SAFETY COMPLIANCE TESTING FOR FMVSS 124 ACCELERATOR CONTROL SYSTEMS

NISSAN MOTOR CO., LTD.  
2010 INFINITY G37, PASSENGER CAR  
nhtsa no. CA5204

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

April 16, 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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Prepared By:  
Approved By:  
Approval Date: 04/16/10  

FINAL REPORT ACCEPTANCE BY OVSC:

Accepted By:  
Acceptance Date: 04/16/10
Compliance tests were conducted on the subject 2010 Infiniti G37 4-door passenger car 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.

Compliance Testing
Safety Engineering
FMVSS 124
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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.
Compliance testing was conducted on a 2010 Infiniti G37 Passenger Car, NHTSA No. CA5204 in accordance with the National Highway Traffic Safety Administration (NHTSA) Laboratory Procedure TP-124-06.

The vehicle is equipped with twin throttle bodies. Both are the same and work in parallel control from the accelerator control signal. The accelerator control system for this vehicle is “Drive by Wire” utilizing an accelerator pedal position sensor which signal is read by the Engine Computer System (ECS), which in turn sends a signal to the throttle body control motor to open/close the throttle butterfly which position is read by a Throttle Plate Position Sensor (TPS). This signal is then sent back to the Engine Computer System (ECS) which then gives closed loop control of the accelerator system. Return Springs 1 and 2 are located in the accelerator pedal assembly. Return Spring 3 is located in the throttle body. Spring 4 is located in the throttle body but is not a return spring. This spring is for clearance adjustment only.

Output from the vehicle throttle position sensor on the air throttle plate shaft 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. The test could not be conducted in
neutral or park as ECS would allow only minimal throttle plate movement with application of force to accelerator pedal.

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 APS return springs in the accelerator pedal assembly independently disconnected and disconnection of the throttle body return spring #3. 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. It is noted that two of the six TPS connector pins controlled the throttle plate motor.

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.

It is noted that disconnection of the TPS connector and shorting and severance of wires within the connector for one throttle body resulted in identical throttle plate responses in both throttle bodies. This occurred regardless of which TPS was faulted, thus the data provided is for one faulted throttle body TPS. This identical response of both throttle plates was also observed for faults to the APS. Data plots record this as a data trace overlay.

This testing was performed at mid ambient temperature of 10º C to 46º 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.
VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 INFINITI G37 PASSENGER CAR
VEHICLE NHTSA NO.: CA5204
VEHICLE VIN: JN1CV6AR7AM454290
DATE OF TEST: APRIL 6-8, 2010
TEST LAB: GENERAL TESTING LABORATORIES
VEHICLE ENGINE TYPE: GAS
GVWR: 2198 KG
VEHICLE ENGINE SIZE: 3.7 L V6
VEHICLE ACCEL. CONTROL SYSTEM (ACS) (Air or Fuel Throttled): AIR
MAX. BHP ENGINE SPEED: 328 HP
MFR. IDLE RPM: 1000 RPM
FUEL METERING DEVICE (Carburetor, fuel injection, etc): FUEL INJECTION

REMARKS:

RECORDED BY: G. FARRAND       DATE: 04/06/10
APPROVED BY: D. MESSICK
DATA SHEET 2
NORMAL OPERATION TEST
(fully operational system)

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 INFINITI G37 PASSENGER CAR
VEHICLE NHTSA NO.: CA5204
DATE OF TEST: APRIL 6, 2010

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

SYSTEM CONDITION: COMPLETE (no modifications) Normal Operation

| GTL # | ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT) | THROTTLE POSITION SENSOR READING | RPM | TEMPERATURE (°C) | ENGINE COOLANT | AMBIENT | THROTTLE POSITION SENSOR READING @ IDLE (BASELINE) | RETURN TIME TO IDLE (Msec) | PASS/FAIL | |
|------|-----------------------------------------------|---------------------------------|-----|-----------------|----------------|---------|--------------------------------------------------|---------------------------|----------|
| 6359 | 100%                                          | 95% 94%                         | 1000| 200             | 87             | 1%      | 1%                                               | 600                       | P        |
| 6360 | 75%                                           | 70% 70%                         | 1000| 200             | 87             | 1%      | 1%                                               | 320                       | P        |
| 6361 | 50%                                           | 56% 56%                         | 1000| 200             | 87             | 1%      | 1%                                               | 270                       | P        |
| 6362 | 25%                                           | 24% 25%                         | 1000| 200             | 87             | 1%      | 1%                                               | 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: Engine has two (2) throttle bodies as indicated by #1 and #2 in the above chart. Normal idle baseline is 1-2%.

