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**REPORT OF DR A F ANDERSON  
INDEPENDENT ELECTRICAL ENGINEERING CONSULTANT  
DATED 9th May 2012**

**[Revised June 27<sup>th</sup> 2012 to include: Case Outcome p 2, & specific references to Belt's Sudden Acceleration Hypothesis on p 49 and in Appendix 5]**

**Specialist Field : Electrical Engineering**

**On Behalf of : Mrs Bronwen Laurenson DEFENDANT**

**Instructed by : Mrs Bronwen Laurenson  
Box 57, OTAKI 5542, New Zealand**

**Subject Matter : Sudden Acceleration/Surge Incident Brandon Street,  
Wellington NZ Friday 20<sup>th</sup> January 2012**

## **CASE OUTCOME**

At a Court Status Hearing on 14<sup>th</sup> June 2012 the police reported that they wished to proceed with the prosecution but wished to have the case adjourned to allow their expert more time to review this report. Mrs Laurenson for her part had a long-standing arrangement to travel to England in July 2012 for an extended visit. However, the police would not agree to an adjournment for the 6 months that Mrs Laurenson would be away. After questions from the judge and explanations about Sudden Unintended Acceleration etc. from Mrs Laurenson's lawyer, the Judge decided to exercise his discretion. He would settle the case there and then and discharge Mrs Laurenson without conviction and with no court costs, or other penalty, provided she would plead guilty to the lower charge of careless driving and make a payment of \$1000 reparation to the insured party. Mrs Laurenson agreed to accept the Judge's offer and has been discharged without conviction, without court costs or other penalty. Most importantly she retains her driving licence which, had she lost it, would have made it impossible to carry on her job which requires extensive travel around North Island.

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## SUMMARY

On Friday, 20 January 2012 at about 2:15 PM the DEFENDANT was driving her 2007 Mitsubishi Outlander along Brandon Street, Wellington NZ looking for a disabled parking bay so that she could settle her 92-year-old mother into a wheelchair and take her shopping. Finding an angled disabled parking bay free, she turned into it and was in the last stages of bringing the car to a halt when it suddenly accelerated, mounted the pavement and crashed into the entrance of the Bayleys building, carrying a passing pedestrian with it. The pedestrian was pushed through a display window of the Kircaldie and Stains Department Store but was not badly injured. The defendant and her passenger were uninjured. The vehicle came to a halt jammed between the angled window of the Department store on its left hand side and on its right hand side against a pillar. As a result of the impact, an extensive segment of the left-hand front disc brake rotor, approximating to the span of the brake callipers, was broken off. It is presumed that as a result of the damage to the brake rotor the left wheel could no longer rotate. On the right-hand side of the vehicle the front right-hand wheel appears to have been spinning against the surface of the pillar for some time. This correlates with a witness statement that the engine continued to roar for several seconds after impact.

The police report on this incident states the following:

**WHAT HAPPENED** "...LAURENSEN approached the park and mistakenly pressed the accelerator instead of the brake (or both at once). She accelerated forwards and mounted the footpath.....LAURENSEN'S vehicle became wedged against a pillar as her tyres continued to spin for a few seconds until she released the accelerator."

**WHY CRASH HAPPENED** "LAURENSEN put her foot on the wrong pedal Slow reflexes. Not able to react when initially lurched forward. LAURENSEN panicked."<sup>1</sup>

The DEFENDANT maintains a contrary opinion that she had her foot on the brake and that nevertheless the vehicle accelerated in spite of her best efforts to restrain it and bring it to a halt. The deciding question is: was the DEFENDANT'S right foot on the brake during the sudden acceleration incident, as she maintains, or was it on the accelerator pedal, as the police report claims. Police photographs show that the front left hand brake disc rotor had fractured during the incident and a large segment had become detached. In my opinion the fractured brake rotor provides the crucial evidence that allows the deciding question to be answered conclusively.

In my opinion the transfer of transverse impact forces from the front right wheel via the brake callipers and brake shoes imposed a twisting moment on the rotor that caused it to fracture. Those forces could only have been transferred if the hydraulic brake cylinders had been exerting high clamping forces on the disc and this could only have occurred if the DEFENDANT had been exerting a high braking force on the brake pedal. If the DEFENDANT had her foot firmly on the

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<sup>1</sup> The police report essentially maintains that the DEFENDANT was "startled" into emergency braking and mistakenly pressed the accelerator rather than the brake and that the sudden acceleration followed from this initial supposed error. The police report follows the basic hypothesis put forward in the 1989 NHTSA Report on Sudden Acceleration, that claims that drivers can be "startled" into slamming on the brakes and pressing the accelerator pedal by mistake. It is my understanding that the pedal error hypothesis requires something to "startle" the driver into totally atypical behaviour. I would point out that the police report nowhere states what it is that it believes "startled" the DEFENDANT out of her normal driving behaviour into a state, as it claims, of panic. Any potential cause for "startlement" appears to be notably absent from any of the witness statements and the police report. In my opinion, lack of an explicit cause for "startlement" weakens the argument in favour of the pedal error hypothesis considerably.

brake pedal then, as I believe I have shown conclusively in this report, she could not also have had her foot on the accelerator pedal. Therefore the sudden acceleration incident cannot have been induced by any action on the part of the DEFENDANT and must have been the result of a vehicle malfunction, namely an uncommanded movement of the electronic throttle to the wide open position.

In the report I discuss at length the various possible causes of electronic throttle malfunction and conclude that, more likely than not, the cause was a temporary deficiency in the electrical power supply system, resulting from an ageing battery and its failure to charge sufficiently.<sup>2</sup>

- I argue that this hypothetical battery charge depletion might have provided exactly the right conditions for the engine control system, combined with the alternator voltage control system, to call for the throttle to open in order to increase the engine speed and so increase the charging rate for the battery in the final stages of parking. How big any hypothetical engine surge might have been and whether it would have been sufficient to give a sudden acceleration of the magnitude experienced by the DEFENDANT'S vehicle is a matter of conjecture.
- Alternatively, with the battery in a partially charged condition, and the engine at near idle condition any sudden increase in load might have created a significant transient voltage drop sufficient to cause the engine ECU to go into a brownout condition and, when the voltage rose again the ECU could restart with incorrect system values stored in memory and a hypothetical engine surge could have taken place that in turn caused the sudden acceleration.

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<sup>2</sup> Similar intermittent failure modes would be likely to affect any vehicle with an electronic throttle and this could account for the fact that other vehicles built by other manufacturers have experienced sudden accelerations when moving slowly into parking spaces or stopping at traffic lights.

## **1.0 INTRODUCTION**

### **1.1 Formal details**

#### **1.1.1 The Author**

Dr A. F. Anderson CEng FIEE, Independent Electrical Engineering Consultant

#### **1.1.2 Speciality**

Electrical Engineering Failure Investigations

#### **1.1.3 Instructions:**

I received formal instructions from Mrs Bronwen Laurenson, Box 57, OTAKI 5542, New Zealand in a letter dated 25th March 2012, concerning her accident on Friday 20th January 2012, as follows:

“I confirm my request to you, as an independent electrical expert witness, (1) to look at the evidence that I provide concerning my sudden acceleration incident and (2) write a report outlining possible causes and (3) give your opinion and the supporting reasons for your opinion as to which of the causes is the most likely.”

### **1.2 Disclosure of Interest**

I have no actual or potential connection with any of the parties or witnesses involved in this incident that would give rise to a conflict of interest in the preparation of this report.

### **1.3 Qualifications**

I, Antony Faithfull Anderson of 26 Westfield Drive, Gosforth, Newcastle upon Tyne, NE3 4XY, United Kingdom am an independent electrical engineering consultant with an honours degree<sup>3</sup> and PhD in electrical engineering from the University of St Andrews, Queens College Dundee, Scotland. I am a professional chartered electrical engineer and a Fellow of the Institution of Electrical Engineers, recently incorporated as part of the Institution of Engineering Technology (IET). I am on the President of the Institution's list of independent electrical expert witnesses. I am a Fellow of the Institution of Diagnostic Engineers. I am a member of the UK Society of Expert Witnesses.

Since early 1997, I have been in practice as an independent electrical engineering consultant and expert witness specialising in electrical failure investigations, some examples of which are as listed in the attached Capability Statement as Appendix 1. In my present work, I draw upon many years previous practice as an electrical engineer, as outlined in my attached CV as Appendix 2.

- I am experienced in the design, testing and application of electrical machines and electronic control systems under steady state and transient conditions. I am aware of the importance of identifying early in the design stage potential failure modes and their effects and especially where novel technological aspects are introduced.

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<sup>3</sup> This course also included in the second and third years mechanical engineering subjects such as: Heat Engines, Hydraulics, Theory of Machines and Strength of Materials.

- I have managed an electromagnetic Research & Development Laboratory for a major electrical machines manufacturer that instrumented electrical machines with voltage, flux, temperature and current and other special purpose probes and where observations on transient electromagnetic behaviour and intermittent faults were carried out.
- I am aware of the state-of-the-art regarding industrial application of electronic motor control systems. I am also conversant with the generic problems arising in electrical/electronic systems because of noise, vibration, shock, corrosion, temperature, humidity, intermittent electrical contacts, fretting, electromagnetic interference (EMI) etc.
- I have been called upon as an expert witness in a number of cases involving electronic malfunctions in automobiles in the UK, elsewhere in Europe and in the USA.

## **2 BACKGROUND AND THE ISSUES TO BE ADDRESSED**

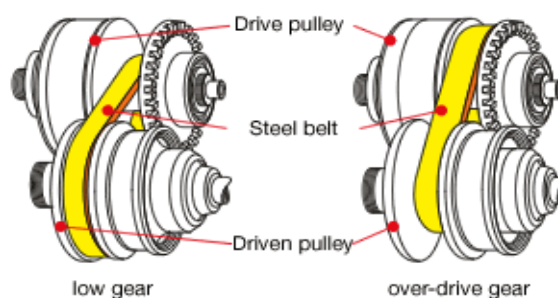
### **2.1 The Assumed Facts**

The car crash in question occurred in Brandon Street Wellington on Friday 20<sup>th</sup> January 2012 at approximately 2.15 pm.

I have been provided with the following information on which to base my opinions:

1. The Police Profile provided by Constable Laurence Vautier of the Strategic Traffic Unit Wellington Police
  - a. Traffic Crash Report + photographs
  - b. NZ Police Suspect Statement Bronwen Laurenson 31/01/2012
  - c. Formal Statement of Jennifer Ellis
  - d. Formal Statement of Abraham Hollingsworth
  - e. Medical Reports Ms Jennifer Jayne Ellis
  - f. Traffic Offence Notice T955441 issued by L J Vautier 18/02/2012
  - g. Photocopies of notebooks of Constable Andy Gilbert Wellington Police, Detective Constable Bryan Miller, Criminal Investigation Branch, Wellington Central Police Station, Constable Laurence Vautier, Strategic Traffic Unit, Wellington Central Police Station
2. Pages of typewritten notes provided by the DEFENDANT Mrs Bronwen Laurenson as follows:
  - a. Initial notes dated 21 March 2012.
  - b. Notes provided 2<sup>nd</sup> April 2012
  - c. Notes provided 5<sup>th</sup> April 2012
  - d. Notes provided 9<sup>th</sup> April 2012
3. Dealer Post Accident Assessment
4. Copy of letter from the Technical Services Manager (Lloyd Robinson) Mitsubishi Motors New Zealand Ltd to Constable Laurence Vautier, Strategic Traffic Unit, Wellington Police dated 16/04/2012

The crashed vehicle in question was a 2007 Model Year Mitsubishi Outlander 4 x 4 vehicle, right hand drive, licence plate DUE 287. The vehicle was equipped with a 4 cylinder gasoline engine, an electronic throttle and an INVECS-III CVT (Constant Velocity Transmission), 4 wheel disc brakes and ABS, with speed sensors on each wheel, Power Steering, Stability Control, Traction Control and Electronic Brake Force Distribution and Active Skid Control.



**Fig 1 Principle of the Mitsubishi INVECS-III CVT  
(Continuously Variable Transmission)**

I have not been able to study the workshop manual and wiring manual for the 4 cylinder version Outlander. I have however been able to obtain the on-line version All-Data manual for the 6 cylinder version. As far as I am aware, the electronic systems of the 4 and 6 cylinder versions are very similar, save only for the fact that the electronics for the 6 cylinder version controls an automatic gearbox and torque converter whereas for the 4 cylinder engine it controls a CVT. Communication between key electronic modules concerned with vehicle control in both models of vehicle is by means of a CAN Bus (Controller Area Network).<sup>4</sup>

I have established from various internet sources the following:

- Vehicle overall length 4.545 m<sup>5</sup>
- Curb idle speed 600 RPM +/- 100 RPM
- There is no separate idle speed control valve. The idle air control system software controls the idle speed via the electronic throttle.
- Dual sensors are used for the accelerator pedal and for throttle position measurement.<sup>6</sup>
- The electronic throttle control valve is driven by a DC motor controlled by the Engine Control Module. (I presume that an H Bridge pulse-width-modulated mode controller has been used.)<sup>7</sup>
- A vacuum brake booster with a vacuum reservoir and check valve is used. Vacuum is replenished from the engine inlet vacuum.<sup>8</sup>

I have not seen the vehicle maintenance records. The DEFENDANT informs me that a 60,000 kms service was carried out on 2 September 2011 plus a Warrant of Fitness and that the tyres were replaced on 22 Nov 2011. She has also informed me that, to the best of her knowledge, there have been no significant electrical or mechanical problems during her ownership and, in particular, no intermittent electrical problems. However, following my enquiry concerning the age of the battery, she reported on 9th April 2012 as follows:

“I have not replaced the battery since purchasing the car in August 2010. I think it was still the original. At that time my local mechanic, who examined the car before purchase observed that:

‘battery borderline on trial – recommend a new one’

<sup>4</sup> [http://en.wikipedia.org/wiki/CAN\\_bus](http://en.wikipedia.org/wiki/CAN_bus)

<sup>5</sup> [http://en.wikipedia.org/wiki/Mitsubishi\\_Outlander](http://en.wikipedia.org/wiki/Mitsubishi_Outlander)

<sup>6</sup> [www.AllData.com](http://www.AllData.com)

<sup>7</sup> [www.AllData.com](http://www.AllData.com)

<sup>8</sup> The practical implications of this are that in the event of a wide open throttle condition there will be no replenishment of vacuum and therefore should the driver pump the brakes for any reason vacuum assist will be lost within a couple of strokes and vacuum assist will temporarily be lost. The driver will then have to press the brake pedal approximately 5 times harder for the same effect.



The Mitsubishi garage selling the vehicle however carried out checks and reported that the battery was good and replacement was not necessary. The test docket has the following

Volts	13.04 v
Measured	414 CCA <sup>9</sup>
Rating	450 CCA <sup>10</sup>

And then an ascending histogram of 14 columns from 0 to OK with a vertical line showing between the 4<sup>th</sup> and the 5<sup>th</sup>.

I have found that<sic> the hard way that the battery flattens overnight if a door is left slightly open which continues to operate an inside light.”<sup>11</sup>

It is evident that battery was not in pristine condition when the DEFENDANT bought the car.<sup>12</sup> It saw a further 17 months use between the purchase of the vehicle and the sudden acceleration incident, during which time, in my opinion, it is likely that there would have been some further reduction in the capability to hold charge and some increase in the internal resistance as a result of the ageing process.

The Defendant has informed me in her note of April 2<sup>nd</sup> 2012 of the following:

“switched off engine inside car wash – air conditioning including fan on speed 2 was in operation when I switched off the engine, I did not turn them off separately and they would have started operating again when I switched the engine on. Radio was not on.”

It is clear that the Air Conditioning was on for all the time when the engine was running prior to the incident. This would represent a significant load on the electrical system that would be especially demanding at low engine RPM when the alternator would be least effective in re-charging the battery.

The DEFENDANT has also informed me that her mobile phone was plugged in to the car electrical system to charge and was switched on (but not in use) both before and at the time of the incident. I understand that a typical phone charger will deliver about 5V at 1 amp. This would not significantly load the electrical system, but could provide a significant source of EMI, (Electromagnetic Interference) possibly capable of upsetting, in some situations, other electronic systems within the vehicle. Some mobile phone manufacturers warn of this possibility in their manuals.

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<sup>9</sup> Cold cranking amperes (CCA) is the amount of current a battery can provide at 0 °F (–18 °C). The rating is defined as the current a lead-acid battery at that temperature can deliver for 30 seconds and maintain at least 1.2 volts per cell (7.2 volts for a 12-volt battery).

<sup>10</sup> The specified battery for this vehicle is a 55D23L Battery. A CCA rating of 450A seems to be a little on the low side for a battery that would normally be fitted for a vehicle of this cubic capacity. Somewhere between 500 CCA and 600 CCA would seem to be the norm for a recommended replacement 55D23L battery. For example:

<http://www.tayna.co.uk/55D23L-Numax-Car-Battery-P3889.html>

<sup>11</sup> If we assume a 5 watt bulb was left on overnight for 16 hours this would require approx. 7 Amp Hours of capacity from a 60 Amp Hour battery. With a battery in good condition the likelihood is that the engine should still start the engine the following morning.

<sup>12</sup> 5-6 years old at the time of the incident.

I understand from the DEFENDANT, that the vehicle was in front wheel drive at the time of the incident.

The DEFENDANT says in her note of April 2<sup>nd</sup> 2012 that she had not used this particular car wash before. Her usual practice was to use the one at Home Base in Otaki and then drive home afterwards, a distance of 3-4 kms, in other words a considerably longer journey than in this case.

In answer to my request for any information regarding potholes and jolts etc. that the car might have experienced shortly before the sudden acceleration incident the DEFENDANT informed me in her note of 2<sup>nd</sup> April 2012 as follows: "Have remembered there was a small but sharp speed hump which was unexpectedly just inside the garage forecourt. It was quite a jolt and my mother was a bit shaken." See Fig 2.

I have examined Google maps for the area in which the incident occurred and I have traced the route taken from the exit from the Car Wash at the junction of Featherstone Street and Whitmore Street to the location of the incident in Brandon Street. The vehicle would have left the car wash and turned sharply left into Featherstone Street (one way traffic approaching from the right) and then proceeded in a South-South-Westerly direction down Featherstone Street across Balance Street, Waring Taylor Street and Johnston Street and then taken a right turn of 90 degrees into Brandon Street. I understand from the Defendant that traffic on the day of the incident was light and that all the traffic lights encountered were set at green. (See Section 3.2 )

The total distance travelled between the car wash exit and the disabled parking outside Kircaldie & Stains where the sudden acceleration incident occurred appears to be approximately 420 metres.

I have not seen any accurate plan of the accident scene. I am assuming from my interpretation of the witness statements and of the Google images that I have been able to download that the entire sudden acceleration incident took place in about two car lengths, or about 9 m.

Edmunds.com report that on a test track under wide open throttle conditions a six cylinder Outlander reached a speed of 45 mph (20.1 m/sec) in 5.3 seconds and 0-60 mph in 8.2 seconds. Elsewhere I have been able to find the 0-60 mph figure for the V4 version as 10.1 seconds. I am therefore going to make the approximation that the V4 vehicle will accelerate to 45 mph in  $5.3 \times 10.1 / 8.2$  seconds = 6.53 seconds rather than 5.3 seconds. This corresponds to an average acceleration of 6.9 mph/sec or 3.1 m/sec<sup>2</sup>.

Working on the basis of the normal equation for linear motion:

$$s = ut + \frac{1}{2} at^2, \text{ where:}$$

$s$  = distance covered to impact in m  
 $u$  = initial velocity m/sec (approximated to zero),  
 $a$  = acceleration m/sec<sup>2</sup>  
 $t$  = time to impact sec,

Assuming  $a = 3.1 \text{ m/sec}^2$ , a distance  $s = 9 \text{ m}$ , this gives a time to impact of 2.4 secs. The speed at impact would be equal to  $a \cdot t = 7.5 \text{ m/sec}$  (27 kmh) that is about 16.7mph. An accident reconstructionist, having visited the scene and made measurements and assessed the crash damage, might well have come up with different results. It will be appreciated that the above figures should be treated with great deal of caution.

Dealer: McVerry Crawford Palmerston North

VIN: JMYXTCW5W7Z000273

Odometer: 70,911

Model Year: 2007

Model: CW5WXTXH2R1D

## + Post accident assessment of DUE287 19/04/2012

	OEM	Genuine Outlander mats		
	Aftermarket	NO		
	All-weather floor mats	NO		
<b>Floor Mats</b>	Multiple floor mats or double-stacked floor mats?	NO		
	Floor mat secured to the floor mat hook?	YES		
	Was floor mat interfering with the accelerator pedal?	NO		
<b>Vehicle condition</b>	Any driveability concerns? What type?	none reported		
	Check engine light on	NO		
	DTCs	None present		
	Does the engine idle up when turning on the A/C?	YES		
	Does the engine idle up when turning the steering wheel?	YES		
	Overall maintenance condition	Last service record 9/20 10		
	Throttle body dirty?	clean		APS Main 996mv-4492mv
	Condition of the accel pedal assembly	Good condition		APS sub 488mv-2246mv
	How is the voltage sweep of the APP & TPS -idle to WOT?	Within specs		TPS Main 723mv-4355mv
	If equipped, what is the condition of the throttle cable?	Not equipped		TPS main learned value 938mv
	Any abnormal conditions with the shift lever?	None present		TPS sub 4258mv-605mv
	Any abnormal conditions with the shift position indicator?	NO		
	Any abnormal conditions with the brake system? If yes, note condition.	NO		50kph brake test. Vehicle driven at 50kph. Throttle depressed to wide open position and concurrently brake pedal depressed hard with left foot. Vehicle was brought to a standstill.
<b>Aftermarket Accessories</b>	Remote engine start	none		
	Alarm	Not equipped		
	Cell phone and/or cell phone charger	Phone charger in accessory plug		
	Other			

[Original Document transcribed by AFA to fit A4 page 25 April 2012]

**Table 1 Dealer Post Accident Assessment of DUE 287 19/04/2012**

Table 1 above shows the Dealer Post Accident Assessment carried out on 19<sup>th</sup> April 2012.

The DEFENDANT: has provided me with the following information relating to the accelerator and brake pedals and shoes worn:

Width of brake pedal	11 cms
Width of accelerator pedal	3.5 cms
Horizontal distance between the two pedals	9 cms
Relative height of brake pedal above accelerator pedal	3.7cms
Width of shoe	8 cms tapering to 2cms at toe
Length of shoe	25.5 cms

## 2.2 The Issues to be Addressed

It is clear that this particular incident may be described as a sudden acceleration incident from at or near standstill, with a further sub-description as an incident which happened in the final stages of parking.

Two very different explanations for this particular sudden acceleration incident have been put forward: vehicle malfunction is claimed by the Defendant and driver error is claimed by the police. The police case is expressed in their report as follows:

WHAT HAPPENED "...LAURENSEN approached the park and mistakenly pressed the accelerator instead of the brake (or both at once). She accelerated forwards and mounted the footpath.....LAURENSEN'S vehicle became wedged against a pillar as her tyres continued to spin for a few seconds until she released the accelerator."

WHY CRASH HAPPENED "LAURENSEN put her foot on the wrong pedal Slow reflexes. Not able to react when initially lurched forward. LAURESEN PANICKED."

I will explore these two possibilities as fully as I can in this report. However I am working with very incomplete information and any opinions I reach might well have to be revised if more information should come to light.

## 3 INVESTIGATION AND ENQUIRIES

### 3.1 General

I note that the DEFENDANT has been driving for 50 years and has a clean licence with no driving restrictions. She states that she learnt to drive in London and has driven elsewhere in the UK, in Europe, Australia and all over New Zealand. I presume therefore that she has driven a wide variety of vehicles, both manual and automatic, under widely differing traffic and weather conditions. The DEFENDANT says that she drives between 500-800 km per week in her work all over lower North Island. She has owned the vehicle in question since August 2010 which could amount to her driving over 30,000 km in the vehicle since then. I think therefore that it is a reasonable working assumption that the DEFENDANT was familiar with the vehicle controls, in particular was familiar with the positions of the brake and accelerator pedals.

The DEFENDANT says in her statement that prior to the incident the brakes were working normally. Had they not been working normally this would probably have become apparent just after she left the car wash and was preparing to turn sharply into Featherstone Street.

In her statement, the DEFENDANT records that "the weather was fairly warm. It was fine, perfect conditions for driving." She also reports that the air conditioning was on (including fan on speed 2). The court should note that air conditioning represents a significant electrical load on the battery and alternator<sup>13</sup>. The DEFENDANT also told me in her note of 9<sup>th</sup> April 2012 that her

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<sup>13</sup> The power necessary to operate a vehicle air-conditioning compressor is significant . it can be greater than the engine power required to move a mid-sized vehicle at a constant speed of 56 km/h (35 mph). Source Farrington R and Rugh, J.: Impact of Vehicle Air-Conditioning on Fuel Economy, Tailpipe Emissions and Electric Vehicle Range *Earth Technologies Forum Washington, D.C..October 31, 2000.* <http://www.nrel.gov/docs/fy00osti/28960.pdf>

mobile phone was plugged into the vehicle's electrical system to allow it to charge and also that it was switched on (but not in use) before and during the incident.

The DEFENDANT specifically told me the incident was: "a unique and extraordinary set of circumstance for me." My reading of this is that in all her many years driving the DEFENDANT had never experienced anything even remotely similar.

### 3.2 Prior to the sudden acceleration incident

After lunch on Friday 20th of January 2012 The Defendant drove her elderly mother from her home in Otaki to Wellington, a distance of about 70 km and went first to the Z Garage at the corner of Featherstone Street and Whitmore Street to fill up with petrol. This was the first time that she had used this particular garage. The DEFENDANT has reported to me the following: "Have remembered there was a small but sharp speed hump which was unexpectedly just inside the garage forecourt. It was quite a jolt and my mother was a bit shaken."<sup>14</sup>



**Fig 2 Small speed humps at entrance to garage**

Fig 2 above shows the small speed humps inside the garage forecourt.

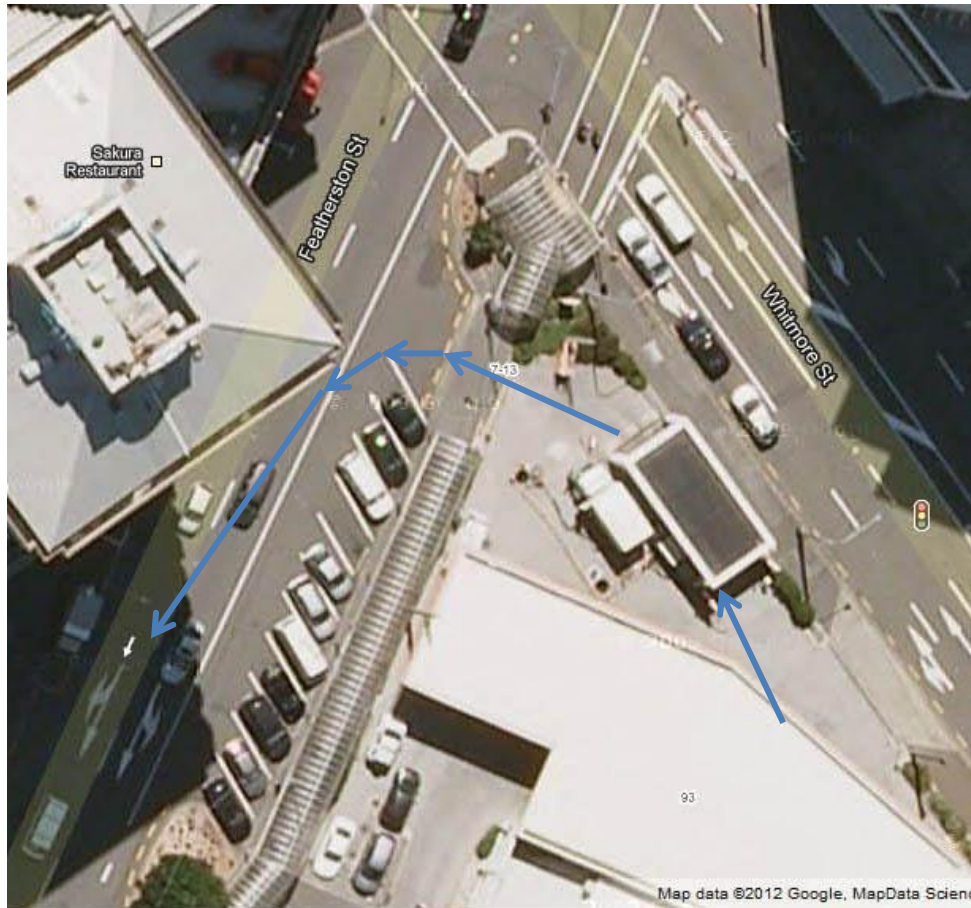
After filling up she then put the car through the car wash before proceeding the short distance to the disabled car park outside Kircaldie & Stains in Brandon Street.

My understanding is that the DEFENDANT switched off the engine for the first time while filling up with petrol and started it again after she had paid the bill. She then travelled tens of metres and manoeuvred her car so that it was ready to go into the car wash as soon as the car ahead had left the car wash. She switched the engine off for the second time while she waited and started it again when her turn came to move her car into the car wash. Once correctly positioned in the car wash she switched the engine off for the third time. When the car wash operation had been completed she started the engine again and drove out of the car wash and, after a distance of several tens of metres, did a 270° turn to the South-South-West into Featherstone Street.<sup>15</sup>

<sup>14</sup> Sometimes the shock from going over a bump or a wheel falling into a pothole can seriously disturb electrical contacts in the connectors between electronic systems and the wiring harness and battery connections. Sudden accelerations have been known to be triggered by such disturbances. For example NHTSA ODI Complaints 10316132, 10314982 for Toyota Prius vehicles.. In this instance there is no indication of any kind of change in vehicle behaviour after upon going over the bump.

<sup>15</sup> I infer that in a period of perhaps 20 minutes she stopped and started the engine three times. Each start would represent a heavy drain on the battery for several seconds. The power steering pump and the air conditioning would have represented additional significant discharge loads on the battery. Bearing in mind that the battery had been tested over a year before by the DEFENDANT'S mechanic and found "borderline on trial" and that he had





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**Fig 3 Route through the car wash and heading into Featherstone Street in a SSW direction**

The DEFENDANT'S statement says that she proceeded first across Balance Street, then across Waring Street, then across Johnston Street before coming to a halt at the traffic lights at Brandon Street. She says in her statement to the police - in response to the question "Tell me how you stopped for those lights?" – "I used my brakes. The brakes seemed fine. I didn't notice anything abnormal. I had been driving within the speed limit but I wasn't in any sort of a rush so I was quite relaxed."

