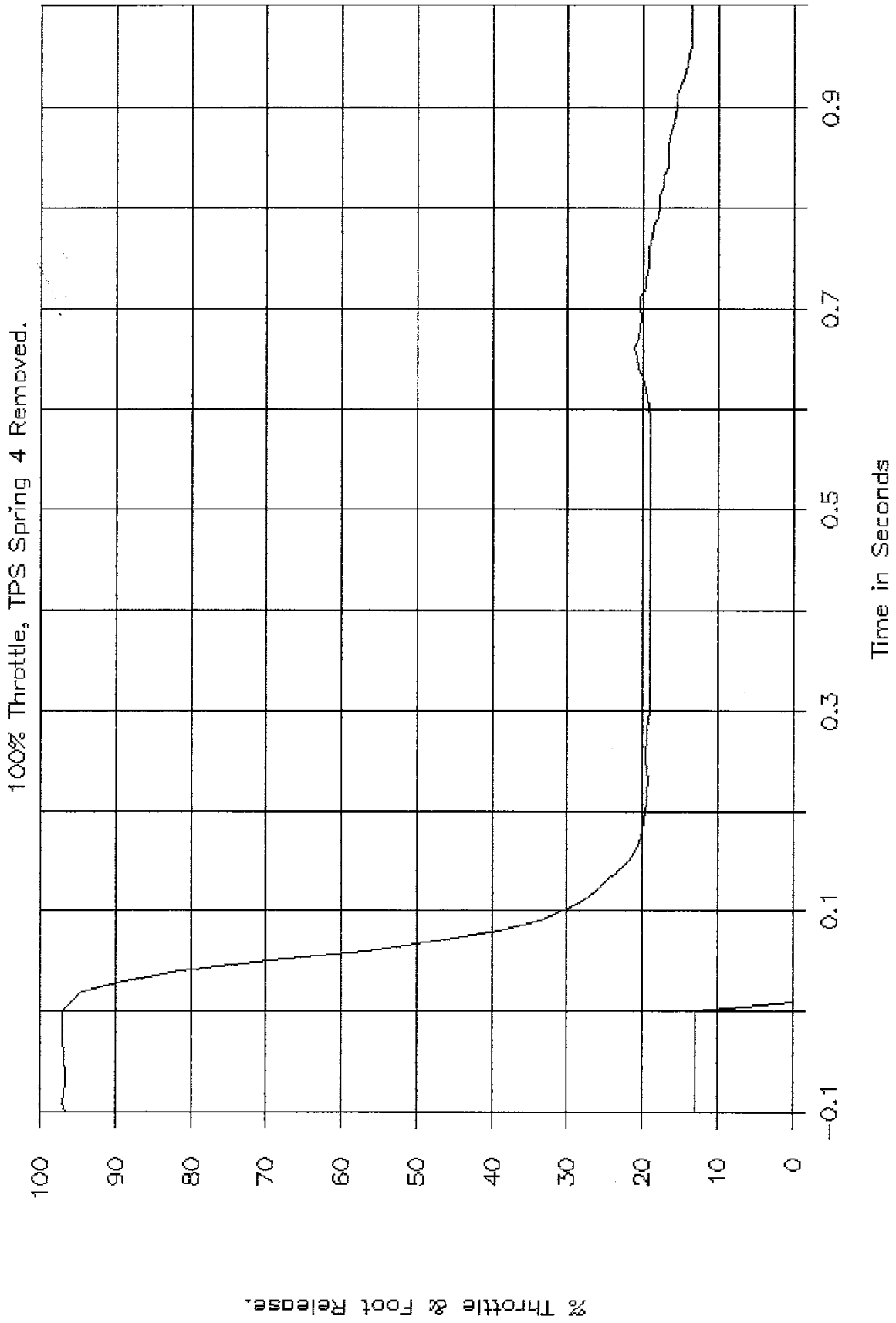


GTL 6488, NHTSA CA0514, FMVSS 124.

25% Throttle, TPS Spring 3 Removed.