RECORDED BY: G. FARRAND DATE: 04/06/10
APPROVED BY: D. MESSICK
FAIL-SAFE OPERATION
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE:  2010 INFINITI G37 PASSENGER CAR
VEHICLE NHTSA NO.:           CA5204
DATE OF TEST:                  APRIL 8, 2010

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

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

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (ºC)</th>
<th>ENGINE COOLANT</th>
<th>AMBIENT</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
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<tbody>
<tr>
<td>6363</td>
<td>100%</td>
<td>95% 95%</td>
<td>1000</td>
<td>200</td>
<td>86</td>
<td>1% 1%</td>
<td>#1 #2</td>
<td>260 P</td>
<td></td>
</tr>
<tr>
<td>6364</td>
<td>75%</td>
<td>70% 69%</td>
<td>1000</td>
<td>200</td>
<td>86</td>
<td>1% 1%</td>
<td>#1 #2</td>
<td>280 P</td>
<td></td>
</tr>
<tr>
<td>6365</td>
<td>50%</td>
<td>57% 57%</td>
<td>1000</td>
<td>200</td>
<td>86</td>
<td>1% 1%</td>
<td>#1 #2</td>
<td>250 P</td>
<td></td>
</tr>
<tr>
<td>6366</td>
<td>25%</td>
<td>22% 21%</td>
<td>1000</td>
<td>204</td>
<td>86</td>
<td>1% 1%</td>
<td>#1 #2</td>
<td>190 P</td>
<td></td>
</tr>
</tbody>
</table>

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 -18º C or less

PASS X       FAIL

REMARKS: Normal Idle Baseline is 1-2%

RECORDED BY: G. FARRAND  DATE: 04/08/10
APPROVED BY: D. MESSICK

7
FAIL-SAFE OPERATION
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 INFINITI G37 PASSENGER CAR
VEHICLE NHTSA NO.: CA5204
DATE OF TEST: APRIL 8, 2010

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

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

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN (WOT)</th>
<th>RPM</th>
<th>TEMPERATURE (ºC)</th>
<th>RETURN TIME REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENGINE COOLANT</td>
<td>AMBIENT</td>
<td>THROTTLE POSITION</td>
<td>RETIME TO IDLE (Msec)</td>
</tr>
<tr>
<td></td>
<td>#1</td>
<td>#2</td>
<td>READING</td>
<td>@ IDLE (BASELINE)</td>
</tr>
<tr>
<td>6367</td>
<td>100%</td>
<td>96%</td>
<td>96%</td>
<td>1000</td>
</tr>
<tr>
<td>6368</td>
<td>75%</td>
<td>80%</td>
<td>80%</td>
<td>1000</td>
</tr>
<tr>
<td>6369</td>
<td>50%</td>
<td>48%</td>
<td>48%</td>
<td>1000</td>
</tr>
<tr>
<td>6370</td>
<td>25%</td>
<td>21%</td>
<td>21%</td>
<td>1000</td>
</tr>
</tbody>
</table>

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 -18º C or less

PASS _____ X_____  FAIL ____________

REMARKS: Normal Idle Baseline is 1-2%

RECORDED BY: G. FARRAND DATE: 04/08/10
APPROVED BY: D. MESSICK
FAIL-SAFE OPERATION
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 INFINITI G37 PASSENGER CAR
VEHICLE NHTSA NO.: CA5204
DATE OF TEST: APRIL 8, 2010

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

SYSTEM CONDITION: #3 SPRING DISCONNECTED IN THROTTLE BODY

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (ºC)</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

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 -18º C or less

PASS X FAIL

REMARKS: During engine start-up sequence the ECS can sense the spring fault and will only let the engine idle at 1000 RPM and will not allow throttle pedal control of the engine.