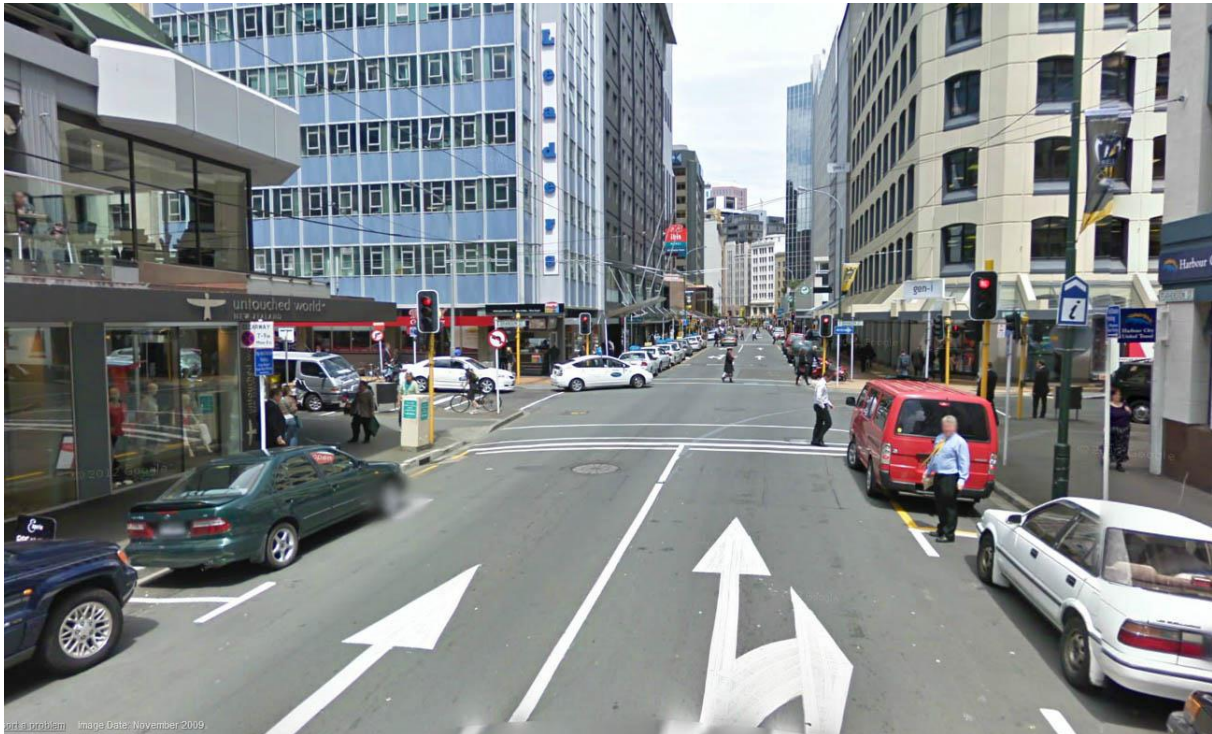
On questioning she has since told me the following:

1. Drove onto Featherstone St from car wash. Access straight out without having to really stop (as clear view, traffic very light, nothing coming) turned left along Featherstone St - a one way, 2 lane highway.
2. Drove along Featherstone St across 2 intersecting roads with traffic lights with clear views, virtually no other traffic (holiday period in Wellington) - lights green all the way to third intersection at Brandon St also with traffic lights which were green and where I turned right. This drive along Featherstone St was at a steady, even speed (40 - 50 kms per hour) as all lights were green and low traffic volume. (In my police statement I think I said that I stopped at the lights at Brandon St. However when I went over the route afterwards I remembered more clearly that there were no stops en route. )

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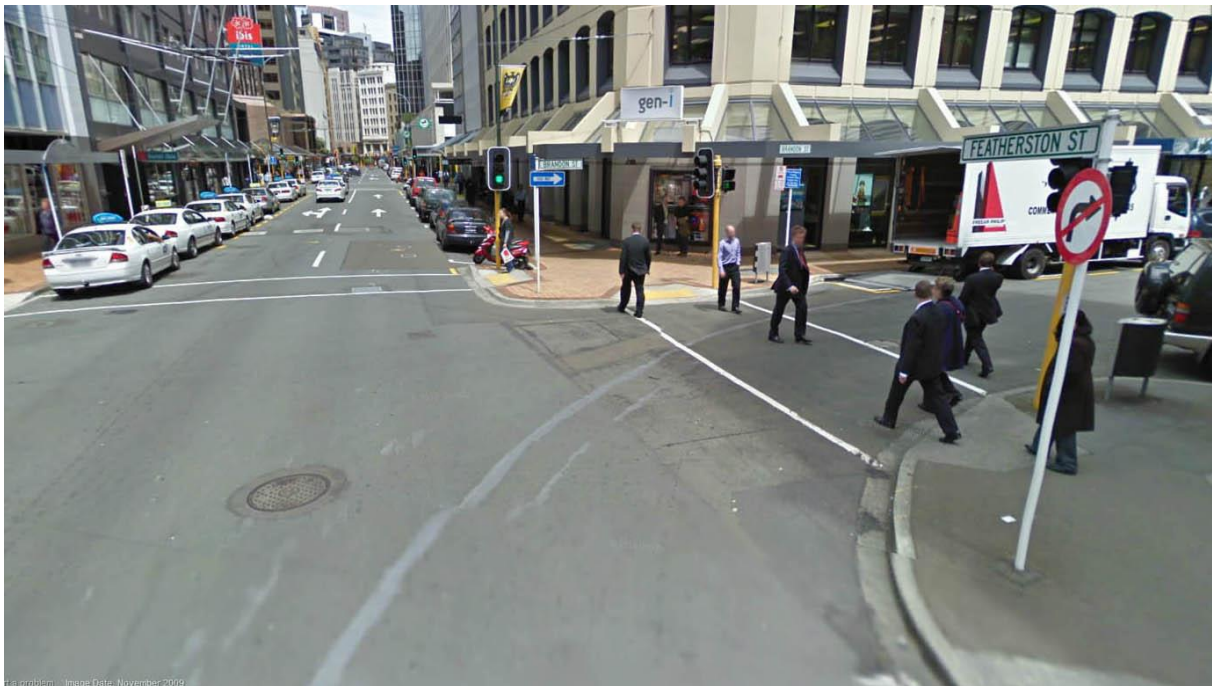
recommended a new one, the state of charge of the battery just before the sudden acceleration incident - after three starts in fairly quick succession, with no significant opportunity to recharge – is in my opinion questionable.

You correctly surmise that wheel turning was involved turning into Featherstone St, turning into Brandon St (plus mild braking) and turning into the angle park -. **I am pretty certain that I had to slow and to brake to turn into the park**



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**Fig 4 Approach to Brandon Street traffic lights**



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**Fig 5 The turn from Featherstone Street into Brandon Street**

I am going to assume that the DEFENDANT did not have to stop at the lights before turning into Brandon Street.





**Fig 6 Google view from half way down Brandon Street**

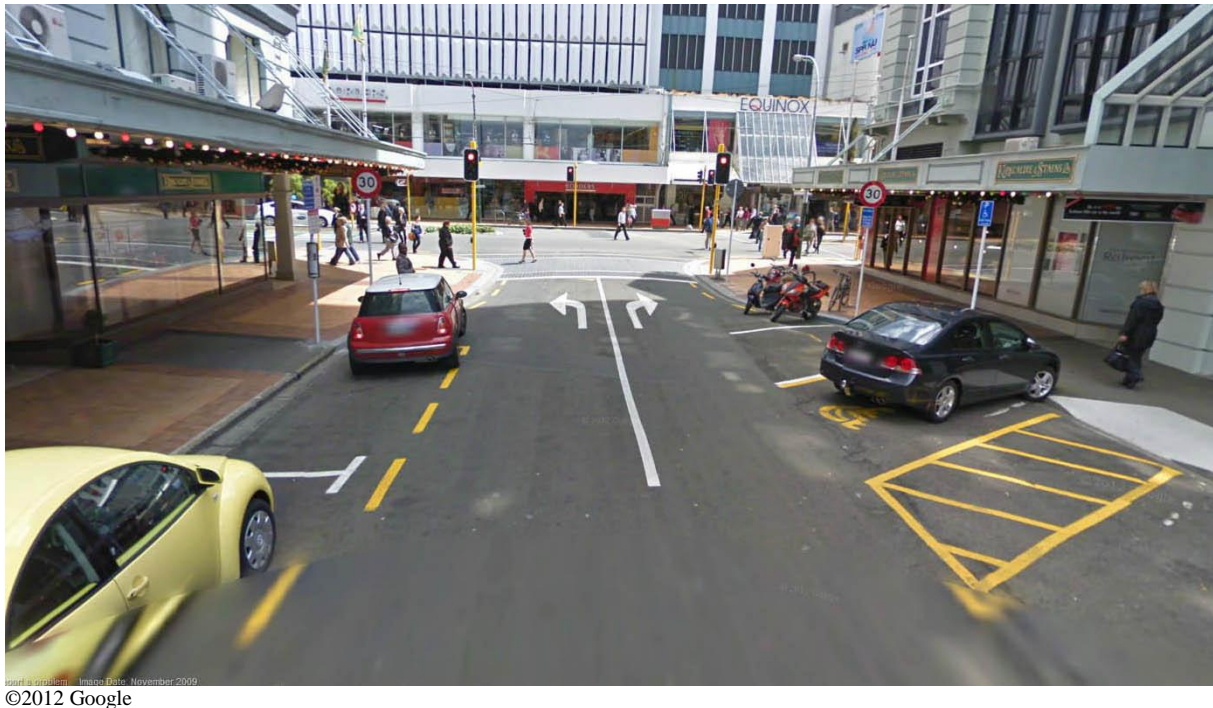
Fig 6 shows a slightly more elevated view down Brandon Street than would be seen by a driver. At this point the driver would probably not have been able to clearly see the disabled parking bays at the end of the street. Bearing in mind that Brandon Street is a one-way street, the Defendant would have had to go round the block again if she had missed the disabled parking bays. I have no reason therefore to suppose that the Defendant would have proceeded down the street in anything other than a fairly cautious manner.

Because the engine would still have been hot after the journey from Otagi, it is likely that when the engine idled it would have dropped back to the normal idle speed rather than the high idle as would have been the case had the engine been cold.

The DEFENDANT says in her statement: “As I drove along Brandon Street I could clearly see the disability car park as I approached it. There were other parked cars there but there weren't any obstructions blocking my view.” Figure 7 below shows that as a driver approaches the disability park it becomes fairly obvious whether the left-hand bay is free or, as here shown, is occupied.

It should also be noted that turning into the Bay appears to be an easier operation than for an ordinary bay because of the striped area to the right of the car that is always kept free. I am assuming that what these Google photographs show is that the street runs more or less level, with a slight camber to allow drainage from the centre to gutter drains.





**Fig 7 View of left-hand disabled parking bay near the end of Brandon Street.**

The total distance from the car wash to the disabled parking bay in Brandon Street is approximately 420 m. This is a distance which could be covered within 2-3 minutes by car moving at a normal permissible town traffic speed without hold-ups.

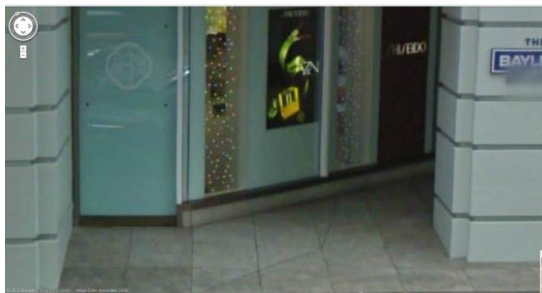
### **3.3 The sudden acceleration incident**

Figs 8a to 8e show the location of the sudden acceleration incident and also of the position of the vehicle after the incident. These Figures are followed by police photos Figs 9-16.



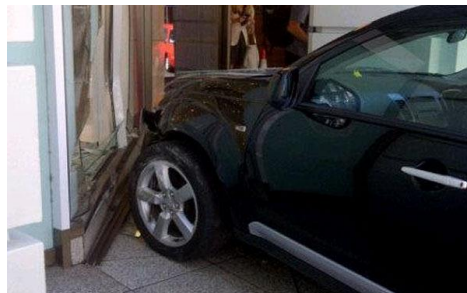
©2012 Google [Image date Nov 2009]

**Fig 8a Entrance to Bayleys Building (Google Earth)**



©2012 Google

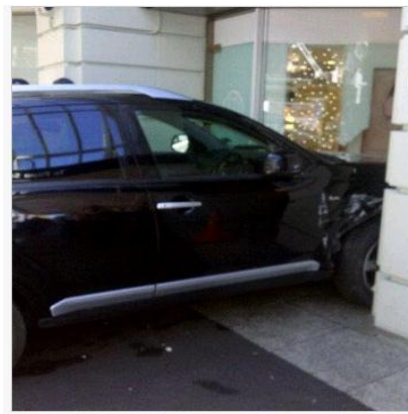
**Fig 8b Window & Pillar (Google Earth)**



**Fig 8c Damaged window (Press)**



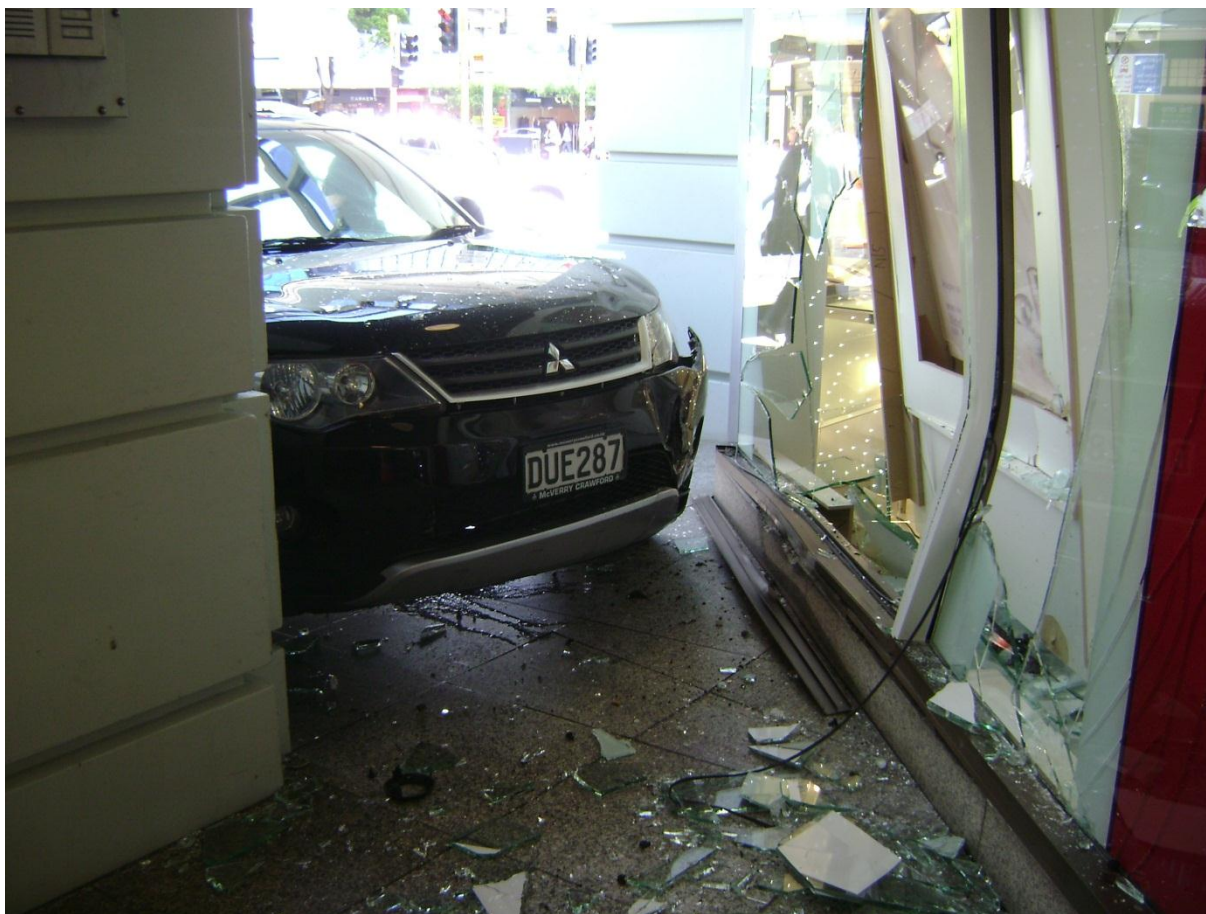
**Fig 8d Vehicle jammed against pillar (Press)**



**Fig 8e RH side of vehicle (Press)**

**Fig 8 a to d : Google photographs of location and press photographs of vehicle after sudden acceleration incident.**





(Police photograph DSC03784JPG)

**Fig 9 Front of vehicle after crash and broken window.**

It is clear that the vehicle must have initially impacted the glass beyond the this point. Presumably the vehicle was pushed back to release the injured pedestrian.



(Police photograph DSC03785PG)

**Fig 10 Nearside front wheel after crash.**

Note THE scuffing on both wheel and tyre and the large segment of fractured and dislodged brake disc. The wheel does not seem to have been permanently distorted by the crash. It is not known if the segment of brake disc was found in this position or was placed there for the photo





(Police photograph DSC03789.JPG)

**Fig 11 Nearside front wheel after crash.**

Note scuffing on both wheel and tyre and large chunk of fractured and dislodged brake disc.



(Police photograph DSC03783.JPG)

**Fig 12 Drivers side showing damage to front right wing and signs of rubbing on road surface and wall of tyre**





(Police photograph DSC03793JPG)

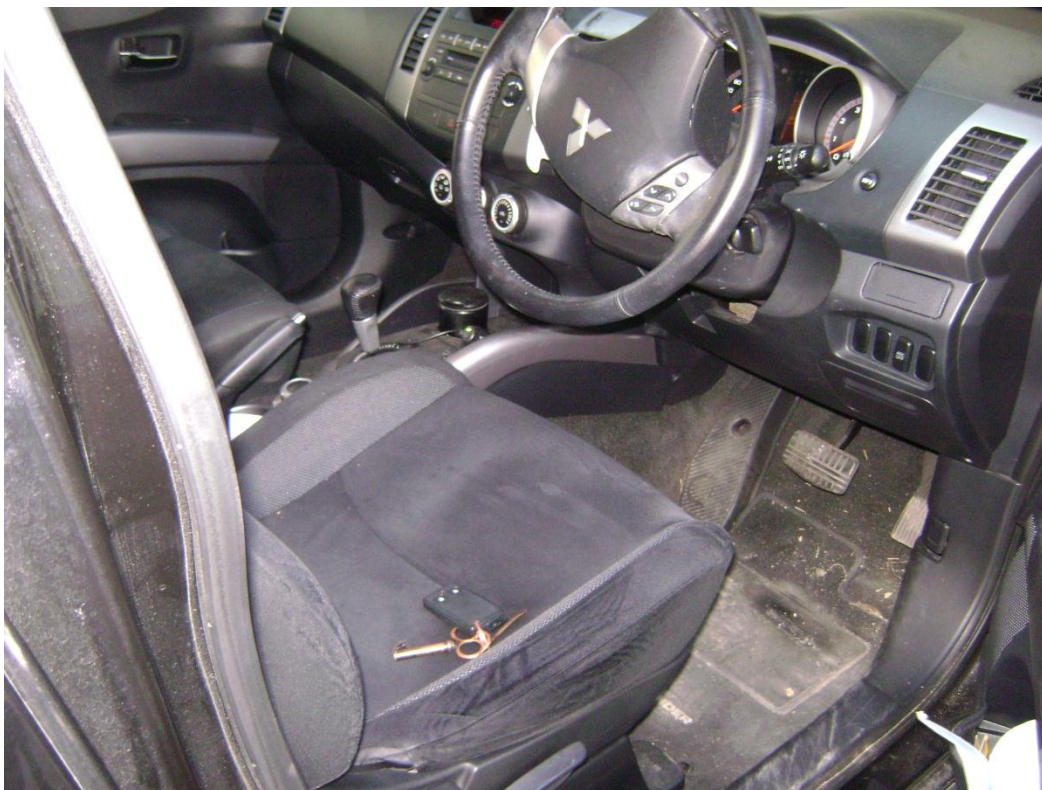
**Fig 13 Circular scuff marks on pillar that appear to have been caused by rotating RH front tyre.**

Note that the centre of rotation appears to have shifted over time. Red arrow shows presumed direction of rotation of RH front wheel and tyre.



(Police photograph)

**Fig 14 Front of vehicle after removal from crash scene showing that damage is mainly to the wings of the vehicle**



(Police photograph)

**Fig 15 Brake and accelerator pedal arrangement.**

The brake and accelerator pedals appear to be spaced well apart.





(Police photograph)

**Fig 16 Brake and Accelerator pedal arrangement. Most of the heel wear on the floor mat seems more or less in the middle of the mat. (Police photograph)**

Floormats appear to be Outlander mats and seem to be properly retained and are nowhere anywhere near the foot pedals.

I have read the witness statements of (1) the DEFENDANT who was driving the vehicle, (2) the injured pedestrian Ms Jennifer Jayne ELLIS and (3) the bystander Mr Abraham HOLLINGSWORTH. I am not aware of there being any other witness statements.

The DEFENDANT says in her police statement:

...I was looking for a disabled car park as my mother uses a wheelchair when we go on excursions in the city. As I drove along Brandon Street I saw a disability car park was vacant on the right hand side (driver's side) of the road. I know Brandon Street is a one way street so I turned into the car park. I was going quite slow as I approached the car park to turn into it. I was just about parked and the car seemed suddenly to shoot forwards. I realized I was going to hit the shop window, which I did."

There is no suggestion in the DEFENDANT'S statement that the vehicle was in any way behaving abnormally during its progress down Brandon Street. When it came to parking, the manoeuvre would appear to have been a simple one and seems to have been proceeding quite normally until the moment when the DEFENDANT "was just about parked and the car seemed suddenly to shoot forwards...". There is no suggestion in the Defendant's statement that there had been any prior lurching, or hesitation in the vehicle's behaviour.

One of the characteristics of the incident was that it appears to have come out of the blue when the driver was at the very last stages of bringing the vehicle to a halt. One of the main elements of the driver error hypothesis, as we will see later, is that it is claimed to be initiated by "driver startlement" – i.e. that there is some pre-cursor event that distracts or startles the driver into mistakenly pressing the accelerator rather than the brake. The DEFENDANT does not report any kind of precursor event, either within or outside the car, that could have distracted or startled her.<sup>16</sup> The DEFENDANT'S statement continues:

"Um, not bruised or hurt but I was aware of someone moving quickly out of the way as I came forwards over the footpath. It all happened very, very quickly maybe only a matter of a few seconds. **I nearly thought I had hit the accelerator or something but I looked down and saw my foot was on the brake.** And my thoughts were thank God we seem to be alright, were both alright, how on earth did that happen. I remember someone coming up to me and saying, "Turn off the engine because there's petrol on the ground", but I assured them it might be the air conditioning, or perhaps water from the car wash."  
<emphasis above added>

I note that it is the DEFENDANT who raises the possibility of having hit the accelerator pedal. The DEFENDANT'S statement continues with a question and answer session with the police cross checking what she had said to them up to that point:

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<sup>16</sup> I note also that neither of the two witnesses ELLIS or HOLLINGSWORTH report hearing or seeing anything that might have served as a distraction to the DEFENDANT when she was in the final stages of parking.

Q: "Taking you back to when you pulled into Brandon Street from Featherstone Street. Tell me about when you approached the disability car park."

A: "Well I was the first car to turn into Brandon Street from Featherstone Street. There wasn't any traffic immediately in front of me. As I drove along Brandon Street I could clearly see the disability car part as I approached it. There were other parked cars but there weren't any obstructions blocking my view."

Q: "You mentioned earlier that as you pulled into the car park the car shot forwards. Tell me about that."

A: "I mean it's as I said. I was in the car park in the right sort of position to park. It wasn't as if I went zooming in. I was going quite slowly into the car park. Then all of a sudden as I was almost in final parking position the car seemed to shoot forwards and went up the pavement. Then I remember thinking I was going to hit the window."

Q: "You mentioned you looked down and saw your foot on the brake pedal. Tell me about that."

A: "Well I think I had my foot on the brake. Then it seemed to go faster, it seemed to leap forwards. I naturally pushed down harder on the brake pedal to try to stop the vehicle but it seemed to go faster. It certainly didn't work. **Well after I hit the window I looked down and saw my foot was on the brake pedal because I was trying to think what had happened.**" <emphasis added>

The police do not appear to have followed up the DEFENDANT'S last answer with further questions regarding her claim to have checked and seen her foot on the brake pedal. They changed the subject:

Q: "Do you recall what gear you had the car in?"

A: "It is an automatic car and I had it in "D" for drive."

This failure to follow up with further questions should be noted because of the claims in the police report under WHY CRASH HAPPENED that "...LAURENSEN put her foot on the wrong pedal. Slow reflexes, not able to react when initially lurched forward. LAURENSEN panicked." What the police report fails to declare is the following:

- The basis for the claim that "LAURENSEN put her foot on the wrong pedal"
- The basis for the claim that the DEFENDANT had "slow reflexes"
- The basis for the claim that "LAURENSEN panicked."

The witness Jennifer Jayne ELLIS was walking down the footpath on Brandon Street and was walking by the disabled car park when:

"a car caught the corner of my eye, to my right. It was a big dark coloured<sup>17</sup> car and it caught my eye because it was pulling into one of the angled parks and was coming towards me."

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<sup>17</sup> I understand the car was black.

ELLIS continues:

“About the same time the car caught my eye I also heard the engine of the car rev a bit. I thought it was a bit strange the car was revving to get into a car park so I turned right round to look at the car....”

My reading of this statement is that although it was the movement of the car pulling into one of the car parks and coming towards her that caught the corner of her eye, it was the revving of the engine that caused her to turn right round to look at the car. ELLIS seems to have felt that there was something unusual about the noise of this particular car, for she continues:

“I almost thought I was walking past a concealed driveway garage. That's the impression I got from the way the car revved...”

ELLIS adds:

“It seemed like the driver was determined to drive forwards...”

She does not say what it was that made her think that the driver was “determined to drive forwards”.

ELLIS then indicates where she thought the car was when it started revving:

“The car was half pulled into the angled car park and it lurched forward as the engine revved”

Here ELLIS seems to be describing a sudden movement forward as the engine revved. My understanding of what she is saying is that the vehicle lurched, or suddenly moved forward as the engine revved. By implication, she appears to be suggesting that prior to that moment the vehicle appeared to be executing a normal parking manoeuvre such as she might have seen many times before.

She then describes her own actions:

“I instinctively turned my whole body towards the car and put my arms out, outstretched towards the car. Almost like I had both arms up trying to stop the car from hitting me.”

At this stage the car had not actually hit her. ELLIS continues:

“The next thing was that the car kept coming forward and that's when I remember hearing the car engine rev again. It was quite distinguishable to hear the engine. As the car hit the curb and revved it sort of lurched forwards at me again.”

It is not quite clear what she means here when she says she remembered hearing the car engine “rev again”. She might mean merely that although the noise may have been fairly constant she now became conscious of it again, or that as the vehicle got nearer to her she became more conscious of the noise because it was louder. Or possibly, that the engine noise had fallen off and had now increased again to a level that forced itself anew on her consciousness. Also it is not clear if what she heard was before the car hit the curb or as the car hit the curb. She may be describing a single revving noise or two separate revvings – one before hitting the curb and one on

hitting the curb. If the latter should prove to be the case, then it could possibly be indicative, but by no means necessarily, of a variable torque loading on the engine, possibly as a result of brake action.

It was only after the car had ridden the curb that it collided with ELLIS:

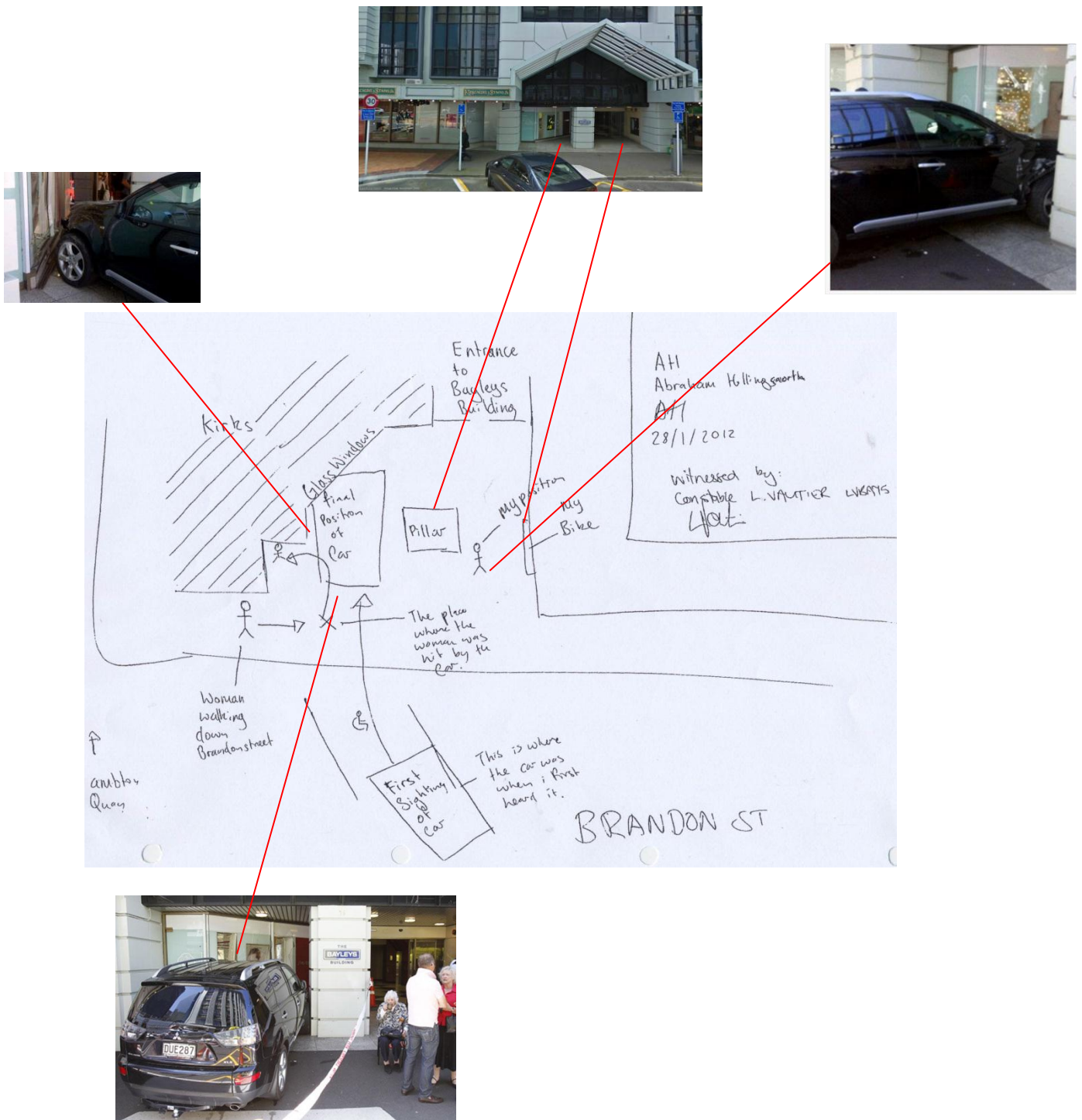
“The car came straight at me and the front bumper on the passenger side hit me. As the bumper hit me I crumpled around it and sort of wrapped around the bonnet of the car. My top half folded over onto the bonnet. My heels felt like they were dragging backwards. It was quite surreal as the car kept coming forwards and pushing me backwards.”

Ellis's description appears to have the following 10 phases:

- 1 she sees a parking car behaving normally in the corner of her eye, but this is of no particular interest;
- 2 she hears the unusual sound of a revving engine which draws her attention to the vehicle and causes her to turn round to look towards it;
- 3 she sees the “the car lurching forward as the engine revved” The implication is of a somewhat irregular forward motion;
- 4 she turns her whole body towards the car and puts out her arms out in self protection;
- 5 there is a period of time when the car continues forward towards the curb and she becomes conscious of the revving engine again;
- 6 the car hits the curb, the engine revs and the car lurches forwards again towards her;
- 7 the car hits her and drags her forward;
- 8 the car crushes her against the window;
- 9 she becomes unconscious for a while;
- 10 she regains consciousness.

The witness Abraham HOLLINGSWORTH was standing next to his bicycle, having just made a delivery to the Bayley's Building adjacent to Kircaldie & Stains. Fig 9 shows his sketch of the accident scene to which I have added various press photographs from Fig 8 to provide orientation. He was only a few metres from the driver's side of the vehicle at the time of impact, as shown in the sketch.





**Fig 17 HOLLINGSWORTH'S sketch with some of the press photographs from Fig 8 to provide orientation of the crash scene**

HOLLINGSWORTH says in his statement:

“While I was standing next to my bike I heard a car’s engine revving continually. This caught my attention so I immediately looked up. When I looked up I saw a large black SUV car which appeared to be pulling into the car park (disabled) next to where I was standing.