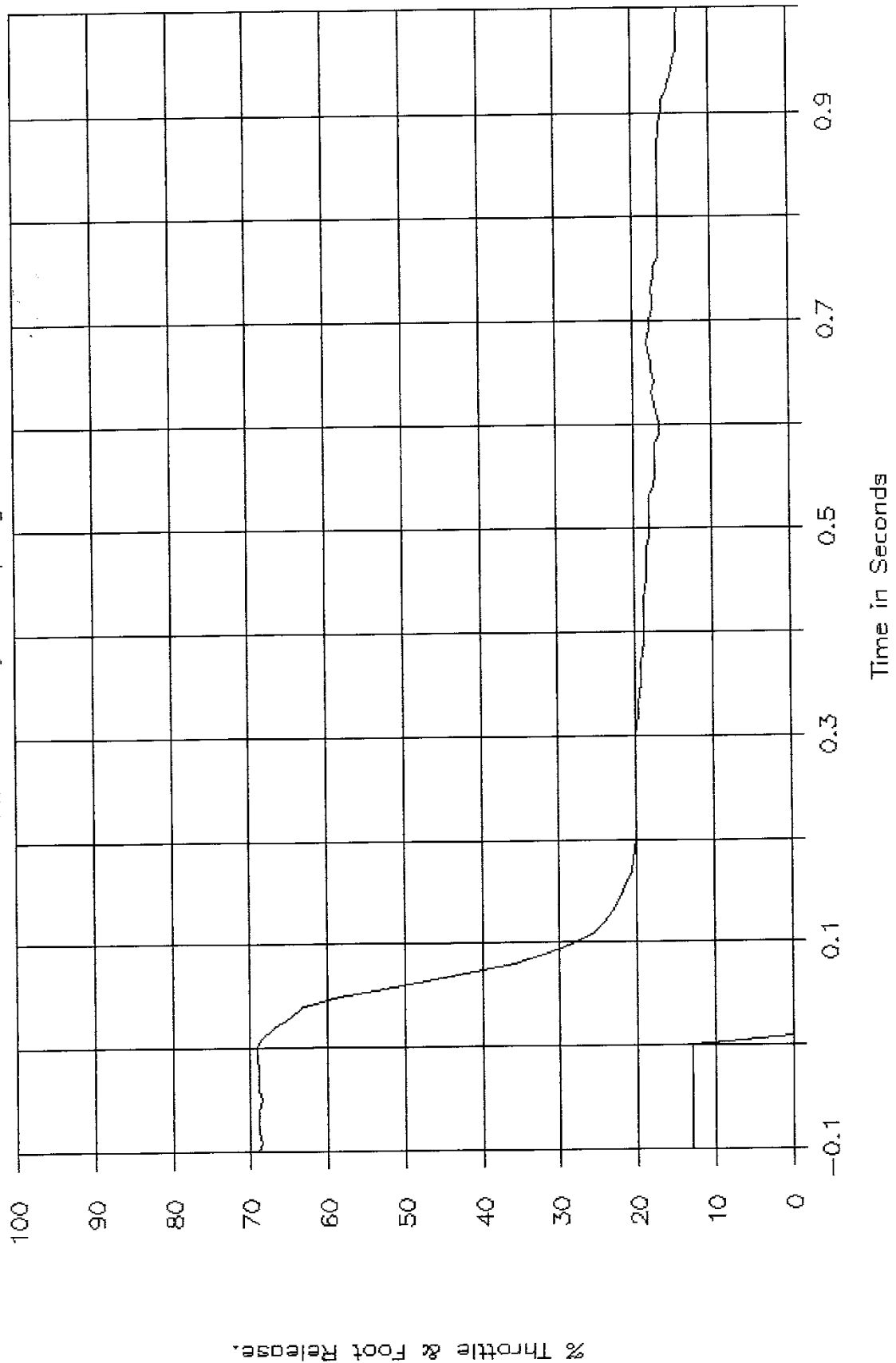
GTL 6489, NHTSA CA0514, FMVSS 124.