RECORDED BY: G. FARRAND DATE: 04/08/10
APPROVED BY: D. MESSICK
DATA SHEET 4
FAIL-SAFE OPERATION
DISCONNECTION

VEHICLE MY/MAKE/MODEL/BODY STYLE: 2010 INFINITI G37 PASSENGER CAR

VEHICLE NHTSA NO.: CA5204
DATE OF TEST: APRIL 8, 2010

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

SYSTEM CONDITION: SEVERANCE OF APS CONNECTOR

<table>
<thead>
<tr>
<th>GTL #</th>
<th>ACCELERATOR POSITION % WIDE OPEN THROTTLE (WOT)</th>
<th>THROTTLE POSITION SENSOR READING</th>
<th>RPM</th>
<th>TEMPERATURE (ºC)</th>
<th>THROTTLE POSITION SENSOR READING @ IDLE (BASELINE)</th>
<th>RETURN TIME TO IDLE (Msec)</th>
<th>PASS/FAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>6371</td>
<td>100%</td>
<td>#1 96% #2 96%</td>
<td>0</td>
<td>198</td>
<td>#1 1% #2 1%</td>
<td>210</td>
<td>P*</td>
</tr>
</tbody>
</table>

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 -18º C or less

PASS _____ X _____  FAIL _____________

REMARKS: *Engine stopped running when connector was removed. Normal idle baseline is 1-2%.
**DATA SHEET 5**
**FMVSS 124**