As well as hearing the vehicle's engine revving I watched as the SUV accelerated forwards, towards the footpath. There wasn't much distance between the SUV and the footpath but it definitely accelerated forwards. The car mounted footpath just my right, only a few metres away."

"..... The SUV continued forwards after hitting the pedestrian. It went on between a pillar and the wall to Kirkcaldy stains and crashed into a glass window. The window stopped the vehicle's movement but I could still clearly hear the car's engine was running for some 2-3 seconds after it impacted with the glass window."

I note that HOLLINGSWORTH talks of the engine "revving continually", and says that " the SUV accelerated forwards", whereas ELLIS talks in terms of hearing the engine "rev again" and of the vehicle "lurching". Although both were viewing from different viewpoints and used different words, it is clear that both are describing a sudden acceleration event that began when the vehicle was in the last stages of parking.

It is clear from the photographs, Figs 8(a) to (e), that the vehicle became wedged between the angled window on its left and a pillar on its right.

HOLLINGSWORTH claims to have heard the car's engine continuing to run for 2-3 seconds after impact, but he makes no mention of seeing the wheels spinning, as mentioned in the police report, possibly because the pillar obscured his view of the right hand front wheel. He ran round the back of the car to see if he could help ELLIS the injured pedestrian. Others rushed in to help. HOLLINGSWORTH stepped back to allow some space. After ELLIS had been carried to the footpath he went back to his bicycle. His witness statement says:

"The female that had been driving the SUV exited the car and the first thing I heard her say was "my brakes didn't work."

The police report says:

"LAURENSEN'S vehicle became wedged against a pillar as her tyres continued to spin for a few seconds until she released the accelerator."

In my opinion Figs 10-13 and in particular Fig 13 substantiate the police claim that the tyres continued to spin for a few seconds after impact. However, in my opinion they do not substantiate the claim in the second part of the sentence that the wheels continued to spin until the DEFENDANT "released the accelerator". The reasons for reaching this conclusion regarding the DEFENDANT are not declared in the police report. The DEFENDANT, on the other hand, maintains that after impact she looked down and saw that her foot was on the brake.

Figs 10 and 11 show quite clearly that a large sector of the cast iron brake rotor disc for the L.H. front wheel has fractured and has broken off. The wheel itself does not appear to have more than superficial damage and, from the photographs, would not appear to have greatly been damaged during the incident.



**From Fig 10: Broken off segment of LH front Disc Brake Rotor**

The broken off sector appears to have been balanced on the lower wheel rim between two spokes, presumably to enable the photograph to be taken. Were the broken segment to be presented to a metallurgist for examination, I am sure that they would be able to provide some useful information about where the cracks initiated and how they propagated.

I have searched the police report and have not found any mention of the broken disc brake rotor. I find this surprising.



## 4 DISCUSSION

### 4.1 General

In Section 3 I established that the vehicle had apparently been operating normally over the time that the DEFENDANT had owned it up until the incident, during which time she had driven the vehicle approximately 30,000 miles. The sudden acceleration incident appears to have occurred unexpectedly, without warning, just as the vehicle was in the final stages of a normal parking manoeuvre. I can find no hint of anything in any of the witness statements that might have distracted the DEFENDANT or startled her as she brought the vehicle into the parking space in Brandon Street.

The vehicle accelerated up over the curb, across the pavement and into the shop window of Kircaldie & Stains hitting and injuring a pedestrian en-route. It would appear that the front driver-side wheel may have continued to spin after the vehicle came to a stop for several seconds. The total distance over which the incident occurred, a rough estimate from photographs, would appear to have been about two car lengths (for the sake of argument, say about 9 m). The large segment of the left hand front disk brake fractured and broke off during the incident.

In order for the sudden acceleration to occur, the electronic throttle must have opened to a wide open, or near wide open position. There are two possible explanations: either a vehicle malfunction or a driver malfunction could have hypothetically caused the throttle to open, and this would have led to a sudden acceleration. In the case of this incident, evaluating the two alternative hypothetical explanations is made difficult because of the very limited facts available.

In my opinion there is a danger in an investigation of this kind of failing to be sufficiently agnostic at the outset and thereby running the risk of prematurely jumping to conclusions. It is helpful for discussion, I believe, to think in terms of three, rather than two, possible conclusions:

- (a) vehicle malfunction
- (b) a driver malfunction
- (c) Trouble Not Identified, or No Fault Found – i.e. insufficient evidence to pin the fault down either to (a) or (b).

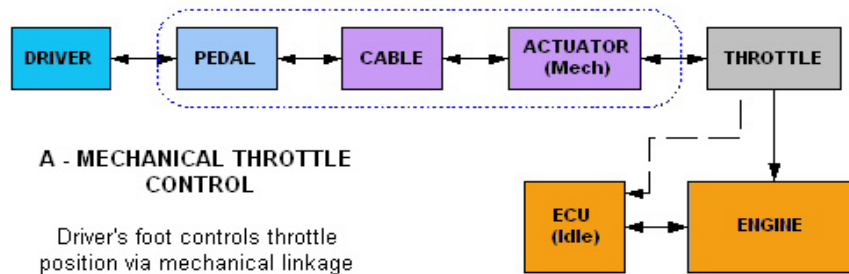
The temptation is to work on the basis of the seductive and fallacious argument that “absence of proof is proof of absence”. In this instance, there are two equally fallacious arguments that need to be recognised and avoided:

- “If there is **no proof of a vehicle malfunction** it must have been a **driver malfunction**”
- “If there is **no proof of a driver malfunction** it must have been a **vehicle malfunction**”.

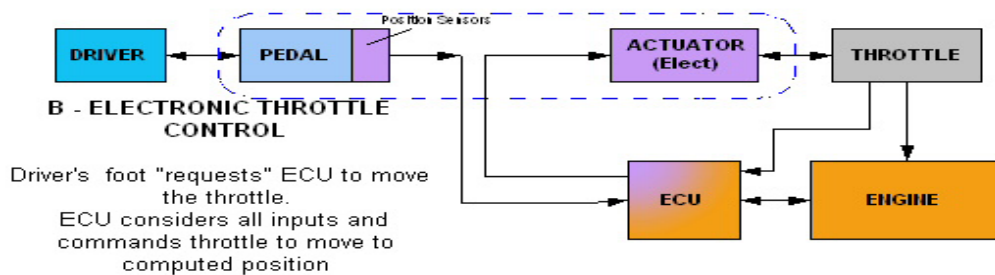
In the presence of uncertainty “absence of proof is NOT proof of absence”. In practical terms, having the vehicle examined after the incident and finding it in good working order does not prove driver malfunction. Equally finding the driver to be fit and without a blemish on their licence after the event does not prove a vehicle malfunction.

## 4.2 Electronic throttles are different from manual throttles

There is a major functional difference between a mechanical throttle control system and an electronic throttle control system, even though they are designed to have the same “look and feel” as far as the driver is concerned. See Fig 18.



**A- Mechanical throttle control is passive – driver provides the active element**



**B - Electronic throttle control is active – the electronics provides the active element**

**Fig 18 Diagram to illustrate the difference between mechanical and electronic throttle control**

Up until fairly recently all vehicles had mechanical throttle linkages, see Fig 18A. The driver pressed the accelerator pedal with their right foot and this pulled on a flexible Bowden cable that in turn opened the throttle. When the driver lifted their foot from the accelerator pedal, springs would start to close the throttle and would force the accelerator pedal to rise against the driver's foot. The driver controlled speed by judicious use of the accelerator pedal.<sup>18</sup> engine braking and the brake pedal. Such mechanical throttle arrangements can get stuck open – i.e. fail to close having once opened. However mechanical throttles cannot open of their own accord.<sup>19</sup> Mechanical throttle systems are passive and in order to operate require an energy input from the driver. Clearly the driver exercises direct control of engine speed via the mechanical throttle control.

Nowadays electronic throttles are replacing mechanical throttles. Electronic throttle controls are designed to have a similar “look and feel” to the mechanical throttle control that they replace, but they are NOT functionally equivalent and the difference is important. Electronic throttle control

<sup>18</sup> I leave out of consideration here the modifying effects of the gearbox and the different gear ratios. I am also talking about automatic gearboxes and not manual gearboxes.

<sup>19</sup> I have searched the technical literature extensively and I have found no references to uncommanded sudden accelerations in vehicles until the introduction of cruise control.

systems, are not powered by driver muscle power, but by energy drawn from the vehicle's electrical supply. See Fig 18 B. The driver presses the accelerator pedal as before to call for an increase or a decrease in speed. Electrical sensors on the accelerator pedal send electrical signals to the Engine Control Electronic Control Unit (ECU) as a "request". The ECU then takes the driver's "request" into account, along with a variety of other sensor signals, in order to determine a desired throttle angle to meet the requirements of the moment. The ECU then "tells" the electronic throttle control motor to move to a particular position. Thus it is the engine control ECU that is in charge of the throttle and hence the vehicle and not the driver.

The significance of this change from direct mechanical throttle control to indirect electronic throttle control has not generally been recognized but is of fundamental importance:

- Because the electronic throttle control system is an active system there is always the possibility of "electronic disobedience", that is to say there is always the possibility, albeit small, that an electronic throttle system may act in an uncommanded manner. From a functional safety point of view, just as a large steam turbine requires protection against over-speeding and an escalator requires emergency stop buttons, so a vehicle fitted with electronic throttle control requires some kind of totally independent fail-safe that allows the driver to regain control in the event of an uncommanded sudden acceleration. It is the failure to provide such a fail safe mechanism - equivalent to the failure to provide of sufficient life boats and rafts on a ship – for which the automobile manufacturers can be deservedly criticized.<sup>20</sup>
- It is a general requirement that the driver is at all times in control of the vehicle. But how can this legal requirement be satisfied if the electronic throttle control is capable of "electronic disobedience" and the driver is not provided with some means of last resort to regain control in such an emergency?

### 4.3 A brief background on electronic throttle control

#### 4.3.1 Electronic Speed Control/Cruise Control

By the early 1970s automobile electronics had advanced the stage where it was possible not only to control the engine to meet emission targets, but to build in cheap automatic speed control systems (cruise control) where the driver could hand over speed control on long journeys to the electronics.<sup>21</sup>

An electronic speed control system comprises a speed sensor, control switches, a small servo amplifier and a servo driven by the amplifier that controls the throttle and thereby keeps the speed of the vehicle constant. Electronic speed control systems are designed to disengage and restore normal manual throttle control to the driver on demand either by the driver pressing the cruise OFF switch or by pressing lightly on the brake pedal.

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<sup>20</sup> However, it is only recently that some manufacturers have begun fitting electronic brake override systems, that is to say software that detects any potential clash between brake and accelerator pedals. Electronic brake override systems rely on the proper functioning of the engine control software and cannot necessarily cope with situations in which for some reason the ECU software itself has locked up or malfunctioned.

<sup>21</sup> US Patent 3,455,411 of July 15 1969. Bendix Corporation. Automobile Speed Control Ralph W. Carp, Michael Slavin; Leoncio T. Describes the basic features of an electronic speed control system using a vacuum actuator

By the early 1980s electronic speed control systems were becoming fairly standard in the United States where they were sold as “driver assist” or “driver comfort” systems. These speed control systems were safety-critical systems and, should they fail, were potentially very dangerous. The requirement for a high degree of functional safety had been recognised by the Society of Automotive Engineers in a Report of the Automotive Safety Committee, approved October 1970 and reaffirmed by the Speedometer and Tachometer Committee December 1988 which advised that:

- 4.5 An alternative hand-operated deactivation control within the reach of the driver, in addition to the brake, clutch (if so equipped) and ignition key shall be provided
- 4.6 The system shall be capable of deactivation or capable of being made inoperative by a control within the reach of the driver under the following conditions:
  - 4.6.1 Failure of any power source to the device
  - 4.6.2 Failure of any speed signal to the device
  - 4.6.3 Short circuit of electrical leads of the device
  - 4.6.4 Failure of other vehicle components upon which the device is dependent for function

Unfortunately this recommendation along with later recommendations for incorporating an independent fail safe mechanism by Follmer(1973)<sup>22</sup> and advice provided by a 1975 NHTSA<sup>23</sup> report on how to avoid EMI problems with electronic speed control systems were largely ignored by the automobile manufacturers.

Whereas it a mandatory requirement in the USA for the throttle to fully close within one second of the release of the accelerator cable [FMVS 124], there is no similar requirement for a stand-alone speed control system to release the throttle, or reduce the fuel supply, within a similar period of time in the event of an uncommanded wide open throttle.

Because of this lack of attention to functional safety, and with the very large population of vehicles in the USA by then being fitted with electronic speed control it is scarcely surprising that by the mid-1980s there were increasing numbers of reported incidents of vehicles suddenly accelerating, particularly from standstill. The main characteristics of these incidents were firstly that they generally occurred more or less at standstill and at the instant of gear engagement and secondly that it was often very difficult, if not impossible, for the driver to overcome the sudden acceleration by braking<sup>24</sup>. Manufacturers variously attributed these incidents to loose floor mats and driver error, except in cases where an obviously faulty mechanical or electronic component was found.

The manufacturers' argument was essentially that any intermittent electronic fault would reveal itself after the event, either by leaving some physical trace or by being able to be reproduced either by bench or road testing. However, It is manifestly self-evident that intermittent electronic faults are extremely difficult to reproduce.<sup>25</sup> Absence of proof, is NOT proof of absence.<sup>26</sup>

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<sup>22</sup> Follmer, William C.: 'Electronic Speed Control.' Society of Automotive Engineers Inc. 1973

<sup>23</sup> DOT HS-801 737 Investigation of electromagnetic interference effects on motor vehicle electronic control and safety devices. Final Report Prepared for US Department of Transportation NHTSA

<sup>24</sup> Manufacturers often assert that “the brakes will always overcome the engine”. However, brake systems were never designed to operate against full engine power. If the driver should happen to pump the brakes, vacuum assist will be lost after about two pumps and will not be replenished because, with a wide open throttle there is little or no vacuum produced. Furthermore with a racing engine and the vehicle at low speed, the torque multiplication effect (where a torque converter is used) will be a maximum (circa 2.5:1) which is equivalent to an extra low gear. As a consequence, the braking system will require a great deal more force on the part of the driver than they might expect to have to exert. When tested later, the brakes will function perfectly.

<sup>25</sup> Thomas, Dawn A.; Ayers, Ken; Pecht, Michael. The “trouble not identified” phenomenon

If manufacturers had recognized that speed control systems could occasionally malfunction and as a safety precaution always had fitted a “kill switch” that the driver could use in an emergency, then the issue of sudden acceleration would probably never have arisen.<sup>27</sup> Fig 19 shows a kill switch fitted to a Toyota Camry after the owner had experienced a sudden acceleration.<sup>28</sup> Fig 20 shows a kill switch for a motorcycle. I understand these are compulsory.



© Photo by Kitko

**Fig 19 Kill Switch for 2002 Toyota Camry**



Source: www.Southbayriders.com

**Fig 20 Kill Switch for motorcycle**

In 1989 the US Government [National Highway Traffic Safety Administration \(NHTSA\)](#) published a report on sudden acceleration to which reference is frequently made as “proving” sudden accelerations from at or near standstill are due to driver error.<sup>29</sup> The starting point for the report was a set of so-called “logical assumptions” the key assumption being the following:

“If the cause of an SAI is an intermittent electronic failure, physical evidence may be very difficult to find, but the failure mode should be reproducible either through in-vehicle or laboratory bench tests. “

The claim that: “the failure mode should be reproducible either through in-vehicle or laboratory bench tests” is highly questionable as an appropriate basis for the diagnosis of intermittent electronic malfunctions. I know of no similar assumption being made anywhere in the electrical and electronic engineering industries as the basis for a fault diagnosis strategy. I know of no electrical engineer or technician cognisant in any degree with electronic systems who would dream of assuming that if he or she could not reproduce an intermittent failure therefore it could never have occurred. This particular assumption, as far as sudden acceleration diagnosis goes,

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in automotive electronics *Microelectronics Reliability* 42 (2002) 641–651  
<http://www.autosafety.org/sites/default/files/TNI%20paper.pdf>

<sup>26</sup> A medical example of an intermittent malfunction might be Atrial fibrillation that is often intermittent in nature, at any rate in the early stages. Only if it happens to occur when the patient is being monitored will it be discovered.

<sup>27</sup> In other industries it is customary to protect against the risk of runaway failures. For example turbine generators in large power stations have overspeed protection that will cut off the steam supply if, for any reason, the speed should rise above the normal operating speed by a specific amount. DC motors have loss of field protection because otherwise if their field excitation failed they would over-speed and self-destruct.

<sup>28</sup> [http://www.youtube.com/watch?annotation\\_id=annotation\\_606902&src\\_vid=CdeJrhJ7Wxo&v=HdNx91qEcXw&feature=iv](http://www.youtube.com/watch?annotation_id=annotation_606902&src_vid=CdeJrhJ7Wxo&v=HdNx91qEcXw&feature=iv)

<sup>29</sup> 1989 NHTSA Report on Sudden Acceleration

has the effect of re-classifying any intermittent electronic faults that fail to reproduce as proven not to exist and, ergo, by fallacious argument, as instances of driver pedal error.

Since any sudden acceleration incidents that could not be reproduced were arbitrarily deemed by NHTSA not to be due to intermittent electronic failures, the following conclusion in the 1989 Sudden Acceleration Report is scarcely surprising:

“For SAI<sup>30</sup> in which there is no evidence of throttle sticking or cruise-control malfunction, the inescapable conclusion is that these definitely involve the driver inadvertently pressing the accelerator instead of, or in addition to the brake pedal.”

Since 1989 when the NHTSA report was written, sudden accelerations have continued to occur in sporadic clusters. Manufacturers have continued to shelter behind the report's finding and blame drivers, or loose floormats, or stuck throttles, for sudden accelerations. Sudden accelerations still occur, sometimes with disastrous results. In cases where there is death or injury, by default there is a reversal of the burden of proof, so that the vehicle as a general rule is presumed 'innocent' i.e. not to have malfunctioned, unless the driver can prove otherwise.

#### 4.3.2 Electronic throttles

Commencing in the late 1990s automobile companies began to realize the cost advantages of doing away with the manual throttle control and extending the engine management system to include an electronic throttle. By about 2003 electronic throttles were beginning to become fairly commonplace at least on high end product lines. With an electronic throttle, cruise control systems now reduce to the control switches and the speed sensors, the speed control function is exercised by the electronic throttle control software. Electronic throttles, unlike stand-alone cruise controls, are subject to US FMVS 124 requirements and the throttle must return to the idle position within one second of the accelerator pedal being released.<sup>31</sup>

As with cruise control, in the case of an electronic throttle a totally independent fail-safe is needed that can restrict engine power in an emergency in order to enable the driver to maintain control of the vehicle. Automobile manufacturers dodge this issue of functional safety and place their faith in the ECU software to identify faults, forgetting that the software is so complex that it can never be completely tested before going into production<sup>32</sup> and, if the software fails, so do the safety measures that depend on that software.

Following the introduction of electronic throttles there was a rise in sudden acceleration incidents that was by no means confined to one manufacturer. Sudden accelerations would undoubtedly have been prevented had independent fail safes been provided. The result of not providing an independent fail safe was made abundantly clear by the horrific Saylor crash in California in late August 2009 when four people were killed in a runaway Lexus<sup>33</sup>. See Fig 20.

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<sup>30</sup> SAI = Sudden Acceleration Incident (From near standstill)

<sup>31</sup> <http://www.nhtsa.gov/DOT/NHTSA/Vehicle%20Safety/Test%20Procedures/Associated%20Files/TP-124-06.pdf>

<sup>32</sup> In the modern automobile it is estimated that there are all told about 100 million lines of code, as opposed to about 10 million lines of code in a jumbo jet.

<sup>33</sup> <http://www.nbcsandiego.com/news/local/CHP-Officer-Family-Killed-in-Crash-56629472.html>





**Fig 20 The Saylor crash August 2009 4 people killed**

The publicity resulting from this crash brought to light a large number of sudden accelerations in Toyota vehicles in particular and resulted in US Congressional hearings. Professor David Gilbert Professor of Automotive Technology Southern Illinois University Carbondale was able to demonstrate at a Congressional Committee hearing<sup>34</sup> a fundamental flaw in the so-called redundant design of the Toyota electronic accelerator wherein the fault detection software<sup>35</sup> failed to detect a double fault. Leidecker et al at NASA Goddard<sup>36</sup> have since been able to demonstrate the presence of tin whiskers on accelerator pedal sensors that in principle could give rise to incorrect signals being sent from the accelerator pedal to the throttle. Professor Todd Hubing of Clemson University has found it possible to induce sudden accelerations in Toyota vehicles without triggering fault codes<sup>37</sup>.

In March 2010, largely as a result of the congressional hearings on sudden acceleration, the US National Highways Transport Safety Agency (NHTSA) commissioned the US National Academy of Sciences to investigate sudden accelerations in all vehicles and report in the summer of 2011. NHTSA also commissioned NASA with a narrower brief to examine electronic throttle systems in Toyota vehicles. The terms of reference of both studies were restricted to a considerable degree by NHTSA.

NASA presented their report to NHTSA in mid January 2011 and NHTSA published a heavily redacted version of the report in early February 2011.<sup>38</sup>

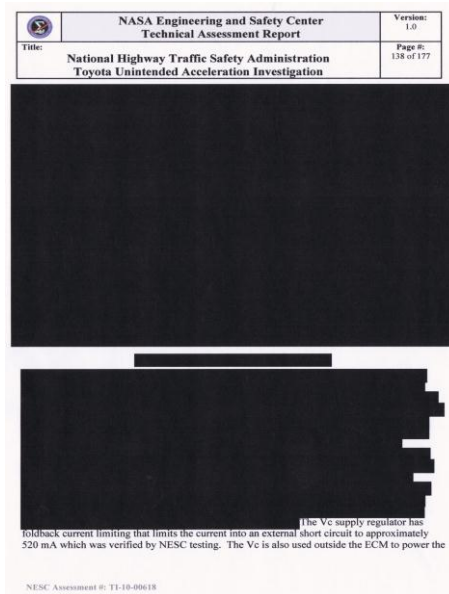
<sup>34</sup> [http://democrats.energycommerce.house.gov/Press\\_111/20100223/Gilbert.Testimony.pdf](http://democrats.energycommerce.house.gov/Press_111/20100223/Gilbert.Testimony.pdf)

<sup>35</sup> <http://www.emeraldinsight.com/journals.htm?articleid=1943742&ini=aob>

<sup>36</sup> [http://nepp.nasa.gov/WHISKER/reference/tech\\_papers/2011-NASA-GSFC-whisker-failure-app-sensor.pdf](http://nepp.nasa.gov/WHISKER/reference/tech_papers/2011-NASA-GSFC-whisker-failure-app-sensor.pdf)

<sup>37</sup> <http://onlinepubs.trb.org/onlinepubs/ua/100701hubing.pdf>

<sup>38</sup> NHTSA redacted significantly large sections of the NASA report, presumably at the request of Toyota.



**Fig 21 Example of redaction in the NASA Sudden Acceleration Report**

Claims have been made in some quarters that the NASA and NAS reports exonerate electronic throttles as the potential cause of sudden accelerations, ergo they must be caused by loose floormats, sticking accelerator pedals or driver error. This is what the NASA report actually says:

***“Due to system complexity .....and the many possible electronic hardware and software system interactions, it is not realistic to attempt to ‘prove’ that the ETCS-I<sup>39</sup> cannot cause UAs<sup>40</sup>. Today’s vehicles are sufficiently complex that no reasonable amount of analysis or testing can prove electronics and software have no errors. Therefore absence of proof that the ETCS-I has caused a UA does not vindicate the system.”***

#### **4.3.3 Sudden Acceleration Litigation regarding Electronic Speed Control and Electronic Throttles**

Up until recently US courts have tended to accept prosecution arguments that if no physical evidence of a malfunction in the cruise control or electronic throttle can be found, it must have been caused by driver error. By such fallacious argument, the burden of proof is reversed, and the vehicle is assumed innocent unless proven guilty rather than the driver. The situation may now change as a result of a reversal of judgement in the Koua Fong Lee case<sup>41</sup>.

Koua Fong Lee was driving his family home from church on June 10, 2006 when his 1996 Toyota Camry suddenly accelerated at an Interstate 94 exit ramp near St Paul Minnesota. In vain Lee tried to brake and his car rear-ended an Oldsmobile that was stopped at a red light, killing the three occupants. During his trial no other sudden acceleration cases were brought before the court in evidence by the defence. Lee was sentenced to 8 years imprisonment on the basis of the prosecution case that he must have pressed the accelerator rather than the brake.

<sup>39</sup> ETCS-I Electronic throttle control system - intelligent

<sup>40</sup> UA = Unintended Acceleration

<sup>41</sup> <http://www.startribune.com/local/east/100196199.html?elr=KArksUUUoDEy3LGDio7aiU>



Because of a large number of Toyota sudden acceleration incidents coming to light during late 2009 and early 2010, Lee was granted a review hearing before the same judge who had sentenced him. Having heard a parade of witnesses testifying that they had experienced sudden acceleration incidents in similar vehicles the judge released Lee in August 2010, saying that if the testimony from other drivers had been introduced during the original trial it would “more likely than not, or probably, or even most certainly” have resulted in a different verdict.

In California a multi-district litigation (MDL) is in progress against Toyota and will result in a bell-weather case reaching court in February 2013. It is likely that extensive documentation will be discovered in the meantime regarding the extent to which Toyota knew about the sudden acceleration problem, information which is likely to be put into the public domain fairly soon. Meanwhile, sudden acceleration cases against Subaru and Kia were recently settled for undisclosed sums<sup>42</sup>.

Perhaps the most telling recent judgement is that of Judge Sweigert in the long-running case of *Stimpson v Ford*<sup>43</sup>, reported in Bloomberg News, which concerns another sudden acceleration from standstill in a Ford vehicle fitted with cruise control.<sup>44</sup>

A state court jury in Bushnell, Florida, cleared Ford of liability in February 2010 in a lawsuit brought by a woman who was left paralyzed from the waist down when the van she was riding in crashed. The woman, Peggy Stimpson, and her husband sued Ford in 2004, claiming a defect in the 1991 Aerostar's cruise control system could trigger unintended acceleration. They also claimed the company destroyed or concealed documents related to the risk.

Circuit Court Judge William T. Swigert reversed the jury's verdict and ordered a new trial on damages only. Swigert entered judgment on liability for Stimpson, barring Ford from claiming in the new trial that the vehicle wasn't defective.

“The court finds by clear and convincing evidence that defendant Ford Motor Co engaged in misconduct justifying the striking of its answer and the entry of judgment in plaintiffs' favor on liability. These acts of misconduct, individually and collectively, constitute a calculated plan to interfere with the judicial system's ability to adjudicate a matter by improperly influencing the jury.” Ford presented testimony at trial it knew was untrue and withheld information from the public about internal reports on sudden acceleration incidents, Swigert said. The company also destroyed some documents, he said.

The Stimpson case has now been taken on Appeal to the Florida Supreme Court and is likely to be heard in the autumn of 2012.

#### **4.4 Examples of sudden acceleration from standstill when vehicle slowing down**

Sudden accelerations are relatively rare events, estimated at somewhere between 1 in 1000 and 1 in 100,000 vehicle lifetimes.<sup>45</sup> By no means all complaints are passed back by customers to the

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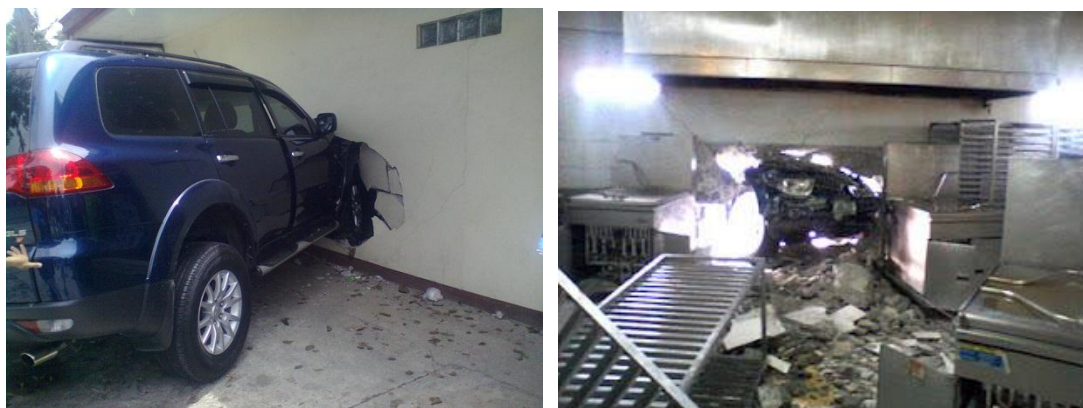
<sup>42</sup> <http://www.safetyresearch.net/2012/02/29/automakers-blame-drivers-but-settle-unintended-acceleration-cases/>

<sup>43</sup> [http://www.autosafety.org/sites/default/files/imce\\_staff\\_uploads/Stimpson%20v%20Ford%20SA%20order%207-11.pdf](http://www.autosafety.org/sites/default/files/imce_staff_uploads/Stimpson%20v%20Ford%20SA%20order%207-11.pdf)

<sup>44</sup> <http://www.bloomberg.com/news/2011-07-25/ford-must-face-new-trial-in-sudden-acceleration-suit-judge-says.html>.

manufacturers. Manufacturers do not disclose their statistics unless for some reason required, as in the case of recalls, to governmental road traffic safety organizations. The only comprehensive publicly accessible complaints database is that operated in the USA by NHTSA<sup>46</sup>. This records complaints mainly from the USA and Canada although it will accept complaints from elsewhere in the world if complainants choose to provide the information. With Japanese and foreign cars, the NHTSA complaints database provides useful statistics on particular vehicles of possible relevance to vehicles sold in other markets only insofar as the questioned vehicle sold in the USA is built in the same factory and to the same specification as the vehicle sold into other markets. This is by no means always the case.

I searched the NHTSA complaints database for Mitsubishi vehicles for the years 2007 to 2012. I could find no complaints for Outlanders. However Mitsubishi report 10 complaints worldwide.<sup>47</sup> In the NHTSA database I could only find one instance of a sudden acceleration from standstill and this was in a Montero Sport that turned out to have occurred in the Philippines. Further search on the internet revealed a spate of sudden acceleration incidents in 2009-2011 Montero Sports vehicles in the Philippines reported on a blog spot<sup>48</sup>, a selection of which I include in Table 1. I have only included examples where the vehicle had accelerated from braking. Fig 22 shows a typical example.



**Fig 22 Montero hits wall after SA event – Philippines**

<sup>45</sup> Anderson, A. F. Reliability in Electromagnetic Systems: The role of electrical contact resistance in maintaining automobile speed control system reliability IEE Colloquium on Reliability in Electromagnetic Systems, Paris, 24 May 2007. Published in Conference Digest PEZ07827 (07/11827) Available from the IET as a CD-ROM ISBN 978-0-86341-809-9 £35 from the IET or at [http://www.antony-anderson.com/CRES2007\\_0001\\_paper-r.pdf](http://www.antony-anderson.com/CRES2007_0001_paper-r.pdf)

<sup>46</sup> <http://www.odn.nhtsa.dot.gov/complaints/>

<sup>47</sup> According to Mitsubishi Motors New Zealand Ltd 630,000 Outlanders have been manufactured up to March 2012 from 2 production plants in Japan and the Netherlands. “Of these there have been 10 reports globally of unexplained acceleration. One case was determined to be caused by incorrect floor mat fitment, while other cases cannot be substantiated nor have any faults been found after investigating the vehicles.”