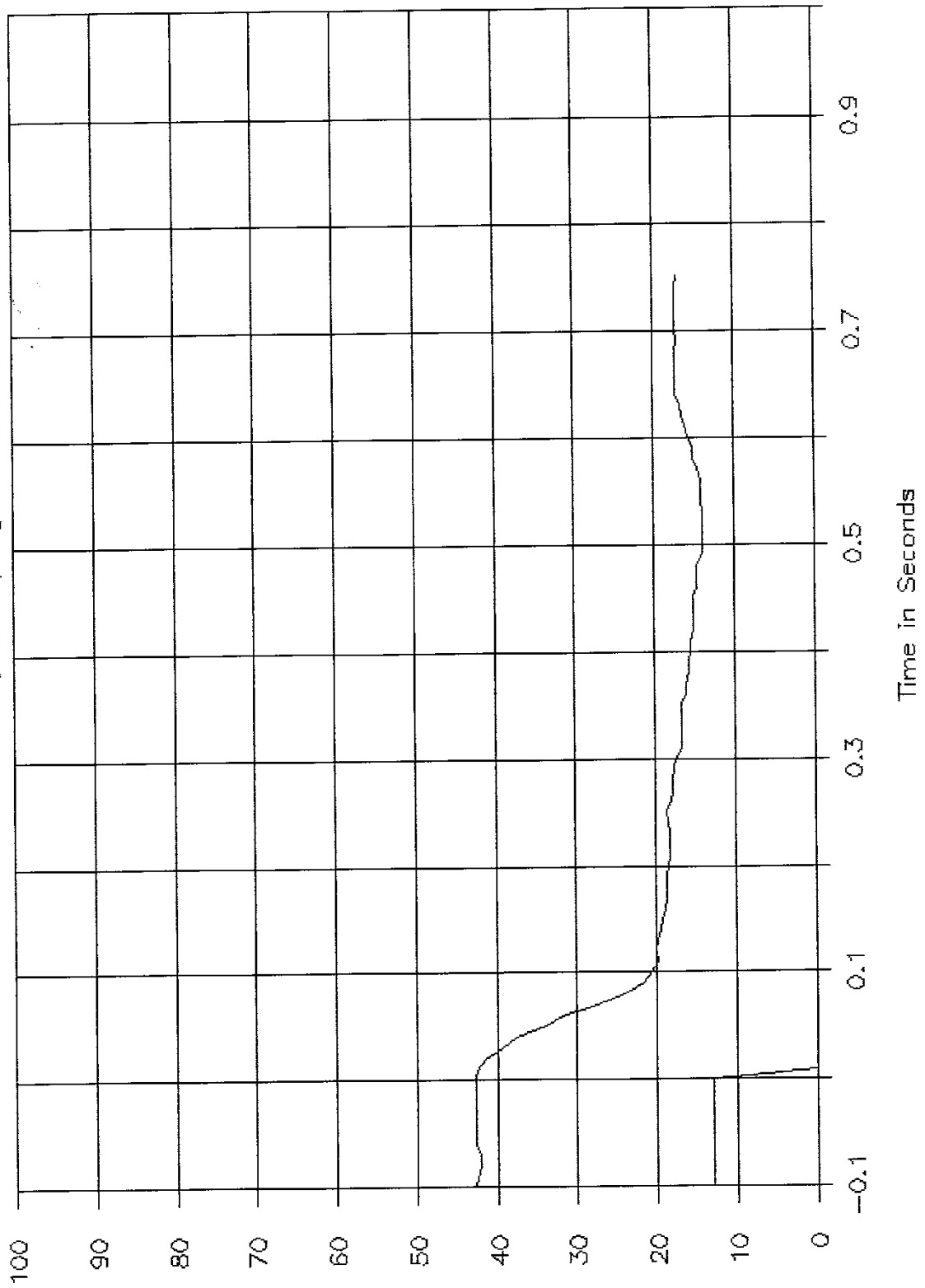
GTL 6490, NHTSA CA0514, FMVSS 124.

75% Throttle, TPS Spring 4 Removed.



GTL 6491, NHTSA CA0514, FMVSS 124.

50% Throttle, TPS Spring Removed.



% Throttle & Foot Release.

GTL 6492, NHTSA CA0514, FMVSS 124.

25% Throttle, TPS Spring 4 Removed.