**VEHICLE MY/MAKE/MODEL/BODY STYLE:** 2010 INFINITI G37 PASSENGER CAR

**VEHICLE NHTSA NO.:** CA5204

**DATE OF TEST:** APRIL 8, 2010

<table>
<thead>
<tr>
<th>GTL #</th>
<th>CONNECTOR</th>
<th>WIRE/PIN DESCRIPTION</th>
<th>FAULT CONDITION</th>
<th>ENGINE TEMP. ºC</th>
<th>% THROTTLE/RETURN TIME (MS)</th>
<th>PASS/FAIL/NOTES</th>
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</thead>
<tbody>
<tr>
<td>6372</td>
<td>APS</td>
<td>#1/Red</td>
<td>OPEN</td>
<td>198</td>
<td>100/820</td>
<td>P</td>
</tr>
<tr>
<td>6373</td>
<td>APS</td>
<td>#2/White</td>
<td>OPEN</td>
<td>198</td>
<td>100/660</td>
<td>P</td>
</tr>
<tr>
<td>6374</td>
<td>APS</td>
<td>#3/Blue</td>
<td>OPEN</td>
<td>200</td>
<td>100/720</td>
<td>P</td>
</tr>
<tr>
<td>6375</td>
<td>APS</td>
<td>#4/Grey</td>
<td>OPEN</td>
<td>200</td>
<td>100/630</td>
<td>P</td>
</tr>
<tr>
<td>6376</td>
<td>APS</td>
<td>#5/Pink</td>
<td>OPEN</td>
<td>202</td>
<td>100/680</td>
<td>P</td>
</tr>
<tr>
<td>6377</td>
<td>APS</td>
<td>#6/Purple</td>
<td>OPEN</td>
<td>202</td>
<td>100/780</td>
<td>P</td>
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<tr>
<td>6378</td>
<td>APS</td>
<td>#1/Red</td>
<td>SHORT</td>
<td>201</td>
<td>100/670</td>
<td>P</td>
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<tr>
<td>6379</td>
<td>APS</td>
<td>#2/White</td>
<td>SHORT</td>
<td>198</td>
<td>100/610</td>
<td>P</td>
</tr>
<tr>
<td>6380</td>
<td>APS</td>
<td>#3/Blue</td>
<td>SHORT</td>
<td>200</td>
<td>100/0*</td>
<td>P</td>
</tr>
<tr>
<td>6381</td>
<td>APS</td>
<td>#4/Grey</td>
<td>SHORT</td>
<td>202</td>
<td>100/580*</td>
<td>P</td>
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<tr>
<td>6382</td>
<td>APS</td>
<td>#5/Pink</td>
<td>SHORT</td>
<td>201</td>
<td>100/640</td>
<td>P</td>
</tr>
<tr>
<td>6383</td>
<td>APS</td>
<td>#6/Purple</td>
<td>SHORT</td>
<td>201</td>
<td>100/690</td>
<td>P</td>
</tr>
<tr>
<td>6384</td>
<td>TPS</td>
<td>#1/Red</td>
<td>OPEN</td>
<td>198</td>
<td>100/200</td>
<td>P</td>
</tr>
<tr>
<td>6385</td>
<td>TPS</td>
<td>#2/Black</td>
<td>OPEN</td>
<td>199</td>
<td>100/250</td>
<td>P</td>
</tr>
<tr>
<td>6386</td>
<td>TPS</td>
<td>#3/White</td>
<td>OPEN</td>
<td>199</td>
<td>100/200**</td>
<td>P</td>
</tr>
<tr>
<td>6387</td>
<td>TPS</td>
<td>#4/Grey</td>
<td>OPEN</td>
<td>199</td>
<td>100/630</td>
<td>P</td>
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<tr>
<td>6388</td>
<td>TPS</td>
<td>#5/Purple</td>
<td>OPEN</td>
<td>201</td>
<td>100/370</td>
<td>P</td>
</tr>
<tr>
<td>6389</td>
<td>TPS</td>
<td>#6/Green</td>
<td>OPEN</td>
<td>200</td>
<td>100/360</td>
<td>P</td>
</tr>
<tr>
<td>6390</td>
<td>TPS</td>
<td>#1/Red</td>
<td>SHORT</td>
<td>204</td>
<td>100/420</td>
<td>P</td>
</tr>
<tr>
<td>6391</td>
<td>TPS</td>
<td>#2/Black</td>
<td>SHORT</td>
<td>201</td>
<td>100/790</td>
<td>P</td>
</tr>
<tr>
<td>6392</td>
<td>TPS</td>
<td>#3/White</td>
<td>SHORT</td>
<td>201</td>
<td>100/370</td>
<td>P</td>
</tr>
<tr>
<td>6393</td>
<td>TPS</td>
<td>#4/Grey</td>
<td>SHORT</td>
<td>199</td>
<td>100/230</td>
<td>P</td>
</tr>
<tr>
<td>6394</td>
<td>TPS</td>
<td>#5/Purple</td>
<td>SHORT</td>
<td>201</td>
<td>100/480</td>
<td>P</td>
</tr>
<tr>
<td>6395</td>
<td>TPS</td>
<td>#6/Green</td>
<td>SHORT</td>
<td>200</td>
<td>100/20*</td>
<td>P</td>
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<tr>
<td>6396</td>
<td>TPS</td>
<td>Connector Pins 1-6</td>
<td>Disconnect</td>
<td>200</td>
<td>100/160</td>
<td>P</td>
</tr>
</tbody>
</table>

*Engine stopped running when fault was induced.
**Engine went to 1000 RPM but had no throttle control.

**REMARKS:** Inducing faults and disconnecting wiring to throttle body #2 gave the same results as throttle body #1.

**RECORDED BY:** G. FARRAND  DATE: 04/10/10

**APPROVED BY:** D. MESSICK
## SECTION 4
TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th>DESCRIPTION</th>
<th>MODEL/ SERIAL NO.</th>
<th>CAL. DATE</th>
<th>NEXT CAL. DATE</th>
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<tbody>
<tr>
<td>THERMOCOUPLES</td>
<td>OMEGA</td>
<td>43P136P</td>
<td>08/09</td>
<td>08/10</td>
</tr>
<tr>
<td>ENGINE RECORDING</td>
<td>GTL COMPUTER</td>
<td>CPU1</td>
<td>BEFORE USE</td>
<td>BEFORE USE</td>
</tr>
<tr>
<td>TACHOMETER</td>
<td>MONARCH</td>
<td>1444664</td>
<td>05/09</td>
<td>05/10</td>
</tr>
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SECTION 5
PHOTOGRAPHS
FIGURE 5.1
FRONT VIEW OF VEHICLE
2010 INFINITI G37
NHTSA NO. CA5204
FMVSS NO. 124

FIGURE 5.2
LEFT SIDE VIEW OF VEHICLE
2010 INFINITI G37
NHTSA NO. CA5204
FMVSS NO. 124

FIGURE 5.3
RIGHT SIDE VIEW OF VEHICLE
MANUFACTURED BY NISSAN MOTOR CO., LTD.