<sup>48</sup> Mitsubishi Montero Sudden Accelerations in the Philippines <http://monterovictims.blogspot.co.uk/>

Shell Taft La Salle	<b>After filling up</b> , Montero suddenly accelerated then crashed into a post.
December 16, 2010 Quezon City	<b>While parallel parking</b> , Montero suddenly accelerated and crashed into a parked Mercedes Benz then side swiped a wall and hit a palm tree. The air bags did not deploy. Mitsubishi blamed the floor mat for the accident.
December 16, 2010 North Reclamation Area	<b>Montero suddenly accelerated</b> then hit 6 cars. Mitsubishi also blamed the floor mat for the accident.
At a gas station	<b>After a car wash</b> , owner started his Montero then shifted from park to reverse while foot on the brake pedal. Montero roared so loud and accelerated backward without him stepping on the gas pedal almost hitting another car filling up.
June 16, 2011 After starting	<b>Montero suddenly accelerated</b> then turned turtle after hitting a wall.
August 15, 2011 Petron Masinag gas station going to Antipolo	<b>After filling up</b> , Montero suddenly accelerated narrowly missing school children.
August 28, 2011	<b>From a parked position and after shifting from park</b> , Montero suddenly accelerated then crashed into a wall despite the driver stepping on the brakes <b>See Fig 13</b>
January 29, 2012	A 2011 model Mitsubishi Montero <b>suddenly accelerated coming from a parked position.</b>
March 15, 2012 Ayala Alabang Village	A Mitsubishi Montero <b>coming out of its garage suddenly accelerated</b> and rammed two cars parked in the driveway of a house across just 15 meters away.

**Table 1 selection of sudden acceleration incidents 2009-2011 Model Year Mitsubishi Montero vehicles in the Phillipines.**

A number of the Montero incidents seem to have occurred either **just after starting the vehicle** or **after filling up, after a car wash or while parking**.

I had previously become aware that many sudden acceleration incidents seem to occur after braking, particularly after the vehicle has almost come to a halt. I therefore decided to search the USA NHTSA complaints database specifically for 2007 MY for sudden acceleration incidents that bear some resemblance to that experienced by the DEFENDANT - i.e. where the vehicle had braked to a low speed and then “took off”.

Table 2 shows a small selection of the complaints which will be found in full in Appendix 3. In Appendix 3 eleven different vehicle brands are listed – Ford, Honda, Hyundai, Infiniti (Nissan), Jaguar, Jeep, Kia, Lexus (Toyota), Nissan, Toyota, Volkswagen and they all show a very similar pattern. In three cases the drivers refer to the air conditioning being on when the vehicle surges or lunges.

- WHEN THE AIR CONDITIONER IS RUNNING THE VEHICLE IDLES AT DIFFERENT RPM'S CAUSING IT TO LUNGE FORWARD WHEN THE A/C COMPRESSOR SHUTS DOWN, INCREASING THE RPM'S
- VEHICLE SURGES FORWARD WHEN AIR CONDITIONER ON
- WHEN I AM STOPPING AT A STOP LIGHT/ STOP SIGN AND AM IN DRIVE WITH THE AIR CONDITIONER (A/C) ON THE TRUCK WILL SURGE FORWARD AND I HAVE TO PUSH THE BRAKES DOWN HARDER. THIS ONLY HAPPENS WHEN THE A/C IS ON, AND SEEMS TO COME FROM THE INCREASE IN ENGINE RPMS WHEN THE COMPRESSOR KICKS ON

This apparent association with the electrical loading of the vehicle electrical system by the air conditioning system should be noted.

<b>FORD F-150</b>	MY F150 WITH ABOUT 45000 MILES HAS TWICE HAD AN ENGINE SURGE AS I PULLED TO STOP WITH MY FOOT ON THE BRAKE. IT BASICALLY REVS TO ABOUT 4500 RPM FOR ABOUT 3 SECONDS
<b>HONDA ACCORD</b>	I WAS PULLING INTO A PARKING SPACE IN FRONT OF MY APARTMENT BUILDING AND SLOWING DOWN TO PARK. MY FOOT WAS ON THE BRAKE SLOWING THE CAR DOWN TO A COMPLETE STOP WHEN SUDDENLY THE CAR ACCELERATED ON IT'S OWN AS IF POSSESSED. THE CAR JUMPED OVER THE CURB OF THE PARKING SPACE AND SMASHED INTO THE BRICK WALL OF MY APARTMENT BUILDING
<b>HYUNDAI SONATA</b>	THE CONTACT WAS PARKING THE VEHICLE IN HIS GARAGE WHEN HE APPLIED PRESSURE TO THE BRAKE PEDAL, FOLLOWED BY AN UNINTENDED AGGRESSIVE AND FORCEFUL ACCELERATION. THE ENGINE REVVED EXCESSIVELY AND THE RPM'S RAPIDLY INCREASED. HE IMMEDIATELY FORCED THE GEAR SHIFT INTO THE "PARK POSITION"; HOWEVER, THE VEHICLE LUNGED FORWARD AND CRASHED INTO THE GARAGE WALL.
<b>TOYOTA 4RUNNER</b>	WHEN THE AIR CONDITIONER IS RUNNING THE VEHICLE IDLES AT DIFFERENT RPM'S CAUSING IT TO LUNGE FORWARD WHEN THE A/C COMPRESSOR SHUTS DOWN, INCREASING THE RPM'S. THIS HAS ALMOST CAUSED A FENDER BENDER SEVERAL TIMES WHILE AT A STOP LIGHT.
<b>TOYOTA 4RUNNER</b>	VEHICLE SURGES FORWARD WHEN AIR CONDITIONER ON. HAZARD AT TRAFFIC LIGHTS
<b>TOYOTA CAMRY</b>	HE HAD ALREADY PULLED INTO THE PARKING LOT AND WAS GETTING READY TO PARK HIS CAR FACING NORTH BOUND. ALL OF A SUDDEN THE CAR ACCELERATED OUT OF NOWHERE AND HOPED THE PARKING CURB STILL FACING NORTHBOUND. IN ORDER TO AVOID ANY CASUALTIES AND PREVENT HITTING ANY OF THE CHILDREN NEAR THE PLAYGROUND, HE WAS ABLE TO STEER THE CAR AND MADE A U-TURN AT ABOUT 150 DEGREES. AT THIS POINT HE WAS FACING SOUTH BOUND OF THE PARKING LOT AND THE CAR CONTINUED TO ACCELERATE AT HIGH SPEEDS. HIS CAR THEN HOPPED THE CURB ON THE SOUTH SIDE OF THE PARKING LOT. ONCE THE CAR HOPPED THE PARKING CURB ON THE SOUTH SIDE, IT CONTINUED TO HOP OVER A COUPLE OF RAISED CONCRETE BLOCKS THAT DELINEATE A PATH ONTO THE HILLSIDE JUST SOUTH OF THE PARKING LOT. DUE TO THE STEEPNESS OF THE HILL, IT PREVENTED THE CAR FROM GOING ANY FURTHER AND THE CAR CRASHED IN BETWEEN TWO TREES LOCATED ON THE HILLSIDE.
<b>TOYOTA TACOMA</b>	MY INCIDENT STARTED FROM A NEAR STANDSTILL WITH MY RIGHT FOOT FIRMLY ON THE BRAKE. AS A FORMALLY TRAINED OBSERVER AND TROUBLESHOOTER OF AIRCRAFT ELECTRONIC SYSTEMS, IT IS MY OPINION THAT THIS VEHICLE DELIVERED UNINITIATED STIMULUS TO THE ELECTRONIC THROTTLE CONTROL SYSTEM. I AM 100% POSITIVE ABOUT THIS
<b>TOYOTA TACOMA</b>	<p><b>FIRST INCIDENT:</b> STOPPED AT A TRAFFIC LIGHT WITH MY FOOT ON THE BRAKE, THE TRUCK LUNGED FORWARD A FEW FEET. THE DEALERSHIP TOLD ME THEY COULD NOT FIND ANY PROBLEM.</p> <p><b>A MONTH LATER,</b> STOPPED IN A GAS STATION DRIVE WITH MY FOOT ON THE BRAKE WAITING TO EXIT, THE REAR WHEELS BEGAN SPINNING OUT OF CONTROL. I PRESSED ON THE BRAKE AS HARD AS I POSSIBLY COULD TO KEEP FROM ENTERING TRAFFIC.</p> <p><b>THREE WEEKS LATER,</b> APPROACHING THE BOTTOM OF A HILLY SHARP TURN, I TAPPED THE BRAKES TO SLOW DOWN. AGAIN THE REAR WHEELS ACCELERATED TO A HIGH RATE OF SPEED. I COULD NOT STOP THE TRUCK TO KEEP FROM STRIKING A VAN IN FRONT OF ME SO I CROSSED OVER A DOUBLE YELLOW LINE TO AVOID A COLLISION. IT TOOK ABOUT A THOUSAND YARDS TO GAIN CONTROL. THE DEALERSHIP SAID, "WE CAN'T FIX THE PROBLEM" UNTIL WE CAN DUPLICATE IT". I CALLED TOYOTA OF AMERICA, AGAIN ONLY TO BE TOLD THAT TOYOTA COULD DO NOTHING.</p> <p><b>THE FOURTH INCIDENT</b> OCCURRED ON AN ENTRANCE RAMP TO A HIGHWAY. I TAPPED THE BRAKES TO SLOW DOWN. THE VEHICLE ACCELERATED TO A HIGH RATE OF SPEED. I GOT IT UNDER CONTROL QUICKLY.</p> <p><b>FINALLY THE FIFTH AND FINAL INCIDENT.</b> COMING OUT OF NASHVILLE WHERE IT WAS RAINING HARD, I GOT FURTHER NORTHBOUND ON THE I-24 WHERE IT WAS RAINING LESS AND THE PAVEMENT WAS WET. WHILE IN THE SHOULDER LANE, A VEHICLE IN THE LEFT LANE STARTED MOVING OVER TO THE RIGHT CAUSING ME TO TAP MY BRAKES. THE REAR WHEELS ACCELERATED TO A VERY HIGH RATE OF SPEED CAUSING THE TRUCK TO HYDROPLANE. THE REAR END OF THE TRUCK SPUN AROUND TO THE LEFT AND, STILL ACCELERATING ON ITS OWN, DROVE INTO THE EMBANKMENT, FIRST SKIDDING SIDEWAYS THEN THE TRUCK BEGAN TO ROLL SEVERAL TIMES. IT STRUCK A RUT CAUSING IT TO GO AIRBORNE FINALLY LANDING ON ITS ROOF. IT ROLLED SEVERAL MORE TIMES COMING TO A STOP IN A DITCH ON THE DRIVERS DOOR. I WAS TRANSPORTED TO THE HOSPITAL.</p>
<b>TOYOTA TACOMA</b>	WHEN I AM STOPPING AT A STOP LIGHT/ STOP SIGN AND AM IN DRIV WITH THE AIR CONDITIONER (A/C) ON THE TRUCK WILL SURGE FORWARD AND I HAVE TO PUSH THE BRAKES DOWN HARDER. THIS ONLY HAPPENS WHEN THE A/C IS ON, AND SEEMS TO COME FROM THE INCREASE IN ENGINE RPM'S WHEN THE COMPRESSOR KICKS ON. THIS IS VERY UNSAFE AND COULD CAUSE ME TO REAR END SOMEONE.
<b>VOLKSWAGEN PASSAT</b>	WHILE APPROACHING A STOP, THE ENGINE BEGAN TO REV AND THE RPM NEEDLE INCREASED. THE VEHICLE WAS IN DRIVE AND THE BRAKE PEDAL WAS DEPRESSED AT THE TIME. THE CONTACT PLACED THE VEHICLE INTO PARK AND TURNED OFF THE ENGINE.



© Frank Visconi

**Fig 23 Tacoma after 5<sup>th</sup> sudden acceleration incident****Table 2 Extracts from NHTSA Complaints Database for 2007 MY vehicles See also Appendix 3**



All the above incidents are described in more or less the same terms, irrespective of the make or model of the vehicle in question. A number of the drivers associate the start of the sudden acceleration with the moment when they have almost brought the vehicle to a stop by braking. During this process, the driver must have been braking or covering the brake and was neither using nor intending to use the accelerator. Such incidents are clearly distinguishable from classic sudden acceleration from standstill incidents as defined by the 1989 NHTSA report that seem to occur when the driver moves the gear stick from park to drive and then the vehicle takes off.

## **4.5 Mechanical Explanations of Sudden Acceleration incidents**

### **4.5.1 The loose floormat hypothesis**

Since the early 1980's automobile manufacturers have tried to blame sudden accelerations on loose all-weather floormats which allegedly may entrap the accelerator pedal.

However, in many instances of sudden acceleration either the floormats have been found correctly positioned and locked down after the event, or else have not been present at all. In this particular instance, Policeman Andy Gilbert attended the scene of the accident and his notes of 20/01/12 record "No Floormats". See also Fig 16

### **4.5.2 The sticky accelerator pedal hypothesis I (pedal sticks in fully open throttle position)**

This is really is a version of the stuck throttle hypothesis. Stuck open throttles are a known hazard in car racing and can be highly dangerous. For this reason in stock car racing NASCAR (National Association for Stock Car Auto Racing) requires kill switches to be fitted to all stock cars.<sup>49</sup>

It is certainly possible for an electronic accelerator pedal to get stuck in the fully open position and, if it does so, the throttle will undoubtedly go to the wide open position and remain in that position unless the pedal releases. However a stuck-open accelerator pedal can only arise if the driver first fully presses down the accelerator pedal fully to the floor. Thus neither a stuck-open throttle nor a sticky accelerator pedal can explain a sudden acceleration such as this particular event which occurred from near standstill.

### **4.5.3 The sticky accelerator pedal hypothesis II (pedal sticks in closed or intermediate position, releases and overshoots)**

If an accelerator pedal should stick in the closed throttle or idle position, when the driver presses down their foot on the pedal initially nothing will happen. They may press their foot down harder in order to get a response from the engine. Eventually the pedal will release and because it may now have the full force of the driver's foot pressing on it, it may overshoot causing the engine to surge. However the driver, sensing the engine surge will then probably respond by raising their foot so that the throttle will then tend to close again. Such a fault would probably manifest itself in jerky control over a period of time and would probably become more noticeable with the passage of time and would also be apparent by the sticky "feel" of the pedal with the engine not running.

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<sup>49</sup> [http://en.wikipedia.org/wiki/Kill\\_switch](http://en.wikipedia.org/wiki/Kill_switch)

Such a fault would be very unlikely to occur out of the blue. Rather, there would be a gradual deterioration in the pedal behaviour that would be noticed long before serious pedal jamming took place.

I have not been presented with any evidence of a sticky pedal prior to the incident or by inspection of the car after the incident.

For these reasons I am of the opinion that the incident cannot be explained as the consequence of an accelerator pedal that is sticking somewhere between the idle position and the throttle fully open position.

#### **4.6 Electrical and Electronic Explanations of Sudden Acceleration**

##### **4.6.1 General**

A small minority of sudden accelerations have been traced to failed components or wiring or connector faults and have been made the subject of recalls. However, most electronic malfunctions, especially those of an intermittent nature, are system failures and resolutely refuse to lend themselves to easy diagnosis in physical terms. Anyone who uses a computer will know how they may function for months without any problems and then, without warning, lock up and refuse to function or may crash altogether. Switch the computer on again and it may run perfectly for another six months before misbehaving in a similar manner. The same goes for cars. One day, out of the blue, an electronic system malfunctions for no apparent reason. Switch off the ignition, switch on and start the engine and the fault has disappeared.

Intermittent electronic malfunctions tend to leave no trace behind afterwards, or at least no trace that is visible within the limitations of workshop inspection or testing. These NFFs or No Fault Found have to be recognised for what they are – as unknowns. The tendency is to fall for the fallacious argument that ‘no fault found’ means that there was no fault and that therefore the suspect behaviour was not a malfunction of the electronic system at all but something quite other: and who better to fulfil the role of scapegoat for intermittently malfunctioning electronics than a supposedly malfunctioning driver?

Nowadays vehicles are fitted with diagnostic systems that store a variety of fault codes. These fault codes may be downloaded later and may give some idea about the occurrence of some malfunctions, but by no means all. Just because there are no diagnostic fault codes show up after the event does not necessarily mean that there have been no faults, but merely that they have not been detected. Sometimes this is because the particular fault has not been anticipated by the designers and as a consequence fault detection software has not been written to catch it<sup>50</sup>. In this particular case no fault codes were triggered.

##### **4.6.2 Moisture-induced electronic malfunctions**

It is well established that moisture can play havoc with electronics. For example, moisture condensing on a printed circuit board can result in increased leakage currents between tracks and in some cases cause intermittent or permanent short circuits. Water getting into connectors can cause pin corrosion and can increase contact resistances or gives rise to tracking and eventual short circuits between pins. Where wiring harness insulation has become mechanically damaged, ingress of moisture into cracks can cause short circuits to other conductors or to ground. Perhaps

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<sup>50</sup> Many vehicles are now also fitted with MVEDRs, Motor Vehicle Event Data Recorders, misnamed automobile black boxes. These are normally triggered by the air bags going off and, with luck capture about 5 seconds before the event and two afterwards. The amount of data captured is severely limited, with data capture points at 1 second intervals, which is far too slow to capture transient events and in any case limits capture to a few seconds before the incident,

the most insidious effect of moisture is causing battery and ground connections to deteriorate through corrosion.

I am aware of one instance in 2003 in Malaysia where a brand new Proton Waja fitted with an electronic throttle of Renault provenance and only three days old accelerated uncommanded to about 100 km/hr when going through a tropical rainstorm. Five days later a similar event occurred. On examination, pins on the ECU were found to be corroded. A replacement ECU was offered to the owner, but he refused the offer because no guarantee could be given that the same problem would not occur again. Eventually the dealer agreed to replace the car with an alternative vehicle fitted with a manual throttle and without cruise control. My informant told me that there had been a spate of similar problems in this model of vehicle and that a contributory factor had been that the ECU had been placed where it could be well cooled – in the engine compartment near to a front wheel arch – where in tropical storms it was highly likely to be enveloped in heavy water spray.

Sudden accelerations of vehicles on leaving car washes, usually at the moment of gear engagement, are known to occur, although the reasons have never been established. Jeep Cherokees and Grand Cherokees appear to be particularly susceptible. The international Car Wash association has issued an advisory concerning the handling of Jeep Cherokees<sup>51</sup>:

- 1. Handle Jeep Cherokees and Jeep Grand Cherokees with extreme caution**
- 2. Allow only specially trained car wash employees to handle these vehicles**
- 3. Notify all car wash employees when one of these vehicles is on the property**
- 4. Move the vehicle using both feet - left foot on the brake and right foot on the accelerator**
- 5. Instruct employees and customers to never walk in front of one of these vehicles**

Videos clips of sudden accelerations in car washes can be found at  
<http://sites.google.com/site/jeepsua/home>

As far as is known, all instances of sudden acceleration involving car washes have occurred when the engine is switched on or the vehicle is moved into drive at the end of the car wash and as the vehicle is moved out of the car wash. Although in this instance the Defendant's vehicle was presumably still not fully dried after the car wash, it had been running for several minutes without any problems when the sudden acceleration incident occurred. The sudden acceleration event therefore does not seem to fit the typical pattern sudden accelerations after a vehicle has gone through a car wash. In my opinion it is therefore unlikely that the sudden acceleration in this instance is directly connected with moisture ingress following washing the car in the wash.

#### **4.6.3 Other causes of electronic malfunctions**

There are numerous other possible causes of an electronic throttle going to the wide open position: tin whiskers causing intermittent short circuits in the electronics, EMI (Electromagnetic Interference), software malfunctions, intermittent contacts at connectors or on printed circuit boards, single event upsets, lock-up of the throttle control motor switching transistors caused by transients etc. etc. Any one of these causes remains a possibility that I am not in a position either to confirm or eliminate because I just do not have enough information.

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<sup>51</sup> <http://www.carwashnetwork.com/feature/3/sudden-acceleration-advisory-group.htm>

#### **4.6.4 The possible role of a deficiency in the electrical power supply system**

In section 4.3 which is based on a search of the NHTSA complaints database for 2007, I note that sudden accelerations following braking seemed to follow a remarkably similar pattern, irrespective of the make of vehicle: sometimes a sudden acceleration incident happened when the vehicle had almost stopped at traffic lights; sometimes when pulling into a parking bay. These incidents differentiate themselves from the classic “sudden acceleration from standstill at the moment of gear engagement”, as defined in the 1989 NHTSA report, in two respects: (1) vehicle had been running at road speed for some time and was already in Drive; (2) the driver had reduced speed by braking to near standstill and was either covering the brake or holding the brake down to stop the vehicle from creeping forwards in idle.

I also noted that in a small number of cases drivers mentioned that the sudden acceleration appeared to be related in some way to the fact that they had the air conditioning on: the implication being that they thought the extra electrical load at engine idle might be contributing in some way to the incident.

It is well established that the alternator supplies the electric system load and that the battery provides smoothing of the supply against the effects of sudden load current changes. The battery acts in a smoothing capacity, to supply any transient current loads momentarily and helps maintain the system voltage until the alternator voltage regulator can adjust. Were the battery not there, or if it were in poor condition, it might fail to exercise sufficient smoothing capacity and every time a transient load appeared on the system – such as when the brake lights were applied or a solenoid engaged, or a motor started – the system voltage might drop momentarily to an unacceptably low value.

Maintaining the charge on the battery at all times is a pre-requisite for a properly functioning automobile electrical system. This is difficult to achieve at idle because the engine is not developing much power and is sensitive to load changes and the alternator is at the bottom end of its voltage range and is unable to deliver a high current to charge the battery. The problem becomes worse with an old battery for two reasons (1) an old battery is less able to hold charge and (2) an old battery may develop a higher internal resistance which means that it will regulate the voltage at its terminals less effectively.

If the engine were idling at 600 RPM and a heavy load, such as the air conditioning, were suddenly switched on this would probably stall the engine. To avoid this a signal from the air conditioning system informs the engine ECU that the Air Conditioning Load is about to come on and the ECU requests the electronic throttle to open and allow the engine to generate more power. Only as the engine power increases is the Air Conditioning load switched on and, as a result, the engine speed remains more or less constant. This process is automatic and is to all intents and purposes the same for all vehicles.

Should the air conditioning fail to come on as anticipated, the engine will develop an excess of power and will momentarily accelerate or surge until such time as the engine speed control comes into action and brings the speed down again to idle. The magnitude of the surge will be determined by many factors including the dynamic response of the engine speed control system.

Idle speed control therefore has to cope with fluctuating electrical loads, such as windscreen wipers, indicators, brake lights, radios, headlights and sidelights power steering loads, air conditioning etc. The engine control combined with the alternator voltage control also have to

ensure that the battery maintains its charge. If the battery appears to be losing charge, then the system will detect this and will increase the idle speed and hence the alternator voltage and hence the charging rate to try to recharge the battery. Evidence of these control processes going on will be familiar to many motorists from time to time. They may stop at the lights and, after a few seconds the idle speed may go up to high idle, say 1000-1200 RPM and, after a while drop back again to normal idle speed. Such small engine surges are part and parcel of keeping control of the system voltage.

In the days when there was a separate idle speed control valve these speed excursions were strictly limited by the volume of air that could flow through the fully-open idle valve. However, with the electronic throttle now also performing the function of idle control, clearly an uncommanded fully open throttle valve becomes a possibility.

There are a whole variety of factors that may come into play that may interfere with the charging process and also with the maintaining of charge:

- the alternator or its voltage control regulator may develop a fault;
- the battery may age and develop a high internal resistance and a reduced capacity to hold charge;
- the battery terminal connectors may develop a high resistance or intermittencies for one reason or another.

As a consequence, the battery may become less efficient in acting as an absorber of load current transients and this may be reflected into increased transient voltage drops appearing on the system. If the transient voltage drops are too great some microprocessors on the system may detect that the supply voltage has dropped below what can provide them with a safe operating voltage and they will go into protective mode and then reset when the voltage has returned to a sufficiently high value. Such brownouts followed by recovery can cause incorrect values to be stored in computer memory and may therefore cause subsequent system malfunctions. (Belt hypothesis April 2012<sup>52</sup>).

In the DEFENDANT'S case, there is some evidence to suggest that the battery had a significantly reduced CCA<sup>53</sup> at the time when the vehicle was purchased and that, even when new, the rated CCA of 450A was significantly less than what might be normally obtained from a 55D23L battery (namely a CCA of 500A to 580 A). It seems reasonable, bearing in mind the known characteristic of batteries to continue to deteriorate with age, to assume that there had been further reduction in the CCA by the time of the incident. It would be interesting to know what the battery CCA rating would be now,

The state of charge of the battery at the time when the Defendant's vehicle reached the Z garage is by no means certain. Especially with an air-conditioning load, it may have been less well charged than might be imagined after the 70 km journey from Otago.<sup>54</sup> By the time that the vehicle turned

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<sup>52</sup> Belt, R. An Electronic Cause for Sudden Unintended Acceleration. Privately circulated discussion memorandum dated March 18<sup>th</sup> 2012. PDF Copies obtainable from Mr R Belt on request. E-mail: [mrbelt@voyager.net](mailto:mrbelt@voyager.net) See Appendix 5 of this report for Summary of Belt Memorandum and access to pdf files.

<sup>53</sup> Cold cranking amperes (CCA) is the amount of current a battery can provide at 0 °F (-18 °C). The rating is defined as the current a lead-acid battery at that temperature can deliver for 30 seconds and maintain at least 1.2 volts per cell (7.2 volts for a 12-volt battery). This replaces the battery capacity definition in terms of the more familiar Ampere Hours. Probably this battery would have a 50 AH capacity or thereabouts.

<sup>54</sup> According to the UK Automobile Association 1 in 7 of all call outs are battery related and they estimate that 1 in 5 of all cars on the road need their batteries replaced. According to one of their experts "It takes a lot longer to fully



into Featherstone Street after going through the car wash and entered upon the final stages of its journey to the disabled parking place in Brandon Street the engine would have been started three times within about twenty minutes. Starting three times in quick succession would have considerably discharged the battery, particularly as the air conditioning was on for the whole time that the engine was on, which during this period might well have been operating for part of the time at near idle speed<sup>55</sup>. It is unlikely that the battery would have charged significantly, if at all, in the final minutes of the car's journey after the car wash and it is quite possible that it would have become even more depleted by the time that the vehicle had turned into the parking bay, especially as there would at times have been an additional electrical load imposed by the power steering.

I argue that this hypothetical battery charge depletion might have provided exactly the right conditions for the engine control system, combined with the alternator voltage control system, to call for the throttle to open in order to increase the engine speed and so increase the charging rate for the engine in the final stages of parking. How big any hypothetical engine surge might have been and whether it would have been sufficient to give a sudden acceleration of the magnitude experienced by the Defendant's vehicle is a matter of conjecture.

Alternatively, with the battery in a partially charged condition, any sudden increase in load might have created a significant transient voltage drop sufficient to cause the engine ECU to go into a brownout condition and, when the voltage rose again the ECU could restart with incorrect system values stored in memory and a hypothetical engine surge could have taken place that in turn caused the sudden acceleration.

#### **4.7 Consideration of the pedal error/driver error hypothesis as proposed by the police.**

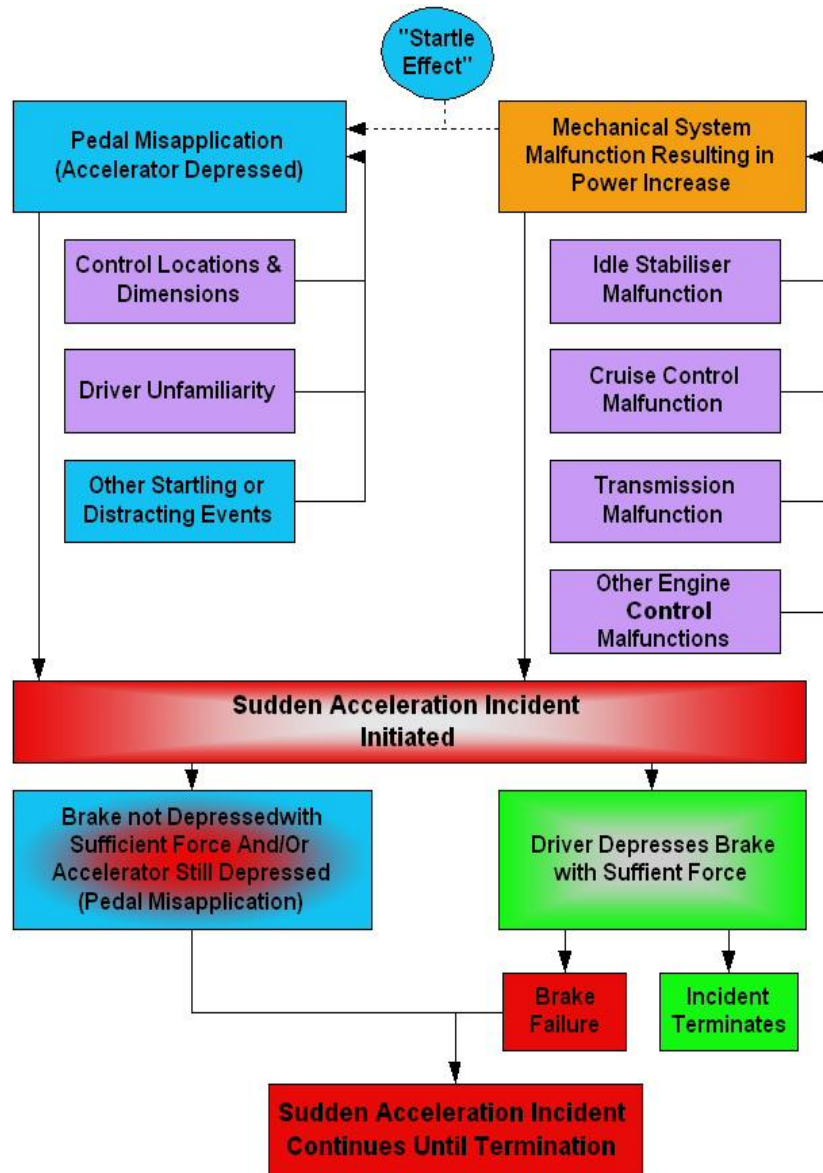
The pedal error hypothesis was developed in the 1980s to explain sudden accelerations that did not invoke any kind of malfunction in the cruise control electronics. It found its first public expression in the 1989 NHTSA sudden acceleration report.

The pedal error hypothesis, briefly stated, is that the driver is "startled" into making a "pedal misapplication" and presses the accelerator instead of the brake, so initiating a sudden acceleration. The hypothesis postulates that the resulting sudden acceleration, being the opposite to what was intended and totally unexpected, causes the driver to panic and induces a state of hyper-vigilance such that they fail to recognise their error and continue to press the accelerator down hard, thinking that they are pressing the brake.

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charge a modern car battery than many people realise – typically 240 miles of driving with no load, or eight hours of continuous driving – which can unfortunately lead to problems.” [http://www.theaa.com/motoring\\_advice/news/car-battery-life-and-breakdowns.html](http://www.theaa.com/motoring_advice/news/car-battery-life-and-breakdowns.html)

<sup>55</sup> Recently the DEFENDANT took the vehicle out on the road and once the engine had warmed up ran the vehicle at between 40 and 50 kmh and measured the engine speed as being between 1250 and 1300 RPM. Which is a high idle



**Fig 24 Diagram from 1989 NHTSA Report<sup>56</sup>(Redrawn)**

Fig 24 is taken from the 1989 NHTSA Sudden Acceleration Report and illustrates the hypothesis.

<sup>56</sup> The 1989 NHTSA Sudden Acceleration Report explains the diagram in the following rather confusing words:

Figure 3.0-1 presents a fault-tree analysis showing all of the possible events involved in an SAI <Sudden Acceleration Incident>. A large increase in engine power must occur by definition. This can be caused by a vehicle malfunction (a failure of one or more of the engine systems shown in Figure 3.0-1) or a pedal misapplication on the part of the driver. If a vehicle malfunction is the initiating factor, loss of control can occur if the brakes fail or if the driver inadvertently presses the accelerator rather than, or in addition to, the brake or fails to apply sufficient force to the brake pedal. Should the initial event have been a pedal misapplication, loss of control may ensue if the driver fails to recognize it and continues to press the accelerator.

The diagram postulates:

- (1) “a startle effect” initiated by a **“mechanical system malfunction resulting in a power increase”**. In plain English, an engine malfunction startles the driver into attempting to effect an emergency stop and they miss the brake and hit the accelerator by mistake. Or:
- (2) **“Other startling or distracting events”**, which are nowhere defined, but which are claimed to have the same effect.
- (3) Potential **contributory factors** are listed as:
  - a. **“Driver Unfamiliarity”** and
  - b. **“Control Locations and Dimensions”**.

My understanding is that hypothesis, as declared in Fig 24, requires an initiator of some kind that confuses or startles the driver into the erroneous action that then sets a hypothetical chain of events into motion that results in a sudden acceleration. In other words, the hypothesis appears to require a clear and well defined cause for “startlement”.

The diagram clearly envisages an engine surge as a result of an idle stabilizer malfunction as a possible source of “startlement” as well as a cruise control malfunction, a transmission malfunction, and “other control malfunctions”. In other words, the vehicle malfunctions in some way and “startles” the driver into trying to carry out an emergency braking operation. They miss the brake and hit the accelerator instead, fail to realize their mistake and go on pressing down the accelerator rather than the brake. The hypothesis clearly depends on having an initiator that confuses or startles the driver.

What if there are no “mechanical system malfunctions resulting in a power increase”? The hypothesis has this covered by “other startling or distracting events”, but fails to define what these might be. Nevertheless it is quite clear that there has to be a cause of startlement of some kind to set off the hypothetical chain of events that result in a sudden acceleration.

Without cause for startlement the driver is not going to be startled out of their normal behaviour and commit a pedal error and any explanation of a sudden acceleration in terms of the hypothesis becomes implausible.<sup>57</sup> In my view, when considering the Pedal Error hypothesis as a possible explanation for a particular sudden acceleration incident, the investigator should first ask: was there any evidence of a precursor event that could have startled the driver? If not, perhaps it would be wise to consider other possibilities.

The police report claims:

**WHAT HAPPENED** “...LAURENSEN approached the park and mistakenly pressed the accelerator instead of the brake (or both at once). She accelerated forwards and mounted the footpath.....LAURENSEN’S vehicle became wedged against a pillar as her tyres continued to spin for a few seconds until she released the accelerator.”

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<sup>57</sup> Of course, if the driver were epileptic or had been proved to have some kind of a mini stroke or a had had a blackout, then that would be quite another matter.

The essence of the claim is that the DEFENDANT “mistakenly pressed the accelerator instead of the brake (or both at once).” In other words, they are explaining the incident in terms of the pedal error hypothesis.

I propose dealing with the “(or both at once)” part of the police report claim first.

Whether or not it is possible to press both pedals at once depends on the pedal geometry and upon the dimensions of the driver's shoe. In Table 3 the DEFENDANT has provided the relevant information.

Width of brake pedal	11 cms
Width of accelerator pedal	3.5 cms
Horizontal distance between the two pedals	9 cms
Relative height of brake pedal above accelerator pedal	3.7cms
Width of DEFENDANT'S shoe	8 cms tapering to 2cms at toe
Length of DEFENDANT'S shoe	25.5 cms



**Table 3 Brake and accelerator pedal and shoe measurements**

The horizontal distance between the brake and accelerator pedals is 9 cms<sup>58</sup> and the width of the DEFENDANT'S shoe is 8 cms. If the heel of the shoe were placed in a pivotal position to enable the driver to press either the brake or the accelerator pedal comfortably – i.e. approximately midway between the brake and accelerator pedals - the shoe would pass between pedals with a total clearance of 1cm<sup>59</sup>. In practice a driver would have their foot on the brake pedal when braking, and the clearance between the right side of the right foot and the left side of the accelerator pedal would be considerably greater than 1 cm. Therefore, in my opinion, it is reasonable to eliminate the hypothesis of pressing on both brake and accelerator pedals at the same time as a potential cause of the sudden acceleration.

From now on I will focus on the claim that “LAURENSEN approached the park and mistakenly pressed the accelerator instead of the brake”.

The police report under ““**WHY CRASH HAPPENED**” asserts:

“LAURENSEN put her foot on the wrong pedal Slow reflexes. Not able to react when initially lurched forward. LAURENSEN panicked.”

Separating out these assertions:

- “LAURENSEN put her foot on the wrong pedal”
- “slow reflexes”
- “not able to react when initially surged forward”
- “LAURENSEN panicked.”

<sup>58</sup> In many vehicles the horizontal distance between pedals is less than this. For example, in the car that I drive the horizontal distance between brake and accelerator pedals is 7cms and it is necessary for any driver with a broad shoe, say 11 cm, to be very careful with foot placement.

<sup>59</sup>

What the police report fails to declare is the basis upon which these assertions have been made.

- How is it known that the DEFENDANT put her foot on the wrong pedal?
- What evidence is there that the DEFENDANT had slow reflexes?
- What is the basis for the claim that she was not able to react when the vehicle initially surged forward?
- What is the basis for the claim that she panicked?

The police report is silent on these matters. In summary, the police report is claiming that the DEFENDANT was “startled” into committing a pedal error, but fails to mention what the police think might have been the cause of that “startlement”. It is worth mentioning here that on entering the filling station forecourt the DEFENDANT had driven over a set of small unmarked speed humps, Fig 2, that caught her by surprise. Of this incident she writes:

“It was quite a jolt and my mother was a bit shaken.”

The DEFENDANT herself does not appear to have been “startled” by the unexpected speed hump nor does she seem to have been distracted by the fact that her 92 year old mother mother “was a bit shaken”. She appears to have reacted to what conceivably might have “startled” her in a controlled manner. She did not panic. She did not slam on the brakes. Far from being shocked into some kind of a catatonic state, as the pedal error hypothesis requires, she appears to have calmly driven the vehicle onwards to fill up at the pump, switching off the engine before doing so. Yet about twenty minutes later, according to the police hypothesis, she was “startled” into making a hypothetical pedal error when parking in Brandon Street when there was, seemingly, no “startling event” to “startle” her.

#### **4.8 Further considerations – the fractured LH front disc brake rotor**

It is clear that during the sudden acceleration incident the vehicle became caught between the angled shop window on the left hand side and the pillar on the right hand side. The left side of the vehicle hit the angled glass window and its support structure and the right hand wheel appears to have been spinning against the pillar to its right.

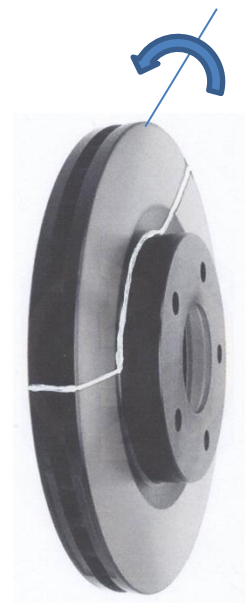




**Fig 11 (Repeated)**



**Figs 10 (repeated)**



**Fig 25 disc rotor**

Figs 10 and 11 repeated above are police photographs of the LH front wheel after the sudden acceleration incident. There are signs of scuffing of the surface of two of the alloy spokes at the 9 o'clock and 11 o'clock positions. However the spokes at the 2 o'clock, 5 o'clock and 7 o'clock positions show absolutely no signs of surface damage whatsoever. The tyre is intact and inflated and shows some signs of wall scuffing between the 9 o'clock and the 1 o'clock positions and some signs of a white deposit on the road surface of the tyre at the top of the wheel. The tyre wall at the bottom of the wheel appears clean. This suggests local impact on one sector of the wheel only.

Looking through the spokes between the 11 o'clock and 2 o'clock positions, the disc brake rotor can be seen to be fractured. The fractured segment itself can be seen balanced on the inner surface of the wheel and is partially obscured by the spoke in the 9 o'clock position. I think it is unlikely that it was found in that position but that it has been placed there by the police photographer to show roughly where it has come from. The brake callipers would appear still to be in position, but I cannot tell from the photograph if the same applies to the brake shoes. There is no mention of the fractured segment in the police report.

The span of the broken segment appears to approximate to the span of the front brake callipers. In order for the fracture to occur some kind of twisting moment must have been applied to that side of the **disc**, see Fig 25. As far as I am able to judge only the brake callipers, if momentarily misaligned, would be capable of exerting a twisting moment on the brake disc causing the cast iron to fracture. If there were pre-existing micro-cracks, as could well have been, then the twisting moment might not have needed to be large to cause the cracks to propagate and cause the fracture.

- Let us suppose first that the brake callipers had twisted under an impact load without there being any appreciable brake force load. In this case the brake pads, when they touched the disc, would have been free to move outwards and hydraulic fluid would have flowed out of the brake cylinders back into the hydraulic system. There would therefore be no twisting forces imposed on the disc by the callipers. The disc would have been very unlikely to fracture

- Imagine a second situation where braking pressure is applied by the driver and is amplified by the vacuum brake assist. In this case, at the moment of impact, the brake shoes would be in firm sliding contact with the brake disc surfaces and any twisting forces acting on the brake callipers at the moment of impact would immediately be transferred into a twisting moment on the cast iron brake discs. The cast iron, being brittle, might then fracture.

Figs 10 and 11 show that the alloy spokes at the 9 o'clock and 11 o'clock positions have taken most of the impact damage. The other three spokes show no visible signs of damage. It seems reasonable to suppose that it was the two spokes that show some signs of damage that must have taken any sideways forces at the moment of impact with the window.

Now it is well established that if a disc is rotating at high speed where the centrifugal forces are high if there are any cracks these may propagate and eventually the disc will fly apart. But here we are not talking about a high speed event and any centrifugal forces would be low.

One possibility is that the sideways force at impact brought the wheel into contact with the brake calliper and this force transformed itself into a turning moment causing the disc to shatter. Another possibility is that at impact the wheel and disc accelerated to the right, the mass of the brake calliper remained where it had been before and the result was a twisting moment on the brake disc tending to cause it to shatter.

In my opinion, when the brake disc shattered, the left hand wheel stopped turning very quickly and, as a result, all the engine torque was applied to the right wheel and it started spinning, see Fig 13.

It is fact that the left hand front disc rotor shattered at the moment of impact. It is my opinion that this could only have happened if a twisting moment had been applied to the segment of the disc that fractured. It may not be possible, without further evidence, to determine how a twisting moment came to be applied to the disc. It is my opinion that the disc could only shatter if impact forces were transferred to the disc by the brake callipers and that this would only happen if the brake assembly and rotor were firmly clamped together. The clamping would only occur if a high braking force was being applied at the time.

In my opinion, had the brakes not been on, the likelihood of there being a turning moment sufficient to crack off a segment of brake rotor would have been vanishingly small.

In my opinion the shattered rotor disc is conclusive evidence that the brakes were being fully applied by the DEFENDANT at the moment of impact.

## 5 Conclusions

I want to make it clear that I have not seen the accident scene nor have I inspected the vehicle and I am having of necessity to base my opinions on very limited information.

On Friday, 20 January 2012 at about 2:15 PM the defendant was driving her 2007 Mitsubishi Outlander along Brandon Street, Wellington looking for a disabled parking Bay so that she could settle her 92-year-old mother into a wheelchair and take her shopping. Finding an angled disabled parking bay free, she turned the car into it and was in the last stages of bringing it to a halt when it suddenly accelerated, mounted the pavement and crashed into the entrance of the Bayleys building, carrying a passing pedestrian with it. The pedestrian was pushed through a display window of the Kircaldie and Stains Department Store but was not badly injured. The defendant and her passenger were uninjured. The vehicle came to a halt jammed between the angled window of the Department store on its left hand side and on its right hand side against a pillar. As a result of the impact, an extensive segment the left-hand front disc brake rotor, approximating to the span of the brake callipers, was broken off. It is presumed that as a result of the damage to the brake rotor the left wheel could no longer rotate. On the right-hand side of the vehicle the front right-hand wheel appears to have been spinning against the surface of the pillar for some time. This correlates with a witness statement that the engine continued to roar for several seconds after impact.

I received formal instructions from the DEFENDANT Mrs Bronwen Laurensen, Box 57, OTAKI 5542, New Zealand in a letter dated 25th March 2012, concerning her accident on Friday 20th January 2012, as follows:

“I confirm my request to you, as an independent electrical expert witness, (1) to look at the evidence that I provide concerning my sudden acceleration incident and (2) write a report outlining possible causes and (3) give your opinion and the supporting reasons for your opinion as to which of the causes is the most likely.”

I have in this report looked at the evidence provided by the DEFENDANT and supplemented this with additional research concerning other similar events. I have outlined possible causes, these being either driver related or vehicle related, and have discussed these various possible causes in the previous sections of this report. I come now to giving my opinion and the supporting reasons for my opinion as to which of the causes is the most likely.

The police report on this incident states the following:

**WHAT HAPPENED** “...LAURENSEN approached the park and mistakenly pressed the accelerator instead of the brake (or both at once). She accelerated forwards and mounted the footpath.....LAURENSEN'S vehicle became wedged against a pillar as her tyres continued to spin for a few seconds until she released the accelerator.”

**WHY CRASH HAPPENED** “LAURENSEN put her foot on the wrong pedal Slow reflexes. Not able to react when initially lurched forward. LAURENSEN panicked.”

The DEFENDANT maintains a contrary opinion that she had her foot on the brake and that nevertheless the vehicle accelerated in spite of her best efforts to restrain it and bring it to a halt.

The sudden acceleration incident could have one of only two mutually exclusive causes:

- a vehicle malfunction (electronic throttle moves uncommanded to the fully open position)
- a driver malfunction (driver mistakenly presses the accelerator pedal rather than the brake).

The deciding question that has to be answered is: where was the DEFENDANT'S right foot during the sudden acceleration incident? Was it on the brake, as she maintains, or was it on the accelerator pedal, as the police report maintains?

The police report essentially maintains that the DEFENDANT was "startled" into emergency braking and mistakenly pressed the accelerator rather than the brake and that the sudden acceleration followed from this initial supposed error. The police report follows the basic hypothesis put forward in the 1989 NHTSA Report on Sudden Acceleration, that claims that drivers can be "startled" into slamming on the brakes and pressing the accelerator pedal by mistake. It is my understanding that the pedal error hypothesis requires something to "startle" the driver into totally atypical behaviour. I would point out that the police report nowhere states what it is that it believes "startled" the DEFENDANT out of her normal driving behaviour into a state, as it claims, of panic. Any potential cause for "startlement" appears to be notably absent from any of the witness statements and the police report. In my opinion, lack of an explicit cause for "startlement" weakens the argument in favour of the pedal error hypothesis considerably.

I looked at the possibility that the sudden acceleration may have been caused by going through the car wash. However, all instances known to me where cars have suddenly accelerated after going through a car wash have happened on the car wash premises when the vehicle was put into gear following the car wash. The circumstances of this incident were very different and so I have no reason to suppose that washing the vehicle was in any way directly contributory to the sudden acceleration.

I note that Mitsubishi have received 10 complaints of sudden acceleration in 630,000 Outlanders world wide up until March 2012. However, I do not know how many of these incidents were sudden accelerations following braking, as in this case.

I have examined the NHTSA ODI Complaints database for 2007 Model Year vehicles. I have found reports of numerous similar cases of sudden acceleration after braking when drivers were pulling into parking spots or were stopping at traffic lights. I have found similar incidents recorded for Mitsubishi Montero Sports vehicles of 2009-2011 model years that have occurred in the Philippines, but no examples of Mitsubishi Outlanders. The pattern of these incidents is similar, irrespective of the make or model of vehicle. This suggests, but by no means conclusively, the possibility of a systemic fault that appears occasionally, given the right conditions.

In the report I discuss at length the various possible causes of electronic throttle malfunction and conclude that, more likely than not, the cause was a temporary deficiency in the electrical power supply system, resulting from an ageing battery and its failure to charge sufficiently.<sup>60</sup>

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<sup>60</sup> In the DEFENDANT'S case, there is some evidence to suggest that the battery had a significantly reduced capacity to hold charge when the vehicle was purchased from its previous owner and, bearing in mind the known characteristic of batteries to continue to deteriorate with age, that there would have been a further reduction in capacity by the time of the incident. The state of charge of the battery at the time when the Defendant's vehicle reached the Z garage is by no means certain. Especially with an air-conditioning load, it may have been less well charged than might be imagined after the 70 km journey from Otago. By the time that the vehicle turned into Featherstone Street after going through the car wash and entered upon the final stages of its journey to the disabled parking place in Brandon Street



- I argue that this hypothetical battery charge depletion might have provided exactly the right conditions for the engine control system, combined with the alternator voltage control system, to call for the throttle to open in order to increase the engine speed and so increase the charging rate for the engine in the final stages of parking. How big any hypothetical engine surge might have been and whether it would have been sufficient to give a sudden acceleration of the magnitude experienced by the DEFENDANT'S vehicle is a matter of conjecture.
- Alternatively, with the battery in a partially charged condition, any sudden increase in load might have created a significant transient voltage drop sufficient to cause the engine ECU to go into a brownout condition and, when the voltage rose again the ECU could restart with incorrect system values stored in memory and a hypothetical engine surge could have taken place that in turn caused the sudden acceleration.

Consideration of all these various hypotheses at length has been absolutely necessary, however, this still does not decide the deciding question. Here we must look to the photographic evidence provided in Figs 10 and 11. These photographs show that the front left hand brake disc rotor has fractured and a large segment has become detached.

**In my opinion it was the transfer of transverse impact forces from the front right wheel via the brake callipers and brake shoes as a twisting moment on the rotor that caused it to fracture. Those forces could only have been transferred if the hydraulic brake cylinders had been exerting high clamping forces on the disc and this could only have occurred if the DEFENDANT had been exerting a high braking force on the brake pedal.**

**If the DEFENDANT had her foot firmly on the brake pedal then, as I believe I have shown conclusively, she could not also have had her foot on the accelerator pedal. Therefore the sudden acceleration incident cannot have been induced by any action on the part of the DEFENDANT and must therefore have been the result of a vehicle malfunction, namely an un-commanded movement of the electronic throttle to the wide open position.**

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the engine would have been started three times within about twenty minutes. Starting three times in quick succession would have considerably discharged the battery, particularly as the air conditioning was on for the whole time that the engine was on, which during this period might well have been operating for part of the time at near idle speed. It is unlikely that the battery would have charged significantly, if at all, in the final minutes of the car's journey after the car wash and it is quite possible that it would have become even more depleted by the time that the vehicle had turned into the parking bay, especially as there would at times have been an additional electrical load imposed by the power steering and braking.

## 6 EXPERTS DECLARATION

I, ANTONY FAITHFULL ANDERSON, DECLARE THAT:-

- 6.1 I understand that my overriding duty is to the court, both in preparing reports and giving oral evidence. I have complied and will continue to comply with that duty.
- 6.2 I have set out in my report what I understand from those instructing me to be the questions in respect of which my opinion as an expert are required.
- 6.3 I have done my best, in preparing this report, to be accurate and complete. I have mentioned all matters that I regard as relevant to the opinions I have expressed.
- 6.4 All of the matters on which I have expressed an opinion lie within my field of expertise.
- 6.5 I have drawn to the attention of the court all matters, of which I am aware, which might adversely affect my opinion.
- 6.6 Wherever I have no personal knowledge, I have indicated the source of factual information.
- 6.7 I have not included anything in this report that has been suggested to me by anyone, including the lawyers instructing me, without forming my own independent view of the matter.
- 6.8 Where, in my view, there is a range of reasonable opinion, I have indicated the extent of that range in the report.
- 6.9 At the time of signing the report, I consider it to be complete and accurate. I will notify those instructing me if, for any reason, I subsequently consider that the report requires any correction or qualification
- 6.10 I understand that this report will be the evidence that I will give under oath, subject to any correction or qualification I may make before swearing to its veracity.
- 6.11 I have attached to this report a statement setting out the substance of all facts and instructions given to me that are material to the opinions expressed in this report or upon which those opinions are based.
- 6.12 I confirm that, insofar as the facts stated in my report are within my own knowledge, I have made clear which they are and I believe them to be true, and the opinions I have expressed represent my true and complete professional opinion.



Signature

Date 9<sup>th</sup> May 2012

## **Appendices**

<b>Appendix 1</b>	<b>CV for Dr A F Anderson</b>
<b>Appendix 2</b>	<b>Capability Statement for Dr A F Anderson</b>
<b>Appendix 3</b>	<b>Sudden Accelerations following braking in 2007 MY vehicles (From NHTSA-ODI Database)</b>
<b>Appendix 4</b>	<b>Letter from Technical Services Manager (Lloyd Robinson) Mitsubishi Motors New Zealand Ltd to Constable Laurence Vautier Strategic Traffic Unit Wellington Police 16/04/2012</b>

## **Capability Statement on Electrical Machines and Control Systems Dr A. F. Anderson CEng FIEE**

I can offer the following experience in investigating electrical failures - especially electrical machines and their electronic control systems – and as an Expert Witness in the UK, the EU and in the USA:

### **1. Recent electrical machines and control system consultancies.**

Electrical Engineering Consultancy: Investigating stator end winding failure[Saudi Arabia], Investigating HV current transformer failure [Italy,Nigeria] Investigating medium-sized generator stator and rotor failure mechanisms [EU], Investigating generator rotor failure mechanisms [Colombia]; Large machine core failure investigation on behalf of loss adjusters [UK/overseas]; 100 MW core failure investigation [UK]; Investigating problems in hydro-generator testing [Canada]; Investigating a sequence of stator winding failures on deep well induction motor pumps [Libya]; Advising on in-situ repairs of 30MW and 37.5MW generator stators [México]; Investigating the possible winding failure mechanism on high speed switched reluctance motors [EU]; Auditing improvements in automatic voltage regulator subject to heavy vibration levels [EU]; Magnetic bearing failure investigation [UK]; Investigating the causes of supposed electric shock to a maintenance technician on a vacuum forming press [UK]; Advising a contract R & D laboratory specialising in electrical machine problems [UK]; Advising an Automobile Component Manufacturer's Research Laboratory on the patent aspects of novel switched-field reluctance motors.

Electrical Expert Witness: Automobile speed control failures and sudden acceleration events [UK, USA, France, Sweden]; Vehicle electro-hydraulic stability system [UK]; Vehicle Pressure Switch Fire [USA]; Vehicle electrical cable fire [UK]; Catastrophic armature failure of a 1300 kW D.C. industrial mixer motor, advising on repair and providing Expert Witness Reports; Failure of low voltage substation air circuit breaker controller [UK, Single Joint Expert]. Vacuum cleaner cable fire [UK]; Farmhouse electrical cable fire [UK]; Chicken Hatchery Fire [UK]; Electric shock during fault finding in steel mill water pump cubicle [UK]; Alleged shock from electric lift call button [UK]; Electromechanical problems and drive motor reliability in a drinks dispensing machine [UK].

### **2. Organising electrical machine failure investigations and experimental work**

When NEI Parsons had several core failures on large hydrogen-cooled generators, I organised the extensive and rigorous failure investigations and the associated in-works and site experimental work carried out by a multi-disciplinary team of engineers and metallurgists and reported the results. The most spectacular failure was at Hunterston B, where approximately 600 kg of stator core plate melted before the machine tripped on a bar-to-earth fault. The generators were redesigned on the basis of the recommendations made and, as far as I know, no Parsons machine has had a core failure since.

### **3. Wide background of electrical machines experience - from small timing motors to large electrical machines**

For four years I was Group Leader of the Electromagnetics Group, R & D Laboratories NEI Parsons. This involved organising the design, installation and use of special purpose instrumentation of large generators to measure temperatures, flux densities and eddy currents, especially in the end regions and under transient conditions. Incidental studies were undertaken on arcing in hydrogen and factors affecting electrical contact resistances of rotor damper windings.

For 3 years I co-ordinated feasibility studies and experimental testing relating to Superconducting AC Generators at the International Research and Development Co. Ltd. During this period the properties of a novel helical stator winding were investigated. I also acted as an external consultant on small timing motors for Edgumbe Peebles and on armature flashover problems that occurred on the DC lift motors used on the Tracked Hovercraft.

As an NRDC Fellow at the University of Dundee, I designed synchronous reluctance motors with axially laminated rotors. I investigated the transient performance of reluctance and induction motors and developed a practical method of finger-printing the torque speed characteristics of machines during run-up. Prior to this work, I was involved in the early development of variable speed switched-field reluctance motors with thyristor commutation.

For two years I was employed as a Plant Application Engineer at AEI Rugby. This involved the specification of and computer simulation of the transient performance of AC and DC thyristor control system drive configurations for the metal rolling industry and for ship propulsion. Some experience was gained commissioning in the field.

**A. F. Anderson**

**November 2011**



## DR ANTONY F. ANDERSON BSc. Ph.D. CEng FIEE

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**Electrical Engineering Consultant.** He has an extensive background in Electrical R & D. Experienced electrical failure investigator and Electrical Expert Witness. He has successfully managed a variety of Contract R&D and industrial Business Process Improvement projects and has a track record of successful innovation. Experienced in patent literature search and interpretation and the assessment of claimed advances beyond state of the art.

### **1997 - 2012 : Independent Electrical Engineering Consultant and Expert Witness.**

**Electrical Engineering Consultancy:** Investigating stator end winding failure[Saudi Arabia], Investigating HV current transformer failure [Italy/Nigeria] Investigating medium-sized generator stator and rotor failure mechanisms [EU], Investigating generator rotor failure mechanisms [Colombia]; Large machine core failure investigation on behalf of loss adjusters [UK/overseas]; 100 MW core failure investigation [UK]; Investigating problems in hydro-generator testing [Canada]; Investigating a sequence of stator winding failures on deep well induction motor pumps [Libya]; Advising on in-situ repair of 30MW and 37.5 MW generator stators [México]; Investigating the possible winding failure mechanism on high speed switched reluctance motors [EU]; Magnetic bearing failure investigation [UK]; Auditing improvements in automatic voltage regulator subject to heavy vibration levels [EU]; Investigating the causes of supposed electric shock to a maintenance technician on a vacuum forming press [UK]; Advising a contract R & D laboratory specialising in electrical machine problems [UK]; Advising an Automobile Component Manufacturer's Research Laboratory on the patent aspects of novel switched-field reluctance motors.

**Electrical Expert Witness:** Automobile speed control failures and sudden acceleration events [UK, USA, France, Sweden, New Zealand]; Vehicle electro-hydraulic stability system [UK]; Vehicle Pressure Switch Fire [USA]; Vehicle electrical cable fire [UK]; Catastrophic armature failure of a 1300 kW D.C. industrial mixer motor, advising on repair and providing Expert Witness Reports[UK]; Failure of low voltage substation air circuit breaker controller [UK, Single Joint Expert]. Vacuum cleaner cable fire [UK]; Farmhouse electrical cable fire [UK]; Chicken Hatchery Fire [UK], Electric shock during fault finding in steel mill water pump cubicle[UK] ; Alleged shock from electric lift call button [UK]; Electromechanical problems and drive motor reliability in a drinks dispensing machine [UK];

**1990 – 96 : Principal Consultant MARI Group** Carrying out R&D, technology transfer and training for Industry, UK Government Departments, and the European Commission.

### **1970-90 : Parsons - a major manufacturer of turbine generator and associated plant for export**

1980-90: Manager- Information Systems Evaluation Department, NEI Parsons

1976-80: Group Leader - Electromagnetics Group R&D Laboratories NEI Parsons

1971-74: Group Leader Superconducting A. C. Machines Group IRD (Reyrolle-Parsons Group)

1970-71: Senior Design Engineer Superconducting A. C. Machines Group IRD

**Experience prior to 1970** Synchronous and switched field reluctance motor design and simulation of variable speed electrical drives and electro-mechanical and electro-hydraulic systems mainly in the metal rolling industry.

**QUALIFICATIONS:** Ph.D (1966), B.Sc (1st Cl. Hons. 1962) in Electrical Engineering, Univ. of St Andrews, Queens College, Dundee. Fellow of the Institution of Electrical Engineers, Member Royal Institution, Fellow Institution of Diagnostic Engineers. Fellow Royal Scottish Society of Arts.

**PUBLICATIONS:** 13 refereed and invited papers on Electrical Machine Design, Behaviour and Failure Mechanisms; 1984 IEE Ayrtton Premium; 8 Patents. Regular contributor New Scientist, 1 article in the New Dictionary of National Biography.

**PREVIOUS ACTIVITIES:** Member of the Advisory Panel for the IEE Engineering Management Journal 1991-2002; Chairman IEE Archives Committee 1995-99; Chairman IEE NE Centre 1988-9; Project Manager IEE Exhibition, National Garden Festival 1990.

**LANGUAGES:** Fluency in French and German with some knowledge of written Spanish.

**PERSONAL:** British - Age 72 (DOB 23/7/39) – Married

April 2012

## **Appendix 3**

### **Sudden Accelerations following braking in 2007 MY vehicles**

#### **From NHTSA-ODI Database**

# FORD

**FORD Model : CROWN VICTORIA Year : 2007 Manufacturer : FORD MOTOR COMPANY Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10355856 Number of Deaths: 0 Date of Failure: September 15, 2010 VIN : 2FAHP71W77X... Component: VEHICLE SPEED CONTROL**

**Summary:**

FORD CROWN VIC POLICE INTERCEPTOR,2007: ON TWO PREVIOUS OCCASIONS, UPON DEPRESSING BRAKE PEDAL AT STOP SIGN, ENGINE WOULD SEEM TO BEGIN TO RACE; HOWEVER, AFTER STOP I WOULD IMMEDIATELY LET OFF BRAKE TO GO ON THROUGH STOP SIGN AND ENGINE WAS NORMAL ON ACCELERATION. TO-DAY AS I LEFT MY PARKING SPACE I APPROACHED AN AUTOMATIC GATE TO PASS THROUGH AND DEPRESSED BRAKE PEDAL TO WAIT FOR GATE TO OPEN AND ENGINE BEGAN TO RACE TO THE POINT THAT I WAS UNABLE TO HOLD VEHICLE BACK AND TURNED OFF IGNITION TO AVOID HITTING GATE. A LARGE AMOUNT OF BLACK SMOKE RESULTED FROM RACING ENGINE. AFTER ENGINE SHUT-DOWN, I SHIFTED TO PARK, STARTED ENGINE AND HAD NORMAL IDLE. I DEPRESSED BRAKE TO SHIFT INTO DRIVE AND PROCEEDED THROUGH GATE IN NORMAL MANNER. THE ONLY COMMON SYSTEM THAT I AM AWARE OF (OTHER THAN POSSIBLE ELECTRICAL/COMPUTER) TO THE FUEL CONTROL IS THE VACUUM SYSTEM ASSOCIATED WITH THE BRAKE VACUUM BOOSTER AND WHATEVER VACUUM MAY AFFECT THE FUEL FEED. THE FOOT PEDAL WAS DEFINITELY IN AN IDLE POSITION. I AM CERTAIN THAT THIS ENGINE RACING PROBLEM IS INITIATED BY MY APPLYING BRAKES. \*TR

**FORD Model : EXPEDITION Year : 2007 Manufacturer : FORD MOTOR COMPANY Crash : Yes Fire : No Number of Injuries: 1 ODI ID Number : 10367253 Number of Deaths: 0 Date of Failure: November 21, 2010 VIN : Not Available Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 FORD EXPEDITION. THE VEHICLE WAS TAKEN TO AN INDEPENDENT MECHANIC FOR ROUTINE MAINTENANCE. THE TECHNICIAN STARTED THE IGNITION, AND WHEN THE BRAKE WAS ENGAGED THERE WAS A SUDDEN UNINTENDED ACCELERATION WHICH CAUSED THE VEHICLE TO CRASH INTO ONE PARKED UNOCCUPIED VEHICLE, AND FOUR PARKED VEHICLES WITH OCCUPANTS. THE DRIVER IN ONE OF THE PARKED VEHICLES SUSTAINED AN INJURY TO THE NECK. A POLICE REPORT WAS FILED. THE CONTACTS VEHICLE SUSTAINED SEVERE DAMAGE AND WAS TOWED TO A COLLISION CENTER. THE FAILURE MILEAGE WAS 56,000. THE VIN WAS UNAVAILABLE.