DATE: 12/09  GVWR/PNBV: 4846 LBS.
GAWR/PNBE FR: 2423 LBS. RR: 2482 LBS.
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL
MOTOR VEHICLE SAFETY, BUMPER, AND THEFT PREVENTION
STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE
SHOWN ABOVE.

VIN: JN1CV6AR7AM454290  PASSENGER CAR

COLOR  TRIM  TRANS  AXLE  ENGINE
QAA  K  RE7R01A  RC33  VQ37(VHR)  3696CC
The combined weight of occupants and cargo should never exceed 408 kg or 900 lbs.

Le poids total des occupants et du chargement ne doit jamais dépasser 408 kg ou 900 lb.
FIGURE 5.8
SPRINGS INSIDE THROTTLE BODY
2010 INFINITI G37
NHTSA NO. CA5204
FMVSS NO. 124

FIGURE 5.10
ACCELERATOR PEDAL SENSOR WITH SPRINGS 1 & 2
FIGURE 5.11
THROTTLE POSITION SENSOR WITH SPRINGS 3 & 4
2010 INFINITI G37
NHTSA NO. CA5204
FMVSS NO. 124

FIGURE 5.12
THROTTLE POSITION SENSOR WITH SPRINGS 3 & 4
FIGURE 5.14
TEST WIRING HOOK-UP TO ACCELERATOR PEDAL SENSOR
SECTION 6
PLOTS
GTL 6362

124, 25%, Normal Condition.

% Throttle & Foot Release.

Time in Seconds
GTL 6363, NHTSA CA5204, FMVSS124.

APS Spring 1 Removed, 100% Throttle.
GTL 6364, NHTSA CA5204, FMVSS 124.

75% Throttle, APS Spring 1 Removed.
GTL 6365, NHTSA CA5204, FMVSS 124.

50% Throttle, APS Spring 1 Removed.
GTL 6366, NHTSA CA5204, FMVSS 124.

25% Throttle, APS Spring 1 Removed.
GTL 6367, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Spring 2 Removed.
GTL 6368, NHTSA CA5204, FMVSS 124.

75% Throttle, APS Spring 2 Removed.
GTL 6369, NHTSA CA5204, FMVSS 124.

50% Throttle, APS Spring 2 Removed.
GTL 6370, NHTSA CA5204, FMVSS 124.

25% Throttle, APS Spring 2 Removed.
GTL 6371, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Connector Disconnect

% Throttle & Foot Release.
CTL 6373, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 2 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6374, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 3 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6375, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 4 Open.
GTL 6377, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 6 Open.
GTL 6378, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 1 Shorted.

% Throttle & Foot Release

Time in Seconds

0 10 20 30 40 50 60 70 80 90 100

-0.1 0.1 0.3 0.5 0.7 0.9
GTL 6379, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 2 Shorted.
GTL 6380, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 3 Shorted.
GTL 6381, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 4 Shorted.
GTL 6382, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 5 Shorted.
GTL 6383, NHTSA CA5204, FMVSS 124.

100% Throttle, APS Wire 6 Shorted.
GTL 6385, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 2 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6386, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 3 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6387, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 4 Open.
GTL 6388, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 5 Open.

% Throttle & Foot Release.

Time in Seconds
GTL 6389, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 6 Open.
GTL 6390, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 1 Shorted.

% Throttle & Foot Release.

Time in Seconds
GTL 6391, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 2 Shorted.

% Throttle & Foot Release.
GTL 6392, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 3 Shorted.
GTL 6393, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 4 Shorted.
GTL 6394, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 5 Shorted.
GTL 6395, NHTSA CA5204, FMVSS 124.

100% Throttle, TPS Wire 6 Shorted.