**FORD Model : EXPLORER Year : 2007 Manufacturer : FORD MOTOR COMPANY Crash : Yes Fire : No Number of Injuries: 0 ODI ID Number : 10207851 Number of Deaths: 0 Date of Failure: October 27, 2007 VIN : 1FMEU63E27U... Component: VEHICLE SPEED CONTROL**

**Summary:**

WE HAD JUST PURCHASED A NEW 2007 FORD EXPLORER, HAD ONLY BEEN DRIVING IT FOR THREE WEEKS, WE'D HADN'T EVEN MADE OUR FIRST PAYMENT YET. WE WERE AT A STOP AT A TRAFFIC LIGHT IN BUMPER-TO-BUMPER TRAFFIC, WHEN THE EXPLORER TOOK OFF BY ITSELF. BY THIS, I MEAN BOTH OF MY HUSBAND'S FEET WERE FIRMLY ON THE BRAKE PEDAL AND THE EXPLORER STARTED SURGING FORWARD BY ITSELF. TO AVOID COLLIDING WITH THE TRUCK IN FRONT OF US, HE TURNED THE VEHICLE TO GO DOWN BETWEEN THE TWO LANES, AND SCRAPED DOWN THE SIDES OF OTHER CARS. THE VEHICLE ONLY FINALLY STOPPED WHEN MY HUSBAND THREW THE VEHICLE IN THE PARK. THERE WAS VEHICLE DAMAGE TO TWO VEHICLES. THE VEHICLE WAS TAKEN TO THE DEALERSHIP WHERE THEY PERFORMED COMPREHENSIVE DIAGNOSTICS AND TESTING. THEY COULD FIND NOTHING WRONG WITH THE VEHICLE. WE HAD SUPPLIED THEM WITH COPIES OF 30-100 OTHER FORMAL COMPLAINTS FROM CONSUMERS WHO HAD EXPERIENCED SIMILAR SURGING IN THEIR EXPLORERS. THEY SAID THERE WAS NOTHING WRONG WITH IT AND THEREFORE WOULD NOT BE REPAIRING ANYTHING. THIS IS A VERY DANGEROUS DEFECT! WE WERE LUCKY NO ONE WAS INJURED AND WE ARE AFRAID TO DRIVE IT IN CASE IT HAPPENS AGAIN. WITH THE NUMEROUS OTHER COMPLAINTS, MANY SERVICE BULLETINS TO FORD, YOU WOULD THINK THERE WOULD BE A RECALL OR AT LEAST SOME OTHER RECOURSE BESIDES "SORRY, THERE'S NOTHING WRONG WITH IT, HAVE A NICE DAY." \*TR

**FORD Model : F-150 Year : 2007 Manufacturer : ROUSH PERFORMANCE PRODUCTS, INC. Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10451573 Number of Deaths: 0 Date of Failure: June 10, 2009 VIN : 1FTPW14V87F... Component: VEHICLE SPEED CONTROL**

**Summary:**

I READ AN ARTICLE IN THE NEWSPAPER ABOUT AN INVESTIGATION YOU ARE DOING ON FORD TAURUS AND SABLE VEHICLES IN THE 2001 TO 2006 MODEL YEARS FOR ACCELERATING ON THEIR OWN. I PURCHASED MY TRUCK IN FEBRUARY OF 2009 USED AND, IN THE THREE YEARS I HAVE OWNED IT, IT HAS DONE THE SAME THING ON FOUR SEPERATE OCCASIONS. I HAD IT CHECKED OUT BY THE LOCAL FORD DEALER IN MY HOME TOWN AND THEY COULD FIND NOTHING WRONG WITH IT. NOTHING SHOWED UP ON THEIR ELECTRONIC EQUIPMENT. THE FIRST TIME IT HAPPENED, I WAS UNHOOKING MY TRAVEL TRAILER AND PUT IT IN DRIVE TO PULL AWAY AND IT SURGED FORWARD IN MY DRIVEWAY. THE SECOND TIME, I WAS IN A CROWDED PARKING LOT AND IT SURGED FORWARD WHILE I WAS TRYING TO PARK. THE THIRD TIME, I WAS PULLING OUT OF MY DRIVEWAY. THE FOURTH TIME, I WAS PULLING INTO AN AUTOMATED CAR WASH AND NEARLY RAN PAST THE ATTENDANTS AND NEARLY CRASHED INTO THE EQUIPMENT. EACH TIME I WAS ABLE TO SHIFT IT INTO NEUTRAL AND TURN THE ENGINE OFF. IT REVS UP SO MUCH THAT I CAN'T HOLD IT WITH THE BRAKE. I THINK THIS SOUNDS LIKE WHAT YOU ARE INVESTIGATING ON THE OTHER VEHICLES AND IT MAY BE HAPPENING IN A WIDER RANGE OF FORD VEHICLES. I WOULD LOVE NOT HAVING TO WORRY ABOUT WHEN IT WILL HAPPEN NEXT.

**FORD Model : F-150 Year : 2007 Manufacturer : ROUSH PERFORMANCE PRODUCTS, INC. Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10403701 Number of Deaths: 0 Date of Failure: May 20, 2011 VIN : 1FTPW14V57K... Component: VEHICLE SPEED CONTROL**

**Summary:**

MY F150 WITH ABOUT 45000 MILES HAS TWICE HAD AN ENGINE SURGE AS I PULLED TO STOP WITH MY FOOT ON THE BRAKE. IT BASICALLY REVS TO ABOUT 4500 RPM FOR ABOUT 3 SECONDS. I BROUGHT IT INTO THE DEALER TWICE. THE FIRST TIME THE CHARGED ME ABOUT \$140 TO RESET MY COMPUTER CHIP. THE SECOND TIME I BROUGHT IT IN AND THEY SAID THERE WERE NO RECALLS AND BASICALLY I SHOULD PAY 300+ AND REPLACE THE THROTTLE BODY. I'M CERTAIN THERE IS A DEFECTIVE CHIP OF SOME SORT SO REPLACING A MECHANICAL DEVICE WILL NOT SOLVE THE PROBLEM. I'M GLAD I READ THESE BULLETINS BECAUSE I KNOW THIS SHOULD BE A MAJOR RECALL. I AM SAVING THIS EMAIL IN CASE I DAMAGE PROPERTY OR RUN SOMEONE OVER AT AN INTERSECTION OR PARKING LOT. PLEASE RESPOND TO ME TO LET ME KNOW WHAT IT WILL TAKE FOR A RECALL TO OCCUR. IT DOES SCARE ME TO DRIVE MY TRUCK! THE FIRST TIME I ENDED UP IN THE INTERSECTION AND THE SECOND, I ALMOST HIT THE CAR IN FRONT. \*TR

**FORD Model : F-150 Year : 2007 Manufacturer : FORD MOTOR COMPANY Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10371810 Number of Deaths: 0 Date of Failure: December 20, 2010 VIN : Not Available Component: VEHICLE SPEED CONTROL**

**Summary:**

MY WIFE WAS DRIVING HER 2007 F150 CREW CAB WITH 33,000 MILES. SHE WAS APPROACHING A STOP SIGN AND THE ENGINE REVVED VARY HIGH AND SHE COULD NOT STOP FOR THE INTERSECTION. FORTUNATELY THERE WAS NO ONCOMING TRAFFIC AS SHE SHOT STRAIGHT THROUGH THE INTERSECTION BEFORE SHE GOT THE VEHICLE UNDER CONTROL. SHE WAS SCARED TO DEATH. I CALLED THE FORD DEALER AND THEY SAY THEY NEVER HEARD OF THE PROBLEM! I TOLD THEM TO DO AN INTERNET SEARCH AND THEY WILL SEE THOUSANDS OF DOCUMENTED CASES BUT I'VE YET TO SEE A SOLUTION POSTED. \*TR



**FORD Model : F-150 Year : 2007 Manufacturer : FORD MOTOR COMPANY Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10235730 Number of Deaths: 0 Date of Failure: July 23, 2008 VIN : 1FTPX14V37N... Component: VEHICLE SPEED CONTROL**

**Summary:**

MY 2007 FORD F150 HAS A SEVERE SAFETY FLAW. FOUR TIMES SO FAR, BETWEEN MARCH 2008 AND JULY 2008, THE VEHICLE HAS ACCELERATED ON ITS OWN WHEN BRAKING TO STOP. THE TRUCK WILL SLOW TO ABOUT 10 MPH THEN SUDDENLY ON ITS OWN THE ENGINE REVS TO 2000 RPMS AND THE TRUCK SURGES FORWARD. THE ONLY WAY TO STOP IT IS TO THROW IT INTO NEUTRAL. THIS ALMOST CAUSED SEVERAL ACCIDENTS . TWO SEPARATE FORD DEALERS WORKED ON THIS PROBLEM BUT BOTH FOUND NOTHING WRONG EVEN THOUGH THE PROBLEM CONTINUES. I E-MAILED FORD ON 7/23/2008 BUT THEY HAVE NOT YET REPLIED. \*TR

**FORD Model : F-150 Year : 2007 Manufacturer : FORD MOTOR COMPANY Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10184732 Number of Deaths: 0 Date of Failure: February 2, 2007 VIN : 1FTPW12V57F... Component: VEHICLE SPEED CONTROL**

**Summary:**

WITHIN A WEEK OF PURCHASING OUR 2007 FORD 150 TRUCK, WE STARTED HAVING A PROBLEM WITH VEHICLE SUDDENLY LUNGING FORWARD WHENEVER THE VEHICLE WAS IDLING IN DRIVE WHILE STOPPED (FOR RED LIGHT, IN TURN LANE, AT PEDESTRIAN CROSSING, ETC.). THIS SOMETIMES OCCURRED WHEN THE DRIVER STILL HAD A FOOT ON THE BRAKE, OTHER TIMES JUST AS FOOT LIFTED FROM THE BRAKE, BUT ALWAYS WITHOUT DRIVER TOUCHING THE ACCELERATOR. INCIDENTS HAPPENED AT LEAST 6 TIMES IN ONE MONTH AND NOT CONSISTENTLY, WHICH CAUGHT DRIVER OFF GUARD EVEN MORE. DURING ONE INCIDENT, A PEDESTRIAN WAS ALMOST HIT AS SHE CROSSED THE STREET AT LEAST SEVERAL FEET AWAY FROM FRONT OF VEHICLE. INCIDENTS OCCURRED RANDOMLY AT LEAST 6 DIFFERENT TIMES THROUGHOUT THE MONTH OF FEBRUARY. \*JB

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## HONDA

**HONDA Model : ACCORD Year : 2007 Manufacturer : HONDA (AMERICAN HONDA MOTOR CO.) Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10446113 Number of Deaths: 0 Date of Failure: August 1, 2011 VIN : 1HGCM56187A... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 HONDA ACCORD. THE CONTACT STATED THAT THE VEHICLE SUDDENLY ACCELERATED WHEN THE BRAKE PEDAL DEPRESSED. THERE WAS NO WARNING BEFORE THE FAILURE OCCURRED AND THE FAILURE WAS EXPERIENCED SEVERAL TIMES. THE VEHICLE WAS TAKEN TO THE DEALER ON SEVERAL OCCASIONS FOR THE FAILURE. THE DEALER TEST DROVE THE VEHICLE, BUT WAS UNABLE TO DUPLICATE THE FAILURE. A DIAGNOSTIC TEST WAS ALSO PERFORMED AND DID NOT LOCATE A FAILURE CODE. THE VEHICLE WAS NOT REPAIRED. THE FAILURE MILEAGE WAS 40,000 AND THE CURRENT MILEAGE WAS 43,000.

**HONDA Model : ACCORD Year : 2007 Manufacturer : HONDA (AMERICAN HONDA MOTOR CO.) Crash : Yes Fire : No Number of Injuries: 0 ODI ID Number : 10426004 Number of Deaths: 0 Date of Failure: September 10, 2011 VIN : 1HGCM66517A... Component: VEHICLE SPEED CONTROL**

**Summary:**

I WAS PULLING INTO A PARKING SPACE IN FRONT OF MY APARTMENT BUILDING AND SLOWING DOWN TO PARK. MY FOOT WAS ON THE BRAKE SLOWING THE CAR DOWN TO A COMPLETE STOP WHEN SUDDENLY THE CAR ACCELERATED ON IT'S OWN AS IF POSSESSED. THE CAR JUMPED OVER THE CURB OF THE PARKING SPACE AND SMASHED INTO THE BRICK WALL OF MY APARTMENT BUILDING CAUSING EXTENSIVE DAMAGE TO THE FRONT OF MY CAR AND BREAKING THE BRICK WALL AND WINDOW OF THE BUILDING. I KNOW FOR A FACT THAT MY FOOT WAS ON THE BRAKE AND NOT ON THE GAS PEDAL. THIS IS CLEARLY AN ISSUE WITH THE VEHICLE. WE HAVE REPORTED THE ISSUE TO HONDA USA AND THEY WILL PROVIDE FURTHER INSTRUCTIONS AFTER THE VEHICLE IS REPAIRED. \*KB

**HONDA Model : ACCORD Year : 2007 Manufacturer : HONDA (AMERICAN HONDA MOTOR CO.) Crash : No Fire :  
No Number of Injuries: 0 ODI ID Number : 10370543 Number of Deaths: 0 Date of Failure: December 14, 2009 VIN :  
1HGCM726X7A... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 HONDA ACCORD COUPE. THE CONTACT STATED THAT WHILE DECELERATING FROM 5 MPH, THE ENGINE WOULD EXHIBIT AN UNUSUAL INCREASE IN ENGINE RPMS, UP AS IF IT WERE TRYING TO ACCELERATE. THE CONTACT WOULD HAVE TO SHIFT INTO NEUTRAL TO STOP THE ENGINE FROM IDLING. THE FAILURE OCCURRED ON AN INTERMITTENT BASIS. THE VEHICLE WAS NOT INSPECTED BY A DEALER NOR REPAIRED. THE FAILURE MILEAGE WAS APPROXIMATELY 28,000. UPDATED 02/03/11 \*LJ UPDATED 03/17/11

**HONDA Model : ACCORD Year : 2007 Manufacturer : HONDA (AMERICAN HONDA MOTOR CO.) Crash : Yes Fire :  
No Number of Injuries: 0 ODI ID Number : 10263554 Number of Deaths: 0 Date of Failure: November 30, 2008 VIN :  
1HGCM66557A... Component: VEHICLE SPEED CONTROL**

**Summary:**

ENTERED A PARKING SPOT THAT ENDED WITH A 6 INCH CONCRETE CURB. VEHICLE SUDDENLY ACCELERATED CAUSING \$10000 DAMAGE TO BODY & SMOKE COMING OUT OF ENGINE, OIL FLOWING ALL OVER AREA. MY FOOT WAS ON THE BRAKE AND I WAS MOVING AT A SNAIL'S PACE. \*TR

**HONDA Model : ACCORD Year : 2007 Manufacturer : HONDA (AMERICAN HONDA MOTOR CO.) Crash : Yes Fire :  
No Number of Injuries: 1 ODI ID Number : 10203483 Number of Deaths: 0 Date of Failure: September 17, 2007 VIN :  
1HGCM56377A... Component: VEHICLE SPEED CONTROL**

**Summary:**

ON SEPTEMBER 17, 2007, I WAS MAKING A RIGHT TURN INTO MY PARKING SPACE AT MY CONDO, WHEN SUDDENLY AND QUICKLY, MY 2007 HONDA ACCORD ACCELERATED FORWARD, CAUSING THE CAR TO GO OVER THE PARKING BLOCK AND CRASH INTO THE PALM TREE ON THE LAWN. THE DISTANCE THE CAR TRAVELED WAS APPROXIMATELY 15-20 FEET. IT WAS QUITE FREAKY AND EXTREMELY FRIGHTENING. FORTUNATELY, I DID NOT SUSTAIN ANY SERIOUS INJURIES. IF THE PALM TREE HAD NOT BEEN THERE, MY CAR WOULD HAVE CRASHED INTO THE FRONT PORCH OF MY NEIGHBOR'S GROUND FLOOR CONDO. MY ACCORD HAS NOT YET BEEN TOWED AWAY FOR DAMAGE ASSESSMENT AND REPAIR. HOWEVER, THE POLICE REPORT LISTED THE DAMAGE AT APPROXIMATELY. \$4000. I AM VERY RELUCTANT TO DRIVE A HONDA VEHICLE EVER AGAIN. \*JB

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## **HYUNDAI**

**HYUNDAI Model : SONATA Year : 2007 Manufacturer : HYUNDAI MOTOR COMPANY Crash : Yes Fire : No  
Number of Injuries: 0 ODI ID Number : 10329669 Number of Deaths: 0 Date of Failure: April 12, 2008 VIN :  
5NPEU46F67H... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 HYUNDAI SONATA. THE CONTACT STATED WHILE SITTING IDLE AT A TRAFFIC STOP BEHIND A TRUCK, THERE WAS AN UNUSUAL INCREASE IN ENGINE RPMS. THE VEHICLE SUDDENLY ACCELERATED INTO THE REAR OF THE TRUCK. THE VEHICLE WAS TOWED TO THE DEALER YET THE DEALER WAS UNABLE TO DUPLICATE THE FAILURE. THE DEALER ALSO ADVISED THAT IF THE FAILURE WERE TO OCCUR AGAIN, THAT THE CONTACT SHOULD PUT THE VEHICLE INTO NEUTRAL TO STOP THE UNINTENDED ACCELERATION. THE FAILURE OCCURRED AGAIN AND THE CONTACT WAS ABLE TO STOP THE ACCELERATION BY FOLLOWING THE DEALER'S ADVICE. THE FAILURE MILEAGE WAS 2,000 AND THE CURRENT MILEAGE WAS 13,000.

**HYUNDAI Model : SONATA Year : 2007 Manufacturer : HYUNDAI MOTOR COMPANY Crash : Yes Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10298626 Number of Deaths: 0 Date of Failure: January 6, 2010 VIN : Not**  
**Available Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 HYUNDAI SONATA. THE CONTACT WAS PARKING THE VEHICLE IN HIS GARAGE WHEN HE APPLIED PRESSURE TO THE BRAKE PEDAL, FOLLOWED BY AN UNINTENDED AGGRESSIVE AND FORCEFUL ACCELERATION. THE ENGINE REVVED EXCESSIVELY AND THE RPM'S RAPIDLY INCREASED. HE IMMEDIATELY FORCED THE GEAR SHIFT INTO THE "PARK POSITION"; HOWEVER, THE VEHICLE LUNGED FORWARD AND CRASHED INTO THE GARAGE WALL. THERE WERE NO PERSONAL INJURIES OR DAMAGE TO THE VEHICLE. THE CAUSE OF FAILURE HAS NOT BEEN DETERMINED. THE FAILURE AND CURRENT MILEAGES WERE 69,954. THE VIN WAS REJECTED FROM THE SYSTEM WHICH WILL BE UPDATED UPON RECEIPT OF THE COMPLAINT FORM. UPDATED 3/8/10 \*CN THE CONSUMERS HUSBAND WAS DRIVING THE VEHICLE UP THE DRIVEWAY, WHEN IT BEGAN TO ACCELERATE ON ITS OWN. HE HAD THE BRAKE TO THE FLOOR, BUT THE VEHICLE WOULD NOT STOP. HE THREW THE GEAR INTO PARK AND THE VEHICLE STILL DID NOT STOP. THE CONSUMER HIT THE GARAGE WALL WHICH ULTIMATELY STOPPED THE VEHICLE. UPDATED 06/18/10.\*JB

**HYUNDAI Model : TUCSON Year : 2007 Manufacturer : HYUNDAI MOTOR COMPANY Crash : Yes Fire : No**  
**Number of Injuries: 1 ODI ID Number : 10326596 Number of Deaths: 0 Date of Failure: April 12, 2007 VIN :**  
**KM8JM12B57U... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 HYUNDAI TUCSON. THE CONTACT STATED WHILE SITTING IDLE AT A TRAFFIC STOP, THERE WAS AN ABNORMAL INCREASE IN ENGINE RPM'S AND THE VEHICLE SUDDENLY ACCELERATED WITHOUT WARRANT. THE VEHICLE CRASHED INTO A PRECEDING VEHICLE. THE CONTACT CONFIRMED THIS WAS THE THIRD CRASH RESULTING FROM UNINTENDED ACCELERATION IN THE VEHICLE. THE CONTACT CONFIRMED THAT WHEN THE ACCELERATION WOULD OCCUR, THE VEHICLE COULD BE STOPPED BY SWITCHING THE GEAR TO NEUTRAL. THE VEHICLE WAS LEFT WITH THE DEALER HOWEVER, THE DEALER WAS UNABLE TO DUPLICATE THE FAILURE. THE FAILURE MILEAGE WAS 50 AND THE CURRENT MILEAGE WAS 28000.

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## INFINITI

**INFINITI Model : G35 SEDAN Year : 2007 Manufacturer : NISSAN NORTH AMERICA, INC. Crash : Yes Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10392422 Number of Deaths: 0 Date of Failure: March 13, 2011 VIN :**  
**JNKBV61F87M... Component: VEHICLE SPEED CONTROL**

**Summary:**

2007 INFINITI G35X PREMIUM 4DR ACCIDENT ON MARCH 13, 2011 IN PARKING LOT OF A CHURCH; AFTER I PARKED THE CAR, BEFORE CHANGING THE CAR TO PARK AND TAKEOFF THE SEAT BELT TO GO TO CHURCH. THE CAR WENT OUT OF CONTROL; ACCELERATED, AND I WAS UNABLE TO STOP THE CAR. I TRIED THE BRAKES 4 AND IT JUST KEPT SPEEDING UP FORWARD, TOWARDS THE CHURCH BUILDING WHICH MAY HAVE KILLED THE ATTENDEES OF THE CHURCH SERVICE. I FINALLY TRIED THE STEERING WHEEL TO THE RIGHT WHICH WORKED, HIT A TREE, A CAR AND VAN THAT WERE PARKING IN FRONT OF CHURCH AND FINALLY STOPPED THE INFINITI. AS OF NOW INSURANCE & INFINITI DEALER CHECKED AND REPORTED THE CAR BODY DAMAGES, DID NOT CHECK ANY SOFTWARE SPEED CONTROL MALFUNCTION. THEY WANT ME TO APPROVE THE FIXES. I WANT A TRUE INVESTIGATION ABOUT THE SPEED CONTROL ISSUES OF THIS MODEL OF INFINITI G35X 2007. KINDLY UPDATE ME WITH YOUR RECOMMENDATION ----- I FOUND SIMILAR CASES ON THE NET... TOYOTA PRIUS [HTTP://WWW.SATISFICE.COM/BLOG/ARCHIVES/420](http://www.satisfice.com/blog/archives/420)  
[HTTP://WWW.SATISFICE.COM/BLOG/ARCHIVES/426](http://www.satisfice.com/blog/archives/426) [HTTP://MONEY.CNN.COM/2010/03/15/AUTOS/TOYOTA\\_PRIUS\\_PRESSER/](http://money.cnn.com/2010/03/15/autos/toyota_prius_presser/)  
[HTTP://WWW.CLEVELAND.COM/NATION/INDEX.SSF/2010/03/FEDERAL\\_AND\\_TOYOTA\\_INVESTIGATO.HTML](http://www.cleveland.com/nation/index.ssf/2010/03/federal_and_toyota_investigato.html) INFINITI  
[HTTP://CAR-AND-SAFETY.COM/INFINITI-G35-SAFETY/INFINITI-G35-2004.HTM](http://car-and-safety.com/infiniti-g35-safety/infiniti-g35-2004.htm) [HTTP://CAR-AND-SAFETY.COM/INFINITI-VEHICLE-SPEED-CONTROL.HTM](http://car-and-safety.com/infiniti-vehicle-speed-control.htm). \*TR

**INFINITI Model : G35 SEDAN Year : 2007 Manufacturer : NISSAN NORTH AMERICA, INC. Crash : Yes Fire : No  
Number of Injuries: 0 ODI ID Number : 10258173 Number of Deaths: 0 Date of Failure: February 29, 2008 VIN :  
JNKBV61E87M... Component: VEHICLE SPEED CONTROL**

**Summary:**

2007 INFINITI G35S (PURCHASED MARCH 2007) ACCELERATED OUT OF CONTROL WHEN OWNER ATTEMPTED TO PARK CAR IN WORK PARKING GARAGE. OWNER TURNED INTO SPACE THEN BACKED CAR TO STRAIGHTEN OUT CAR IN THE PARKING SPACE. WHEN OWNER PUT CAR IN DRIVE TO COMPLETE THE PARKING, CAR ACCELERATED OUT OF CONTROL AND CRASHED INTO CONCRETE WALL. DRIVER AIRBAG DEPLOYED. OWNER HAD TO CRAWL OUT BACK DOOR DUE TO THE FORCE OF THE IMPACT WHICH SLID CAR INTO THE PARKED CAR ON PASSENGER SIDE AND DRIVER SIDE DOOR STUCK FROM DAMAGE. INSURANCE HAD INFINITI CHECK BLACK BOX AND CLAIMED NO FAULT/PROBLEMS WITH CAR. TOOK 30 DAYS TO FIX CAR. \$15,000 WORTH OF DAMAGE TO CAR, \$2000+ KNOWN DAMAGES TO OTHER CAR. \*TR

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## **JAGUAR**

**JAGUAR Model : X-TYPE Year : 2007 Manufacturer : JAGUAR CARS LTD Crash : No Fire : No Number of Injuries:  
0 ODI ID Number : 10258326 Number of Deaths: 0 Date of Failure: February 10, 2009 VIN :  
SAJWA51A66W... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 JAGUAR X-TYPE. THE CONTACT WAS DRIVING WHEN THE VEHICLE ACCELERATED UNEXPECTEDLY. AT THE TIME OF THE FAILURE, THE RPM'S DRAMATICALLY INCREASE, BUT THE WARNING INDICATORS WERE NOT ILLUMINATED ON THE INSTRUMENT PANEL. THE CONTACT HAD TO PLACE THE VEHICLE INTO NEUTRAL TO PREVENT IT FROM MOVING. THE RISK OF A SERIOUS CRASH WAS INCREASED. THE MANUFACTURER STATED THAT THE CAUSE OF THE FAILURE WAS UNKNOWN AND THERE WAS NO CURRENT REMEDY. THE FAILURE AND CURRENT MILEAGES WERE 32,390. UPDATED 3/19/09 \*CN THE INCIDENT ALSO OCCURRED WHILE STOPPED WITH THE BRAKES APPLIED. UPDATED 03/26/09.\*JB

**JAGUAR Model : XK Year : 2007 Manufacturer : JAGUAR CARS LTD Crash : No Fire : No Number of Injuries: 0  
ODI ID Number : 10240634 Number of Deaths: 0 Date of Failure: June 1, 2007 VIN : SAJWA44B675... Component:  
VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 JAGUAR XK CONVERTIBLE. WHILE APPROACHING A STOP SIGN, THE CONTACT APPLIED THE BRAKES. THE VEHICLE LUNGED FORWARD INSTEAD OF STOPPING. THE BRAKE PEDAL WAS DEPRESSED, BUT THE VEHICLE KEPT MOVING FORWARD AT LESS THAN 2 MPH. THE VEHICLE DID NOT COME TO A COMPLETE STOP UNTIL IT WAS APPROXIMATELY THREE FEET INTO THE INTERSECTION. THE DEALER STATED THAT THE ISSUE WAS COMMON AND TO CONTINUE DRIVING THE VEHICLE. HE WAS ADVISED TO CALL BACK IF THE FAILURE RECURRED. THE VEHICLE WORKED NORMALLY FOR APPROXIMATELY 3,000 MILES BEFORE THE FAILURE RECURRED. IN THIS INCIDENT, THE VEHICLE LUNGED FORWARD AND STOPPED APPROXIMATELY TWO INCHES FROM THE PRECEDING VEHICLE. THE VEHICLE WAS TOWED TO THE DEALER. THEY KEPT THE VEHICLE FOR APPROXIMATELY 24 HOURS, BUT WERE UNABLE TO FIND ANY FAILURES. THE VEHICLE WAS TOWED BACK TO THE CONTACT'S RESIDENCE; HOWEVER, HE IS SCARED TO DRIVE IT BECAUSE THE FAILURE COULD RECUR. THE FAILURE MILEAGE WAS 2,000 AND CURRENT MILEAGE WAS 5,000. UPDATED 09/29/08. \*JB

**JAGUAR Model : XK Year : 2007 Manufacturer : JAGUAR CARS LTD Crash : No Fire : No Number of Injuries: 0  
ODI ID Number : 10171038 Number of Deaths: 0 Date of Failure: October 12, 2006 VIN :  
SAJWA44B075... Component: VEHICLE SPEED CONTROL**



**Summary:**

IN THE EVENING OF 10/12/2006, WITHIN ONE DAY OF DRIVING A NEWLY PURCHASED 2007 JAGUAR XK, UPON STARTING, THE VEHICLE RACED INDEPENDENTLY BETWEEN 6 AND 8,000 RPMS UNCONTROLLABLY. THIS "RUNAWAY" CAR EVENT COULD ONLY BE CEASED BY SHUTTING THE CAR DOWN. THE VEHICLE WAS RETURNED TO THE JAGUAR DEALERSHIP IMMEDIATELY THE NEXT MORNING WITH DETAILS OF THE OCCURRENCE. ON 10/13/2006, THE SERVICE MANAGER AT CROWN JAGUAR, JOHN SCHNEPP INDICATED THAT HE HAD REPORTED THE INCIDENT TO JAGUAR AND HAD BEEN INFORMED BY JAGUAR THAT THE VEHICLE WAS RELEASED WITH DEFECTIVE SOFTWARE AND THAT THERE HAD BEEN AT LEAST TWO OTHER DEALERSHIPS THAT HAD REPORTED THE PROBLEM ALREADY. HE INDICATED THAT HE WAS INSTRUCTED TO UPGRADE THE ONBOARD SOFTWARE FOR THE PURCHASED VEHICLE TO THE MOST CURRENT RELEASE. WE ASKED WHAT WERE THEY GOING TO DO WITH THE OTHER 6 OR MORE OTHER VEHICLES THAT THEY HAD IN INVENTORY. THE SERVICE MANAGER STATED "...NOTHING UNLESS THEY EXHIBIT THE SAME PROBLEM". WE BELIEVE THAT THIS TYPE OF DEFECT IS NOT ONLY SERIOUS ENOUGH TO WARRANT A COMPREHENSIVE REVIEW OF HIS VEHICLES IN INVENTORY, BUT ALSO WARRANTS A MANUFACTURER RECALL. A RUNAWAY VEHICLE COULD RESULT IN NOT ONLY DEATH OR INJURY TO A DRIVER AND PASSENGER(S), BUT ALSO PEDESTRIANS. THIS EVENT WAS REPORTED IN THE AM ON 10/13/2006 VIA PHONE TO GREGORY MAGNO AT THE OFFICE OF DEFECT INVESTIGATION AT NHTSA. MR. MAGNO INSTRUCTED US TO REPORT THIS DEFECT VIA THIS WEB SITE. \*NM

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## **JEEP**

**JEEP Model : COMMANDER Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10399550 Number of Deaths: 0 Date of Failure: April 28, 2011 VIN : 1J8HG48KX7C... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 JEEP COMMANDER. THE CONTACT STATED WHILE STOPPED WITH THE FOOT ON THE BRAKE PEDAL, THE VEHICLE SURGED FORWARD. THE CONTACT HAD TO ENGAGE THE EMERGENCY BRAKE TO STOP THE VEHICLE. THE VEHICLE WAS TAKEN TO AN INDEPENDENT REPAIR SHOP WHERE THEY WERE IN THE PROCESS OF DIAGNOSING THE FAILURE. THE MANUFACTURER WAS NOT NOTIFIED OF THE DEFECT. THE CONTACT STATED A SUDDEN ACCELERATION HAD OCCURRED THREE TIMES PRIOR AND EXPRESSED CONCERN OVER A POTENTIAL CRASH. THE FAILURE MILEAGE WAS 59,000.

**JEEP Model : COMMANDER Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10381415 Number of Deaths: 0 Date of Failure: March 24, 2009 VIN : 1J8HH48K37C... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 JEEP COMMANDER. THE CONTACT STATED THAT THE VEHICLE LUNGED FORWARD WHILE THE BRAKES WERE APPLIED. THE VEHICLE COULD POTENTIALLY LUNGE FORWARD AND CRASH INTO ANOTHER VEHICLE. THE CONTACT TOOK THE VEHICLE TO THE DEALER WHO STATED THAT THE VEHICLE NEEDED BASIC ROUTINE MAINTENANCE. THE DEALER PERFORMED A TUNE-UP AND CLEANED THE FUEL SYSTEM; HOWEVER, IT DID NOT CORRECT THE FAILURE. THE CONTACT TOOK VEHICLE THE VEHICLE BACK TO THE DEALER WHO STATED THAT THE VEHICLE NEEDED A NEW GEAR SHIFT. THE GEAR SHIFT REPAIR PART WAS ON BACK ORDER. THE CONTACT STATED THAT THIS WAS A KNOWN FAILURE THAT THE MANUFACTURER NEEDED TO ADDRESS. THE FAILURE MILEAGE WAS 84,000.

**JEEP Model : COMMANDER Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10361576 Number of Deaths: 0 Date of Failure: December 24, 2008 VIN : 1J8HG48K57C... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 JEEP COMMANDER. THE CONTACT STATED THAT WHENEVER THE VEHICLE WAS BROUGHT TO A COMPLETE STOP, THE ENGINE WOULD EXHIBIT AN UNUSUAL INCREASE IN RPMS AND THE VEHICLE WOULD ABNORMALLY ACCELERATE. THE VEHICLE WAS TAKEN TO THE DEALER WHERE THEY INSPECTED AND RAN A DIAGNOSTIC BUT COULD NOT DUPLICATE THE FAILURE. THE VEHICLE WAS TAKEN TO THE DEALER AT LEAST THREE TIMES FOR THE EXACT SAME FAILURE. THE VEHICLE WAS NOT REPAIRED. THE MANUFACTURER WAS NOTIFIED AND OFFERED NO ASSISTANCE. THE FAILURE MILEAGE WAS 12,000 AND THE CURRENT MILEAGE WAS 61,000.

**JEEP Model : COMMANDER Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10314127 Number of Deaths: 0 Date of Failure: September 22, 2007 VIN : 1J8HH48K47C... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 JEEP COMMANDER. THE CONTACT STATED THAT AS SHE STOPPED HER VEHICLE THERE WAS AN UNINTENDED ACCELERATION. IT DOES NOT MATTER IF THE VEHICLE WAS IN PARK OR DRIVE THE VEHICLE ACCELERATED ON ITS OWN. THE VEHICLE WAS TAKEN TO THE DEALER BUT THEY COULD NOT FIX THE FAILURE. THE VEHICLE WAS TAKEN TO THE DEALER MORE THAN TWELVE TIMES. THE MANUFACTURER WAS ALSO CALLED AND THEY DO NOT KNOW HOW TO ADVISE THE DEALER TO FIX THE FAILURE. THE FAILURE MILEAGE WAS 40,000.

**JEEP Model : LIBERTY Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : Yes Fire : No Number of Injuries: 0 ODI ID Number : 10238208 Number of Deaths: 0 Date of Failure: July 8, 2008 VIN : Not Available Component: VEHICLE SPEED CONTROL**

**Summary:**

LTR FROM SENATOR NELSON ON BEHALF OF CONSTITUENT, WHO HAS EXPERIENCED ACCELERATION PROBLEMS WITH HER 2007 JEEP LIBERTY. \*NJ THE CONSUMER WAS STOPPED AT A LIGHT WHEN ALL OF A SUDDEN, THE VEHICLE ACCELERATED, HITTING THE VEHICLE IN FRONT OF HER. THE CONSUMER HAD BOTH FEET ON THE BRAKE, BUT THE VEHICLE WOULD NOT STOP. THE VEHICLE WAS TOWED A REPAIR SHOP. THE MECHANIC INFORMED THE CONSUMER, THE ELECTRONIC THROTTLE NEEDED TO BE RECALIBRATED. \*JB

**JEEP Model : WRANGLER Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : Yes Fire : No Number of Injuries: 1 ODI ID Number : 10437951 Number of Deaths: 0 Date of Failure: November 8, 2011 VIN : 1J4FA24197L... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 JEEP WRANGLER. THE CONTACT STATED THAT UPON SHIFTING INTO DRIVE, THE VEHICLE SURGED FORWARD UNTIL IT CRASHED INTO ANOTHER VEHICLE. THE CONTACT SUFFERED MINOR INJURIES. THE VEHICLE WAS TOWED TO AN INDEPENDENT REPAIR SHOP WHERE IT WAS REPAIRED. THE MANUFACTURER WAS MADE AWARE OF THE FAILURE AND WILL SEND AN INVESTIGATOR

TO EXAMINE THE VEHICLE. THE FAILURE AND CURRENT MILEAGE WAS 54,000.

**JEEP Model : WRANGLER 2-DR 4X4 Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : Yes Fire : No  
Number of Injuries: 1 ODI ID Number : 10437961 Number of Deaths: 0 Date of Failure: November 8, 2011 VIN :  
1J4FA24197L... Component: VEHICLE SPEED CONTROL**

**Summary:**

MY JEEP WRANGLER (2DR, 4X4) WAS IN THE PARKING LOT AT WORK. WHEN I STARTED IT AND MOVED THE GEAR SHIFT FROM PARK TO DRIVE, THE VEHICLE SUDDENLY ACCELERATED VIOLENTLY. WITHIN 2 SECONDS, I WAS SLAMMING INTO THE VEHICLE IN FRONT OF ME. BY THEN I WAS JAMMING ON THE BRAKES AGAIN, BUT MY CAR STILL FELT LIKE IT WAS INCREASING IN SPEED--THROTTLE WIDE OPEN! WHEN I HIT THE CAR IN FRONT OF ME, MY JEEP PUSHED IT ABOUT 15 FEET UP OVER A CURB TIL IT FINALLY HIT ANOTHER CAR AND STOPPED. ITS BACK TIRES WERE ABOUT 10 INCHES DEEP INTO THE DIRT AND JAMMED UP AGAINST ANOTHER VEHICLE. MY JEEP WAS STILL GOING, AND CLIMBED UP ACROSS HIS HOOD AND OVER TO THE OTHER SIDE, COMING TO REST UPRIGHT. MY JEEP LEFT TIRE MARKS ON THE PAVEMENT AS I TRIED TO STOP IT. THE CAR I HIT, A 2009 VOLKSWAGEN, WAS DESTROYED--TOTALLED. OVER \$20,000 DAMAGE ON THAT CAR ALONE. THERE WAS OVER \$7000 DAMAGE TO MY JEEP. THE 3RD VEHICLE HAD DAMAGE AS WELL. THE ENTIRE INCIDENT TOOK LESS THAN 5 SECONDS---THIS WAS CONFIRMED BY PEOPLE WHO HEARD THE SOUNDS OF THE ENGINE SCREAMING AND THE CRASH ITSELF. MY TOES AND THE BALL OF MY FOOT HURT FOR A COUPLE OF DAYS FROM JAMMING ON THE BRAKE, BUT MY JEEP DIDN'T HAVE TIME TO STOP BEFORE IT WAS HITTING THE CAR IN FRONT OF ME. THE CAR I HIT SLOWED ME DOWN, AND PROBABLY SAVED ME. I HAVE SOME MINOR WHIPLASH AND HAD A TERRIBLE HEADACHE FOR SEVERAL DAYS, BUT OTHERWISE NO ONE WAS INJURED--COULD HAVE BEEN FATAL IF THAT CAR WASN'T IN FRONT OF ME TO STOP ME, BECAUSE I WAS GOING SO FAST. COULD HAVE KILLED SOMEONE IN PARKING LOT. CHRYSLER HAS SENT AN INVESTIGATOR OVER LAST WEEK (AN OVER-NIGHT TRIP) TO LOOK AT THE JEEP, AND HE SAID THAT THE THROTTLE BODY HAD AN EXCESSIVE AMOUNT OF "COKING" (A STICKY CARBON/TAR-LIKE RESIDUE) IN IT, AND THAT IT COULD HAVE STUCK AND CAUSED THE SUDDEN ACCELERATION. I JUST GOT ANOTHER CALL FROM THE SAME CHRYSLER INVESTIGATOR AND HE WANTS TO SEE THE JEEP AGAIN. \*TR

Make : JEEP	Model : WRANGLER SAHARA	Year : 2007
Manufacturer : CHRYSLER GROUP LLC		
Crash : Yes	Fire : No	Number of Injuries: 0
ODI ID Number : 10442717		Number of Deaths: 0
Date of Failure: January 1, 2012		
VIN : 1J4GA59137L...		
Component: VEHICLE SPEED CONTROL		
Summary:		

TL\* THE CONTACT OWNS A 2007 JEEP WRANGLER SAHARA. THE CONTACT STATED THAT THE VEHICLE WAS PARKED AND AS SHE SHIFTED INTO DRIVE, THE VEHICLE ABNORMALLY ACCELERATED AND CRASHED INTO A GARAGE WALL. THERE WERE NO INJURIES. THE INSURANCE COMPANY WAS NOTIFIED OF THE CRASH. THE DEALER PERFORMED A DIAGNOSTIC ON THE VEHICLE TO DETERMINE THE CAUSE OF THE FAILURE BUT THE TEST DID NOT GENERATE ANY FAILURE CODES. THE CONTACT WAS AWAITING FURTHER TESTING OF THE VEHICLE AND POSSIBLE REPAIRS. THE MANUFACTURER WAS NOTIFIED WHO STATED THEY WOULD RETURN THE CONTACT'S CALL

WITHIN FIVE BUSINESS DAYS. THE FAILURE MILEAGE WAS 16,300.

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**JEEP Model : WRANGLER SAHARA Year : 2007 Manufacturer : CHRYSLER GROUP LLC Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10442579 Number of Deaths: 0 Date of Failure: January 3, 2012 VIN : 1J4GA59157L... Component: VEHICLE SPEED CONTROL**

**Summary:**

I WAS PULLING OUT OF A DRIVEWAY AND THE GAS PEDDLE WENT ALL THE WAY TO THE FLOOR. I TRIED TO BRAKE AND THE VEHICLE TOOK OFF TO APPROX. 45 MILES PER HOUR WHILE I WAS STEPPING ON THE BRAKE, IT CONTINUED TO ACCELERATE FOR APPROX. 15 SECONDS. THE CAR EVENTUALLY STARTED TO FISHTAIL AFTER I PUT IT IN NEUTRAL AND STOPPED IN THE MIDDLE OF THE HIGHWAY. I LOOKED TO SEE IF ANYTHING WAS STUCK ON THE GAS PEDDLE AND THERE WAS NOT. I TURNED THE CAR OFF AND HAD TO TAP ON THE GAS PEDDLE TO GET IT TO COME UP FROM THE FLOOR. THE CAR WAS TOWED TO THE DEALERSHIP AND THEY DID NOT FIND ANYTHING WRONG WITH IT. I AM VERY FRIGHTENED OF DRIVING IT AGAIN IN CASE THIS HAPPENS ONCE MORE. PLEASE LET ME KNOW IF YOU HAVE HEARD OF ANYTHING LIKE THIS HAPPENING TO ANYONE ELSE. \*TR

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## KIA

**KIA Model : AMANTI Year : 2007 Manufacturer : KIA MOTORS CORPORATION Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10264763 Number of Deaths: 0 Date of Failure: April 2, 2009 VIN : KNALD125775... Component: VEHICLE SPEED CONTROL**

**Summary:**

THE DATE BELOW REFERS TO MOST RECENT EVENT. THIS HAS HAPPENED AROUND 10 TIMES SINCE I HAVE OWNED THE VEHICLE (2007 KIA AMANTI PURCHASED NEW). IN THE MOST RECENT EVENT I COULD NOT STOP THE CAR FROM RUNNING A RED LIGHT, ENTERING AN INTERSECTION AND NEARLY HAD A COLLISION IN THE PROCESS. THE PROBLEM IS THIS: EVERY NOW AND THEN APPLYING PRESSURE TO THE BRAKES--WHICH OF COURSE IS SUPPOSED TO STOP THE CAR--ACTUALLY CAUSES THE CAR TO ACCELERATE DRAMATICALLY--TO JACKRABBIT I THINK IT IS CALLED--WITH SUCH FORCE THAT EVEN FULL PRESSURE APPLIED TO THE BRAKES CANNOT STOP IT. THE TACHOMETER GOES INTO THE RED OR DANGER ZONE WHEN THIS HAPPENS. I HAVE NOTED ON KIA FORUM (A WEB SITE FOR KIA OWNERS WITH NO CONNECTION TO KIA MOTOR COMPANY) OTHER AMANTI OWNERS HAVE REPORTED THE SAME PROBLEM. THE KIA COMPANY DOES NOT ACKNOWLEDGE ANY PROBLEM AND SAYS THAT I MUST TAKE IT IN SO THAT IT CAN BE FIXED IF THE SERVICE DEPARTMENT CAN DUPLICATE THE PROBLEM. OF COURSE, GIVEN THE INFREQUENCY OF THE PROBLEM, THEY HAVE NOT BEEN ABLE TO DUPLICATE THE PROBLEM WHEN I HAVE TAKEN IT IN--MOST RECENTLY A COUPLE OF DAYS AGO. SINCE I CAN NEVER KNOW WHEN IT MIGHT HAPPEN, ALL DRIVING OF THE CAR MAKES ME VERY ANXIOUS--AFRAID IT WILL HAPPEN, FOR EXAMPLE, WHEN I APPROACH A CROSSWALK FULL OF CHILDREN. I FEEL I HAVE NO CHOICE BUT TO GET RID OF THE CAR. I WILL, OF COURSE, FEEL MORALLY OBLIGATED TO REVEAL THE PROBLEM WHEN I TRADE THE CAR IN AND WILL THUS NO DOUBT TAKE A SIGNIFICANT FINANCIAL LOSS. THIS WILL BE BETTER THAN HURTING SOMEONE EITHER INSIDE OR OUTSIDE OF THE CAR, HOWEVER. I KNOW VERY LITTLE ABOUT CARS, BUT I WOULD GUESS IT IS SOME KIND OF COMPUTER PROBLEM THAT HAPPENS ONLY UNDER CERTAIN UNPREDICTABLE CONDITIONS. JUST KNOWING IT COULD HAPPEN AT ANY TIME, HOWEVER, MAKES THE CAR TOO SCARY AND DANGEROUS TO DRIVE. IF I CAN, I WILL GET RID OF THE CAR AS EARLY AS

TOMORROW EVEN IF I TAKE A SIGNIFICANT FINANCIAL LOSS. \*TR

**KIA Model : SEDONA Year : 2007 Manufacturer : KIA MOTORS CORPORATION Crash : Yes Fire : No Number of Injuries: 0 ODI ID Number : 10247746 Number of Deaths: 0 Date of Failure: March 25, 2008 VIN : KNDMB233976... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 KIA SEDONA. THE CONTACT NOTICED THAT THE COMPUTER IN THE VEHICLE WOULD SOMETIMES ACCELERATE ON ITS OWN. THE FIRST INSTANCE OCCURRED WHILE TEST DRIVING THE VEHICLE. THE VEHICLE ACCELERATED WHEN HE REMOVED HIS FOOT FROM THE BRAKE PEDAL. THE DEALER STATED THAT THE FAILURE WAS CAUSED BY THE VEHICLE BEING PARKED ON THE SALES LOT FOR MONTHS. TWO WEEKS AFTER PURCHASING THE VEHICLE, THE FAILURE RECURRED. WHILE DRIVING IN REVERSE AT 20 MPH, THE CONTACT CRASHED INTO A FENCEPOST DUE TO THE FAILURE. HE TOOK THE VEHICLE TO THE DEALER NINE TIMES FOR A DIAGNOSTIC, BUT NO ERROR CODES COULD BE FOUND. THE MANUFACTURER DID NOT ASSIST. THE CURRENT MILEAGE WAS 42,833 AND FAILURE MILEAGE WAS 30,193.

**KIA Model : SORENTO Year : 2007 Manufacturer : KIA MOTORS CORPORATION Crash : Yes Fire : No Number of Injuries: 0 ODI ID Number : 10384268 Number of Deaths: 0 Date of Failure: February 21, 2011 VIN : KNDJD736675... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 KIA SORENTO. THE CONTACT STATED THAT WHILE PARKING THE VEHICLE WITH HER FOOT ON THE BRAKE, THE VEHICLE SUDDENLY ACCELERATED AND CRASHED INTO ANOTHER VEHICLE IN THE DRIVEWAY. THERE WERE NO INJURIES. THE VEHICLE WAS TOWED TO AN AUTHORIZED DEALER WHO WOULD INSPECT THE FAILURE. THE CONTACT CALLED THE MANUFACTURER WHO STATED THAT A REPRESENTATIVE WOULD RETURN HIS CALL. THE FAILURE MILEAGE WAS 60,456.

**KIA Model : SPECTRA Year : 2007 Manufacturer : KIA MOTORS CORPORATION Crash : Yes Fire : No Number of Injuries: 0 ODI ID Number : 10435512 Number of Deaths: 0 Date of Failure: November 13, 2011 VIN : Not Available Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 KIA SPECTRA. THE CONTACT STATED THAT THE VEHICLE EXHIBITED AN ABNORMALLY LOUD REVING NOISE. WHILE DRIVING 5 MPH AND ATTEMPTING TO PARK WITH THE BRAKES APPLIED, THE VEHICLE SUDDENLY ACCELERATED AND CRASHED INTO A POST. THE CONTACT WAS NOT INJURED. THE VEHICLE WAS ABLE TO BE DRIVEN FROM THE SCENE. THE MANUFACTURER WAS NOT CONTACTED. THE FAILURE AND THE CURRENT MILEAGES WERE APPROXIMATELY 30,000. THE VIN WAS UNAVAILABLE.

**KIA MOTORS CORPORATION Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10361914 Number of Deaths: 0 Date of Failure: November 24, 2008 VIN : KNAFE162X75... Component: VEHICLE SPEED CONTROL**

**Summary:**

IN 2008 I PURCHASED A NEW 2007 KIA SPECTRA 5 SX , IN NOVEMBER OF THAT YEAR I WAS RETURNING HOME FROM A DOCTORS APPOINTMENT AND HAD STOPPED AT A STOP SIGN, WHEN MY AUTOS ENGINE STARTED TO REVING AND MOVING FORWARD WHILE MY FOOT WAS ON THE BRAKE PEDAL, I PRESSED AS HARD AS I COULD WITH MY FOOT , BUT THAT DID NOT STOP THE CAR FROM MOVING FORWARD, THE TIRES



WERE SPINNING, I THEN PUT MY OTHER FOOT ON THE BRAKE PEDAL AND PRESSED AS HARD AS I COULD WAS ABLE TO SHIFT THE GEAR SHIFT INTO NEUTRAL AND THAT STOPPED MOVING FORWARD, BUT THE ENGINE CONTINUED REVING, I THEN WAS ABLE TO TURN THE IGNITION OFF. I LET THE CAR REMAIN OFF FOR ABOUT 15 SECONDS AND TURNED THE IGNITION ON AGAIN THE ENGINE STARTED TO REV AGAIN, I HAD TO TURN ENGINE OFF AGAIN, AFTER ABOUT 15 SECONDS I TURNED THE ENGINE ON AND IT WAS NORMAL SO I WENT HOME AND MADE AN APPOINTMENT WITH MY SERVICE PROVIDER TO HAVE THE AUTO CHECKED OUT FOR THIS PROBLEM. THEY COULD NOT FIND THE PROBLEM. I CALLED THE MANUFACTURER AND SPOKE TO CASE MANAGER (ALBERT) WHO SUGGESTED I GO TO ANOTHER KIA DEALER. I WENT TO KIA OF BAYSIDE IN GREAT NECK, N.Y. (THEY ARE OUT OF BUSINESS NOW). THEY INSPECTED THE VEHICLE AND COULD NOT LOCATE THE PROBLEM. THE TECHNICIAN SUGGESTED THAT THE CRUISE CONTROL MODULE BE DISCONNECTED, WHICH HE DID , AND TOLD ME TO DRIVE CAR FOR TWO WEEKS AND COME BACK TO THE SHOP. I RETURNED TO THE SHOP ON 1/20/09 ( I ORIGINALLY TOOK CAR TO BAYSIDE KIA ON 12/22/08) I TOLD THE TECH THAT NOTHING HAPPENED DURING THE 2 WEEK PERIOD. HE THEN CALLED KIA HEADQUARTERS AND REQUESTED THAT A NEW CRUISE CONTROL MODULE BE INSTALLED. THE TECH ORDERED THE NEW MODULE FOR THE CAR AND RECONNECTED THE OLD MODULE. ON 01/20/09, I HAD ANOTHER EPISODE WITH THE CAR REVING AND MOVING FORWARD AND IT ALSO DID THE SAME THING IN REVERSE, THIS WAS IN PELHAM MANOR, N.Y. JUST ACROSS THE BRIDGE FROM WHERE I LIVE, 2 HOURS LATER I WAS AT THE BARTOW MALL , IN MY NEIGHBORHOOD IT HAPPENED AGAIN, IT DONE THIS 4 MORE TIMES KIA REFUSES TO DO ANYTHING . \*TR

**KIA MOTORS CORPORATION Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10361914 Number of Deaths: 0 Date of Failure: November 24, 2008 VIN : KNAFE162X75... Component: VEHICLE SPEED CONTROL Summary:**

IN 2008 I PURCHASED A NEW 2007 KIA SPECTRA 5 SX , IN NOVEMBER OF THAT YEAR I WAS RETURNING HOME FROM A DOCTORS APPOINTMENT AND HAD STOPPED AT A STOP SIGN, WHEN MY AUTOS ENGINE STARTED TO REVING AND MOVING FORWARD WHILE MY FOOT WAS ON THE BRAKE PEDAL, I PRESSED AS HARD AS I COULD WITH MY FOOT , BUT THAT DID NOT STOP THE CAR FROM MOVING FORWARD, THE TIRES WERE SPINNING, I THEN PUT MY OTHER FOOT ON THE BRAKE PEDAL AND PRESSED AS HARD AS I COULD WAS ABLE TO SHIFT THE GEAR SHIFT INTO NEUTRAL AND THAT STOPPED MOVING FORWARD, BUT THE ENGINE CONTINUED REVING, I THEN WAS ABLE TO TURN THE IGNITION OFF. I LET THE CAR REMAIN OFF FOR ABOUT 15 SECONDS AND TURNED THE IGNITION ON AGAIN THE ENGINE STARTED TO REV AGAIN, I HAD TO TURN ENGINE OFF AGAIN, AFTER ABOUT 15 SECONDS I TURNED THE ENGINE ON AND IT WAS NORMAL SO I WENT HOME AND MADE AN APPOINTMENT WITH MY SERVICE PROVIDER TO HAVE THE AUTO CHECKED OUT FOR THIS PROBLEM. THEY COULD NOT FIND THE PROBLEM. I CALLED THE MANUFACTURER AND SPOKE TO CASE MANAGER (ALBERT) WHO SUGGESTED I GO TO ANOTHER KIA DEALER. I WENT TO KIA OF BAYSIDE IN GREAT NECK, N.Y. (THEY ARE OUT OF BUSINESS NOW). THEY INSPECTED THE VEHICLE AND COULD NOT LOCATE THE PROBLEM. THE TECHNICIAN SUGGESTED THAT THE CRUISE CONTROL MODULE BE DISCONNECTED, WHICH HE DID , AND TOLD ME TO DRIVE CAR FOR TWO WEEKS AND COME BACK TO THE SHOP. I RETURNED TO THE SHOP ON 1/20/09 ( I ORIGINALLY TOOK CAR TO BAYSIDE KIA ON 12/22/08) I TOLD THE TECH THAT NOTHING HAPPENED DURING THE 2 WEEK PERIOD. HE THEN CALLED KIA HEADQUARTERS AND REQUESTED THAT A NEW CRUISE CONTROL MODULE BE INSTALLED. THE TECH ORDERED THE NEW MODULE FOR THE CAR AND RECONNECTED THE OLD MODULE. ON 01/20/09, I HAD ANOTHER EPISODE WITH THE CAR REVING AND MOVING FORWARD AND IT ALSO DID THE SAME THING IN REVERSE, THIS WAS IN PELHAM MANOR, N.Y. JUST ACROSS THE BRIDGE FROM WHERE I LIVE, 2 HOURS LATER I WAS AT THE BARTOW MALL , IN MY NEIGHBORHOOD IT HAPPENED AGAIN, IT DONE THIS 4 MORE TIMES KIA REFUSES TO

DO ANYTHING . \*TR

**KIA Model : SPECTRA Year : 2007 Manufacturer : KIA MOTORS CORPORATION Crash : Yes Fire : No Number of Injuries: 1 ODI ID Number : 10280202 Number of Deaths: 0 Date of Failure: July 27, 2009 VIN : KNAFE122875... Component: VEHICLE SPEED CONTROL**

**Summary:**

1. TWO PASSENGERS (FEMALE 64 YR DRIVER AND FEMALE 13 YR OLD PASSENGER) WERE PROCEEDING DOWN A RESIDENTIAL ROAD IN A 2007 KIA SPECTRA AT LESS THAN 20 MPH. HALFWAY DOWN THE ROAD, DRIVER BEGAN TO LIGHTLY APPLY THE BRAKE KNOWING THAT THE STOP SIGN WAS FURTHER DOWN THE ROAD. AT THIS MOMENT THE CAR REVVED AND EXPERIENCED SUDDEN ACCELERATION. THE DRIVER SHOUTED OUT THAT SOMETHING WAS WRONG WITH THE CAR. THE DRIVER ATTEMPTED TO STOP THE CAR BUT THE BRAKES FAILED. THE CAR ACCELERATED TO APPROXIMATELY 60 MPH. UNABLE TO STOP, THE CAR WENT THROUGH THE STOP SIGN AND PROCEEDED ACROSS THE STREET TOWARDS A GUARD RAIL. DRIVER INSTINCTIVELY TURNED THE WHEEL TO THE LEFT SO THAT THE CAR WOULD NOT HIT THE GUARD RAIL HEAD ON. THE VEHICLE COLLIDED WITH THE GUARD RAIL ON THE PASSENGER SIDE, THROWING THE DRIVER INTO THE PASSENGER SEAT, WHERE THE OTHER PASSENGER WAS SITTING. THE DRIVER HIT HER HEAD HARD ON THE PASSENGER WINDOW AND EXPERIENCED OTHER INJURIES AS A RESULT OF BEING THROWN FROM THE DRIVER SEAT. THE AIR BAGS IN THE CAR FAILED TO DEPLOY. THE CAR BOUNCED OFF THE GUARD RAIL AND PROCEEDED AT FULL SPEED ACROSS THE STREET AGAIN. THE CAR RAN OVER SOME SMALL HEDGES IN A RESIDENT'S YARD AND PROCEEDED UP A STEEP HILL BEFORE COMING TO A STOP. THE PASSENGER OF THE CAR IMMEDIATELY DIALED 911 AND THE POLICE/AMBULANCE ARRIVED SHORTLY AFTER. 2. THE CAR'S ELECTRONIC THROTTLE IS BELIEVED TO BE DEFECTIVE. THIS DEFECT RESULTS IN RANDOM EPISODES OF SUDDEN ACCELERATION WHEN THE BRAKES ARE APPLIED. BECAUSE THE EPISODES ARE RANDOM, THE PROBLEM IS NOT EASILY DUPLICATED. HOWEVER, THERE ARE NUMEROUS DOCUMENTED CASES OF SUDDEN ACCELERATION IN KIA VEHICLES ON THE INTERNET. 3. VEHICLE WAS TOWED TO A MECHANIC FOR INVESTIGATION. MECHANIC ATTEMPTED A DIAGNOSTIC TEST, BUT MECHANIC REPORTED THAT THE 2007 KIA SPECTRA IS NOT SOPHISTICATED ENOUGH TO APPLY SUCH A TEST. VEHICLE WAS THEN TAKEN TO THE LOCAL KIA DEALERSHIP FOR FURTHER EXAMINATION. KIA CLAIMS THEY ARE UNABLE TO DUPLICATE THE PROBLEM. \*TR

**KIA Model : SPECTRA Year : 2007 Manufacturer : KIA MOTORS CORPORATION Crash : Yes Fire : No Number of Injuries: 1 ODI ID Number : 10279912 Number of Deaths: 0 Date of Failure: July 27, 2009 VIN : KNAFE122875... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 KIA SPECTRA. WHILE DRIVING 15 MPH, THE CONTACT ATTEMPTED TO STOP THE VEHICLE AND HEARD A REVING NOISE COMING FROM THE GEAR SHIFTER. SHORTLY AFTER, THE VEHICLE ACCELERATED ACROSS THE STREET. SHE ATTEMPTED TO STEER THE VEHICLE TO AVOID DRIVING INTO A DITCH. THE REAR PASSENGER SIDE WHEEL STRUCK THE GUARDRAIL, BUT THE VEHICLE STILL DID NOT STOP. THE VEHICLE CONTINUED TO DRIVE THROUGH BUSHES AND UP A HILL. THE SPEED FINALLY BEGAN TO DECREASE AND THE VEHICLE CAME TO A STOP. THERE WERE NO SERIOUS INJURIES, ONLY HEADACHES AND BRUISING. THE VEHICLE WAS TOWED TO A GARAGE BY THE POLICE, BUT WAS LATER TAKEN TO A REPAIR SHOP. A POLICE REPORT WAS FILED. THE MECHANIC STATED THAT THE COMPUTER IN THE VEHICLE WAS TOO UNSOPHISTICATED; THEREFORE, A DIAGNOSTIC TEST COULD NOT BE

PERFORMED. THROUGH RESEARCH, THE CONTACT DISCOVERED NUMEROUS COMPLAINTS FOR THE SAME TYPE OF DEFECT. THE VEHICLE IS CURRENTLY BEING REPAIRED AND SHE BELIEVES THAT THE FAILURE WAS DUE TO A MANUFACTURER DEFECT. THE CURRENT AND FAILURE MILEAGES WERE 4,500. UPDATED 6/19/10 \*CN THE CONSUME STATED SHE PLACED HER FOOT ON THE BRAKE TO SLOW DOWN WHEN ALL OF A SUDDEN, THE VEHICLE ACCELERATED ON ITS OWN. UPDATED 07/22/10\*JB

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## LEXUS

**LEXUS Model : ES350 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No Number of Injuries: 0 ODI ID Number : 10433292 Number of Deaths: 0 Date of Failure: October 1, 2011 VIN : Not Available Component: VEHICLE SPEED CONTROL**

### Summary:

2007 LEXUS ES350. CONSUMER STATES SUDDEN UNINTENDED ACCELERATION \*TGW THE CONSUMER STATED HIS WIFE WAS DRIVING THE VEHICLE, WHEN IT SUDDENLY ACCELERATED FORWARD ON ITS OWN, AS SHE WAS ENTERING A PARKING SPACE, RESULTING IN DAMAGE TO THE VEHICLE.\*JB

**LEXUS Model : ES350 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10363755 Number of Deaths: 0 Date of Failure: October 30, 2010 VIN : JTHBJ46G872... Component: VEHICLE SPEED CONTROL**

### Summary:

TL\* THE CONTACT OWNS A 2007 LEXUS ES350. THE CONTACT WAS DRIVING 5 MPH AND PREPARING TO STOP AT A LIGHT WHEN THE VEHICLE SURGED FORWARD. THE CONTACT STATED THAT THE ENGINE EXHIBITED AN UNUSUAL INCREASE IN RPMS WHEN THE FAILURE OCCURRED. THE LOCAL DEALER WAS CONTACT AND THEY REFERRED THE CONTACT TO THE MANUFACTURER. THE CONTACT STATED THAT HE RECEIVED NOTIFICATION OF NHTSA CAMPAIGN ID NUMBER: 09V388000 (VEHICLE SPEED CONTROL: ACCELERATOR PEDAL). THE CONTACT STATED THAT THE RECALL REPAIR WAS PERFORMED PRIOR TO THE FAILURE. THE VEHICLE WAS NOT FURTHER INSPECTED OR REPAIRED. THE FAILURE MILEAGE WAS 14,000.

**LEXUS Model : ES350 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No Number of Injuries: 0 ODI ID Number : 10354735 Number of Deaths: 0 Date of Failure: March 16, 2008 VIN : JTHBJ46G572... Component: VEHICLE SPEED CONTROL**

### Summary:

TL\* THE CONTACT PREVIOUSLY LEASED A 2007 LEXUS ES350. THE CONTACT STATED THAT THE DRIVER INDICATED THAT THE VEHICLE SUDDENLY ACCELERATED WHILE THE VEHICLE WAS STOPPED. THE DRIVER DEPRESSED THE BRAKE PEDAL WHICH AVOIDED AN ACCIDENT. THE VEHICLE WAS TAKEN TO AN AUTHORIZED DEALERSHIP BUT NO REPAIRS WERE PERFORMED. THE VEHICLE WAS TURNED BACK IN TO THE DEALERSHIP. THE CONTACT CALLED THE MANUFACTURER WHO STATED THAT THE DEALER HAD TO MAKE A DECISION ABOUT THE SITUATION. THE CURRENT MILEAGE WAS UNKNOWN. THE FAILURE MILEAGE WAS 2,042.

**LEXUS Model : ES350 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10335420 Number of Deaths: 0 Date of Failure: June 2, 2010 VIN :**  
**JTHBJ46G972... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 LEXUS ES350. WHILE ATTEMPTING TO PARK, THE CONTACT APPLIED THE BRAKES AND THE VEHICLE SUDDENLY ACCELERATED AND CRASHED INTO THE BRICKS OF A STORE. A POLICE REPORT WAS FILED. THERE WERE NO INJURIES. THE VEHICLE WAS LOCATED AT AN AUTHORIZED DEALERSHIP AT THE TIME OF THE COMPLAINT. THE FAILURE AND CURRENT MILEAGES WERE APPROXIMATELY 46,000.

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## **NISSAN**

**Make : NISSAN**

**Model :**

**Manufacturer : NISSAN NORTH AMERICA, INC.**

**Crash : Yes**

**Fire : No**

**ODI ID Number : 10316716**

**Date of Failure: January 25, 2010**

**VIN : 1N4AL21E87N...**

**Component: VEHICLE SPEED CONTROL**

**Summary:**

ON 01/25/2010, I WAS DRIVING FROM WORK AND WHILE I ATTEMPTED TO STOP TO A LIGHT, THE BRAKES FAILED TO R AND HIT ANOTHER CAR IN THE BACK, BUT BECAUSE THE SPEED WAS LOW, THE DAMAGE WAS MINOR. AFTER THAT, THE TO A NEARBY AUTOBODY SHOP; AFTER THE OUTSIDE DAMAGE WAS FIXED, THE CAR WAS TRANSPORTED TO A NISSAN I WARE WAS MESSED UP, AS THE DEALER TOLD ME). AT THE NISSAN DEALERSHIP, THE SOFTWARE WAS RESET. THEY COULDN'T HAPPEN AGAIN. I CONTACTED THE MANUFACTURER AND EXPLAINED THAT THIS CAR HAD A GENERAL INSPECTION LESS THAN 3 WEEKS PRIOR TO THE ACCIDENT, AND NOW, EVEN THE CAR WAS FIXED THE NISSAN DEALER CANNOT MANUFACTURER DECIDED TO SEND THE CAR FOR ANOTHER INSPECTION TO THE SAME NISSAN DEALER THAT COULDN'T DRIVING THE CAR. \*TR

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## **TOYOTA**

**TOYOTA Model : 4RUNNER Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10401009 Number of Deaths: 0 Date of Failure: May 13, 2011 VIN :**  
**JTEBU14R378... Component: VEHICLE SPEED CONTROL**

**Summary:**

WHEN THE AIR CONDITIONER IS RUNNING THE VEHICLE IDLES AT DIFFERENT RPM'S CAUSING IT TO LUNGE FORWARD WHEN THE A/C COMPRESSOR SHUTS DOWN, INCREASING THE RPM'S. THIS HAS ALMOST CAUSED A FENDER BENDER SEVERAL TIMES WHILE AT A STOP LIGHT. \*TR

**TOYOTA Model : 4RUNNER Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No  
Number of Injuries: 1 ODI ID Number : 10356508 Number of Deaths: 0 Date of Failure: August 6, 2010 VIN :  
JTEBU14R978... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 TOYOTA 4RUNNER. THE CONTACT WAS DRIVING 5 MPH INTO A PARKING SPACE WHEN THE VEHICLE ABNORMALLY ACCELERATED INTO THE WALL OF A BUILDING. THE CONTACT SUSTAINED MINOR INJURIES. THE VEHICLE SUSTAINED DAMAGES TO THE FRONT BUMPER AND HEADLIGHTS. THE VEHICLE WAS TOWED BY THE CONTACT'S INSURANCE COMPANY. THE MANUFACTURER ADVISED AN INSPECTOR WOULD EVALUATE THE VEHICLE FOR FAILURES AND ADVISED THE CONTACT THAT THE MANUFACTURER WOULD DISCLOSE THE CAUSE OF THE FAILURE. THE CONTACT WAS NOT ADVISED OF THE FAILURE AND THE VEHICLE WAS NOT REPAIRED. THE CONTACT STATED THE VEHICLE WAS IN THE POSSESSION OF THE DEALER WHERE THE CONTACT WAS AWAITING A DECISION ON REPAIRS. THE FAILURE MILEAGE WAS 35,000.

**TOYOTA Model : 4RUNNER Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10329096 Number of Deaths: 0 Date of Failure: April 24, 2010 VIN : Not  
Available Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 TOYOTA 4RUNNER. WHILE ATTEMPTING TO PARK THE VEHICLE WITH HIS FOOT ON THE BRAKE PEDAL, THE VEHICLE ACCELERATED. THE CONTACT STATED THAT MINOR DAMAGE WAS DONE TO THE VEHICLE WHEN HE ATTEMPTED TO STOP IT FROM ACCELERATING. HE WAS ABLE TO SHIFT THE VEHICLE INTO PARK AND SHUT THE ENGINE OFF. THE DEALER WAS UNABLE TO DUPLICATE THE FAILURE AND STATED THAT THERE WAS NOTHING WAS WRONG WITH THE VEHICLE. THE MANUFACTURER WAS CONTACTED BUT WOULD PROVIDE NO ASSISTANCE. THE VIN WAS NOT AVAILABLE. THE CURRENT AND FAILURE MILEAGES WERE 40,000.

**TOYOTA Model : 4RUNNER Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10322533 Number of Deaths: 0 Date of Failure: March 27, 2010 VIN :  
JTEZU14R878... Component: VEHICLE SPEED CONTROL**

**Summary:**

THE INCIDENT HAPPENED AT THE INTERSECTION OF HARBISON AND DIVISION ST. SOUTHBOUND AT HARBISON ST., WHILE SLOWING DOWN FOR A FULL STOP AT A RED LIGHT WITH MY RIGHT FOOT GRADUALLY PRESSING THE BRAKE PEDAL SUDDENLY THE ENGINE RPM WENT UP SO HIGH WITHOUT STEPPING ON THE ACCELERATOR PEDAL. MY IMMEDIATE REACTION WAS TO PRESS HARDER THE BRAKE PEDAL. THE HIGH ACCELERATION LASTED ABOUT 10 SECONDS AND I WAS ABLE TO BRING THE VEHICLE TO A FULL STOP AT THE MIDDLE OF THE INTERSECTION WHICH HAVE CAUSED AN ONCOMING VEHICLE AT MY LEFTSIDE TO SWERVE TO ITS LEFT TO AVOID AN IMPACT. THIS IS THE SECOND TIME IT OCCURRED. THE FIRST TIME IT HAPPENED WITH ANOTHER DRIVER IT WAS IGNORED BECAUSE HE THOUGHT IT WAS NORMAL. THERE WAS NO REPAIR DONE ON BOTH TIMES IT HAPPENED. THE OWNER HAVE NOT RECEIVE ANY NOTICE OF MANUFACTURER NOTICE OF DEFECT. THE FIRST INCIDENT WAS ABOUT 6 MONTHS AGO AND NOT REPORTED. ALSO NO FIRE, PROPERTY DAMAGE, CRASH OCCURRED. \*TR

**TOYOTA Model : 4RUNNER Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10192885 Number of Deaths: 0 Date of Failure: May 10, 2007 VIN :  
JTEBT17R878... Component: VEHICLE SPEED CONTROL**

**Summary:**

VEHICLE SURGES FORWARD WHEN AIR CONDITIONER ON. HAZARD AT TRAFFIC LIGHTS. WILL DRIVE ITSELF FORWARD UP HILLS AND ALONG FLAT ROADS WITHOUT ACCELERATOR BEING TOUCHED WHEN AC IS ON. THE HIGHER THE AC FAN SPEED THE FASTER THE VEHICLE GOES. DEALER DOES NOT HAVE "COMPUTER PROGRAM" TO FIX. THIS IS A SAFETY HAZARD. \*TR



**TOYOTA Model : AVALON Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10446607 Number of Deaths: 0 Date of Failure: June 8, 2011 VIN :  
4T1BK36B07U... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 TOYOTA AVALON. THE CONTACT STATED THAT WHILE PARKING, THE VEHICLE SUDDENLY ACCELERATED. THE VEHICLE WAS TAKEN TO THE DEALER, WHO WAS UNABLE TO DUPLICATE THE FAILURE. THE MANUFACTURER WAS NOT MADE AWARE OF THE FAILURE. THE VEHICLE WAS NOT REPAIRED. THE FAILURE AND CURRENT MILEAGES WERE 78,000. UPDATED 03/05/12\*LJ UPDATED 03/08/12

**TOYOTA Model : AVALON Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No  
Number of Injuries: 1 ODI ID Number : 10370947 Number of Deaths: 0 Date of Failure: November 30, 2010 VIN :  
4T1BK36B77U... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 TOYOTA AVALON. THE CONTACT WAS INVOLVED IN A CRASH. WHILE DRIVING APPROXIMATELY 5 MPH, THE CONTACT STATED THAT THE VEHICLE SUDDENLY ACCELERATED WITHOUT WARNING, CAUSING HER TO CRASH INTO A BUILDING. THE CONTACT SUSTAINED MULTIPLE CONTUSIONS AND WAS BEING TREATED BY A PHYSICIAN. THE DEALER WAS CONTACTED AND OFFERED NO ASSISTANCE. THE CONTACT DID NOT INFORM THE MANUFACTURER. THE VEHICLE WAS DESTROYED. THE CURRENT AND FAILURE MILEAGES WERE APPROXIMATELY 63,138. A POLICE REPORT WAS FILED.

**TOYOTA Model : AVALON Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10181756 Number of Deaths: 0 Date of Failure: November 23, 2006 VIN :  
4T1BK36B47U... Component: VEHICLE SPEED CONTROL**

**Summary:**

NOV 23, 2006: IN REPOSITIONING MY 2007 AVALON XLS IN THE DRIVEWAY OF MY SISTER'S HOUSE, I SLOWLY PULLED FORWARD TO RE-PARK AND APPLIED THE BRAKES TO STOP AND THE ACCELERATOR IMMEDIATELY WENT TO HIGH RPMs - I HAD TO BRAKE VERY HARD TO KEEP FROM HITTING MY BROTHER-IN-LAW AND HIS HOUSE. I WAS BRAKING - AND TURNED OFF THE IGNITION. ON DEC 23, 2006 THE SAME PROBLEM OCCURRED TWO BLOCKS IN A ROW IN OUR CONGESTED DOWNTOWN AREA. THE 1ST TIME, I WAS STOPPING VERY SLOWLY; THE SECOND TIME I WAS BRAKING TO WAIT FOR A PARKING SPACE. THE 1ST TIME I TRIED CHANGING GEARS AND THEN TURNED OFF THE IGNITION. THE SECOND TIME I IMMEDIATELY TURNED OFF THE IGNITION. MY WIFE WAS A WITNESS. I DROVE THIS CAR FOR THE MONTH AFTER IT'S PURCHASE NEW (SEP 6, 2006), EVERY 2ND/3RD DAY FOR THE MONTH OF OCT 2006, AND OFF/ON DURING NOV 2006 WITHOUT THIS PROBLEM. I TOLD THE LOCAL/DISTRICT TOYOTA PERSONNEL THAT I COULD NOT TRUST THIS PARTICULAR VEHICLE. IT HAS BEEN PARKED EITHER AT THE DEALERSHIP OR IN MY GARAGE ALMOST EVERY DAY SINCE DEC 23, 2006. THE DISTRICT TOYOTA PERSONNEL SAID THAT THEY DID NOT CONSIDER MY CAR UNSAFE BECAUSE THEY 'COULD NOT FIND ANY ERROR CODES' IN THE CAR'S SYSTEM, AND ON THE 102 MILE TEST DRIVE THEY DID, WITHOUT ME PRESENT, THEY DID NOT EXPERIENCE MY PROBLEM. THEY DID SIMULATE IT BY STEPPING ON THE BRAKE AND ACCELERATOR AT THE SAME TIME!!!! I WAS ON THE HIGHEST ALERT THE SECOND TIME IT HAPPENED ON DECEMBER 23RD! MY FOOT WAS NOT ON THE ACCELERATOR! I WAS BRAKING ALL THREE TIMES - OR ELSE MY BROTHER-IN-LAW WOULD HAVE BEEN INJURED, HIS HOUSE DAMAGED, AND CARS DOWNTOWN HIT. I RESENT THE INSINUATION THAT I WAS PUSHING BOTH PEDALS ALL THREE TIMES. NO EXPLANATION WHY I HAD NOT EXPERIENCED THIS PROBLEM IN THE NEARLY THREE MONTHS (WITH THE SAME SHOES ON) BEFORE THE PROBLEM FIRST AROSE. TOYOTA CLOSED MY PROBLEM REPORT AS 'SOLVED' EVEN THOUGH THE LOCAL SERVICE MANAGER STATED HE DID NOT CONSIDER IT 'SOLVED'. WHY? \*NM

**TOYOTA Model : CAMRY Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No**  
**Number of Injuries: 1 ODI ID Number : 10442616 Number of Deaths: 0 Date of Failure: January 2, 2012 VIN :**  
**4T1BK46K37U... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 TOYOTA CAMRY. THE CONTACT STATED THAT WHILE DRIVING INTO A PARKING AREA, THE VEHICLE SUDDENLY ACCELERATED AND JUMPED A CURB. THE VEHICLE CAME TO A STOP WHEN IT CRASHED INTO A TREE. THE CONTACT SUFFERED INJURIES TO THE BREAST AND NECK. THE VEHICLE WAS THEN TOWED TO A LOCAL BODY SHOP AND THE MANUFACTURER WAS MADE AWARE OF THE FAILURE. THE CONTACT ALSO STATED THAT THE VEHICLE WAS PREVIOUSLY REPAIRED UNDER THE RECALL ASSOCIATED WITH NHTSA CAMPAIGN ID NUMBER 09V388000 (VEHICLE SPEED CONTROL:ACCELERATOR PEDAL). THE FAILURE AND CURRENT MILEAGES WERE 42,000.

**TOYOTA Model : CAMRY Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No**  
**Number of Injuries: 1 ODI ID Number : 10424021 Number of Deaths: 0 Date of Failure: August 25, 2011 VIN :**  
**4T1BE46K77U... Component: VEHICLE SPEED CONTROL**

**Summary:**

SUDDEN UNINTENDED ACCELERATION ON AUGUST 25TH 2011 AT APPROXIMATELY 1:00 PM, MY DAD WAS DRIVING TO GARVEY RANCH PARK LOCATED AT (781 S ORANGE AVE, MONTEREY PARK, CA 91755) AS PART OF HIS DAILY ROUTINE. HE HAD ALREADY PULLED INTO THE PARKING LOT AND WAS GETTING READY TO PARK HIS CAR FACING NORTH BOUND. ALL OF A SUDDEN THE CAR ACCELERATED OUT OF NOWHERE AND HOPED THE PARKING CURB STILL FACING NORTHBOUND. IN ORDER TO AVOID ANY CASUALTIES AND PREVENT HITTING ANY OF THE CHILDREN NEAR THE PLAYGROUND, HE WAS ABLE TO STEER THE CAR AND MADE A U-TURN AT ABOUT 150 DEGREES. AT THIS POINT HE WAS FACING SOUTH BOUND OF THE PARKING LOT AND THE CAR CONTINUED TO ACCELERATE AT HIGH SPEEDS. HIS CAR THEN HOPPED THE CURB ON THE SOUTH SIDE OF THE PARKING LOT. ONCE THE CAR HOPPED THE PARKING CURB ON THE SOUTH SIDE, IT CONTINUED TO HOP OVER A COUPLE OF RAISED CONCRETE BLOCKS THAT DELINEATE A PATH ONTO THE HILLSIDE JUST SOUTH OF THE PARKING LOT. DUE TO THE STEEPNESS OF THE HILL, IT PREVENTED THE CAR FROM GOING ANY FURTHER AND THE CAR CRASHED IN BETWEEN TWO TREES LOCATED ON THE HILLSIDE. WE HAD ALREADY TAKEN THE CAR TO LONGO TOYOTA DUE TO THE ACCELERATION RECALL BACK ON MARCH 13 2010. I COULDN'T BELIEVE THE CAR STILL HAD MECHANICAL ISSUES AFTER WE HAD IT SERVICED IT FOR THE RECALL AND WAS GLAD THAT MY DAD DID NOT SUSTAIN A VERY SERIOUS INJURY. THE CAR IS AVAILABLE FOR INSPECTION IF AN NHTSA OFFICIAL WOULD LIKE TO INSPECT THE CAR. \*TR

**TOYOTA Model : CAMRY Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10418256 Number of Deaths: 0 Date of Failure: August 5, 2011 VIN :**  
**4T1BE46K27U... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\* THE CONTACT OWNS A 2007 TOYOTA CAMRY. THE CONTACT STATED THAT WHILE ATTEMPTING TO PARK, THE VEHICLE SUDDENLY ACCELERATED. THE VEHICLE WAS TAKEN TO A DEALER WHO WAS UNABLE TO DUPLICATE THE FAILURE AND ADVISED THAT THE FAILURE COULD HAVE BEEN CAUSED BY THE FLOOR MATS. THE MANUFACTURER WAS NOT MADE AWARE OF THE FAILURE AND THE VEHICLE WAS NOT REPAIRED. THE FAILURE AND THE CURRENT MILEAGE WAS 34,715.

**TOYOTA Model : CAMRY Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10404500 Number of Deaths: 0 Date of Failure: May 29, 2011 VIN :**  
**4T1BE46K67U... Component: VEHICLE SPEED CONTROL**

**Summary:**

I WAS PARKING MY 2007 TOYOTA CAMRY BEHIND A JEEP WAGONEER THAT WAS HEADED FORWARD IN A PARKING LOT. I WAS ALMOST AT THE STOPPING POINT WITH MY FOOT ON THE BRAKE AND WITHIN A FOOT OR SO OF STOPPING,

WHEN MY CAR SUDDENLY LURCHED FORWARD WITH EXTREME FORCE, PUSHING THE JEEP WAGONEER ABOUT 8-10 FEET FORWARD. MY CAR CONTINUED ACCELERATING AND THE PASSENGER SIDE OF MY CAR SEVERELY CRASHED AGAINST THE SIDE OF THE SUV THAT WAS PARKED NEXT TO THE JEEP WAGONEER. MY CAR FINALLY CAME TO REST. MY 2007 TOYOTA CAMRY WAS PART OF THE RECALL IN 2010 AND I HAD MY CAR IN FOR THE RECALL REPAIR IN FEB. 2010. PRIOR TO HEARING ANYTHING ABOUT TOYOTA'S SUDDEN ACCELERATION PROBLEMS, I HAD A SIMILAR EXPERIENCE WITH THE SAME VEHICLE AROUND MID-2009 (UNCERTAIN OF DATE). AT THAT TIME, I WAS AGAIN TURNING SLOWLY INTO A PARKING SPACE AND ALMOST AT THE STOPPING POSITION WHEN THE CAR ROARED FORWARD, JUMPING THE CURB OF THE PARKING LOT AND GOING TOWARDS THE RIGHT ON A GRASSY KNOLL. THERE WERE NO INJURIES NOR ANY CAR DAMAGE, SO I DID NOT REPORT IT AND DID NOT UNDERSTAND THE CAUSE OF THE INCIDENT UNTIL I BEGAN LEARNING OF TOYOTA'S SUDDEN ACCELERATION PROBLEMS. \*TR

**TOYOTA Model : CAMRY Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No**  
**Number of Injuries: 1 ODI ID Number : 10311156 Number of Deaths: 0 Date of Failure: March 27, 2007 VIN :**  
**4T1BE46K87U... Component: VEHICLE SPEED CONTROL**

**Summary:**

I AS PULLING INTO A PARKING SPACE, CAR ACCELERATED - JUMPED A CURB, HITTING A TREE AND BROKE MY NOSE,AND DAMAGED THE WHOLE FRONT OF MY CAR.. ON JUNE 27, 2009 I WAS PULLING INTO A PARKING SPACE AGAIN, CAMRY ACCELERATED HITTING THE SUV IN FRONT OF MY CAR. TOOK IT IN TO PAULY TOYOTA IN CRYSTAL LAKE, IL AND THEY SENT ME AWAY SAYING THERE IS NOTHING WRONG WITH MY 2007 CAMRY. I ALSO HAD TWO VERY NEAR ACCIDENTS, BUT I WAS ABLE TO STOP IN TIME. I AM DEATHLY AFRAID TO DRIVE THIS CAR. I DON'T KNOW WHEN IT WILL ACCELERATE AGAIN. AND THE DEALER REFUSES TO HELP ME OUT. PLEASE HELP ME! \*TR

**TOYOTA Model : CAMRY Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No**  
**Number of Injuries: 1 ODI ID Number : 10298142 Number of Deaths: 0 Date of Failure: November 16, 2009 VIN :**  
**4T1BE46K87U... Component: VEHICLE SPEED CONTROL**

**Summary:**

I STOPPED MY NEWLY PURCHASED (10/1/09) 2007 TOYOTA CAMRY TO LET PASSENGERS OUT... THEN I TRIED TO MOVE IT UP ABOUT A HALF CAR LENGTH AND PARK IT IN FRONT OF MY GARAGE DOOR. INSTEAD OF MOVING UP SLOWLY IT SUDDENLY ZOOMED OUT OF CONTROL AT HIGH SPEED AND EXPLODED (FLYING GLASS AND BOARDS EVERYWHERE!) RIGHT THROUGH THE GARAGE DOOR. I THOUGHT I WAS GOING TO COME OUT THE OTHER SIDE, FORTUNATELY THE TRACTOR AND OTHER HEAVY GARAGE EQUIPMENT STOPPED IT. THE WHEELS WERE STILL SPINNING AND SMOKE WAS POURING OUT.. IT WAS VERY FRIGHTENING AS I THOUGHT IT WOULD CATCH ON FIRE, THE ONLY WAY OUT...AS IT WAS COVERED IN DEBRIS....WAS OVER THE BACK SEAT AND OUT THE PASSENGER SIDE DOOR. IT DID \$7000 WORTH OF DAMAGE TO MY CAR AND \$4,000+ DAMAGE TO MY HOME AND POSSESSIONS . IT HAD DESTROYED MY CONFIDENCE IN DRIVING IT. WHAT IF IT HAPPENED AGAIN AND IN TRAFFIC? HORRORS...SOMEONE, INCLUDING ME COULD BE KILLED! I HAVEN'T DRIVEN IT IN OVER A WEEK...CAN'T GET UP THE NERVE! I SHOULD PROBABLY SELL IT...EXCEPT WHO WOULD BUY IT WITH IT'S HISTORY? THERE IS SOMETHING WRONG WITH THIS CAR AND YOU NEED A DEEPER LOOK INTO THIS PROBLEM. \*TR

**TOYOTA Model : CAMRY Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10292480 Number of Deaths: 0 Date of Failure: June 13, 2009 VIN :**  
**4T1BE46K27U... Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 TOYOTA CAMRY. WHILE APPROACHING A RED TRAFFIC LIGHT THE VEHICLE SUDDENLY BEGAN TO ACCELERATE ON ITS ON; HOWEVER, SHE WAS ABLE TO CONTROL THE VEHICLE. THE FAILURE OCCURRED ON TWO OCCASIONS. THE CURRENT AND THE FAILURE MILEAGES WERE 15,000.

**TOYOTA Model : RAV4 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10393021 Number of Deaths: 0 Date of Failure: March 27, 2011 VIN :**  
**JTMBK32V175... Component: VEHICLE SPEED CONTROL**

**Summary:**

2007 TOYOTA RAV4, SUDDEN ACCELERATION WHILE WAITING AT A STOP LIGHT. WITHOUT ANY WARNING THE VEHICLE STARTED TO ACCELERATE, EVEN THOUGH FOOT WAS FIRMLY ON THE BRAKE PEDAL THE VEHICLE BEGAN PULLING FORWARD AND THROUGH A STOP LIGHT. AS VEHICLE WAS PULLING FORWARD SHIFTED TO NEUTRAL, ONLY THEN DID THE VEHICLE'S MOTION STOP. ENGINE CONTINUED TO REV TO VERY HIGH RPMS FOR ABOUT 30 SECONDS, THE RPMS THEN CAME BACK DOWN TO NORMAL. DROVE VEHICLE 10 MILES TO GET HOME TERRIFIED THAT IT WOULD HAPPEN AGAIN. \*TR

**TOYOTA Model : RAV4 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10344535 Number of Deaths: 0 Date of Failure: May 19, 2010 VIN :**  
**JTMZK31V575... Component: VEHICLE SPEED CONTROL**

**Summary:**

WE HAD A TOYOTA RAV4, BOUGHT NEW IN 2007. WE HAD ABOUT 5200 MILES ON IT, WHEN, ON MAY 19 ,2010, WHILE PARKING THE CAR IN THE GARAGE, I PUT THE GEAR IN REVERSE , WITH MY FOOT ON THE BRAKE. THE ENGINE SUDDENLY SURGED, THE RPMS WENT ABOVE 5000, AND IN SPITE OF MY PRESSING HARD ON THE BRAKE, THE CAR SHOT OVER 1 YARD OUT THE GARAGE. I PUT THE CAR IN PARK, AND THE ENGINE CONTINUED AT THIS HIGH SPEED . I USED THE KEY TO SHUT IT DOWN. ALL THE LIGHTS ON THE DASH SHONE WITH AN UNUSUAL BRIGHTNESS DURING THIS EVENT. I CALLED THE DEALER, METRO TOYOTA, AND THEY TOLD ME TO BRING THE CAR IN, WHICH I DID , LATE IN THE DAY. THE NEXT DAY, THEY CALLED ME, TOLD ME THERE WAS NOTHING WRONG WITH THE CAR, AND THAT THE REASON OF THE ACCELERATION WAS THE "RUG". THE RAG WAS REMOVED, AND I PICKED UP THE CAR. OBVIOUSLY, I DROVE IT HOME WITH GREAT CARE. THE NEXT DAY, IN TRAFFIC, I WAS APPROACHING A RED LIGHT, WITH A CAR STOPPED IN FRONT OF ME, DOWN A LITTLE SLOPE ON THE ROAD. I KEPT A SAFE DISTANCE OF 3-4 CAR LENGTHS BEHIND THE CAR IN FRONT OF ME, FOOT LIGHTLY ON THE BRAKE, WHEN THE CAR AGAIN SURGED, BUT I MANAGED TO CONTROL IT BARELY AVOIDING REAR ENDING THE CAR IN FRONT OF ME .VERY EARLY NEXT MORNING, I TOOK THE CAR BACK TO THE DEALER, WHERE IT WAS KEPT FOR OVER 2 WEEKS, NO ATTEMPT TO REPAIR WAS DONE, WITH THE WORD THAT THE CAR CHECKED OK. \*TR

**TOYOTA Model : RAV4 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10317892 Number of Deaths: 0 Date of Failure: February 19, 2010 VIN :**  
**JTMBK33V876... Component: VEHICLE SPEED CONTROL**

**Summary:**

IN MARCH OF 2008 I HAD TWO OCCURRENCES OF UNINTENDED ACCELERATION WITH MY 2007 SIX CYLINDER TOYOTA RAV4. THE FIRST WAS VERY FRIGHTENING AS I WAS STOPPED AT A RED LIGHT. THE CAR SUDDENLY ACCELERATED AND PULLED ME THROUGH THE INTERSECTION WHILE MY FOOT WAS ON THE BRAKE. IF THERE HAD BEEN A CAR IN FRONT OF ME OR ONE COMING THROUGH THE INTERSECTION I WOULD HAVE CRASHED. SHORTLY AFTER THAT INCIDENT A Milder LESS POWERFUL ACCELERATION EVENT HAPPENED. I BROUGHT THE CAR TO THE DEALER ON MARCH 26 08 AND THEY COULD NOT DUPLICATE THE PROBLEM OR GIVE A REASON FOR IT. THE TOLD ME TO BRING IT BACK IF THE PROBLEM RECURRED. IT DID NOT HAPPEN AGAIN UNTIL 2/19/2010. AS IN THE FIRST TWO INCIDENTS, THE EVENT HAPPENED WHILE STOPPED AT A RED LIGHT WITH MY FOOT OFF THE GAS PEDAL. IN THIS CASE I QUICKLY SHUT OFF THE MOTOR, OR I WOULD HAVE HIT THE CAR IN FRONT OF ME. AS IN THE OTHER CASES AFTER I RESTARTED THE CAR THE PROBLEM WAS OVER. OUR OTHER CAR IS A CAMRY AND I HAVE NEVER HAVE NEVER HAD THIS PROBLEM WITH THAT CAR OR ANY OTHER CAR. I BROUGHT THE CAR BACK TO THE DEALER AND AGAIN NO REASON FOR THE EVENT WAS FOUND AND THERE WAS NO REMEDY OFFERED EXCEPT POSSIBLY A GAS PEDAL OVER RIDE IF ONE BECOMES AVAILABLE. AFTER THE LONG GAP IN TIME BETWEEN THE FIRST TWO EVENTS I THOUGHT MAYBE THEY WERE A FLUKE. NOW I WORRY THAT I MAY BE IN AN ACCIDENT OR HIT A PEDESTRIAN. I AM NO MECHANIC BUT I REALLY THINK THAT IT IS SOME SORT OF ELECTRONIC PROBLEM. THE CAR WAS STOPPED AND MY FOOT WAS OFF THE GAS PEDAL EACH TIME THE SUDDEN ACCELERATION HAPPENED. \*TR

**TOYOTA Model : RAV4 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10314980 Number of Deaths: 0 Date of Failure: February 28, 2010 VIN :  
JTMBK31V875... Component: VEHICLE SPEED CONTROL**

**Summary:**

WAS STOPPED IN DRIVEWAY OF MY HOME WAITING FOR GARAGE DOOR TO OPEN (REMOTE CONTROLLED.) THEN I SLOWLY PROCEEDED TOWARDS OPEN GARAGE. THE CAR ENGINE SUDDENLY ROARED AND SURGED FORWARD ON ITS OWN. I PUT ALL MY WEIGHT UNTO THE BRAKE WHICH SEEMED TO HAVE LITTLE EFFECT THEN SHIFTED INTO NEUTRAL. ONLY THEN DID THE CAR SEEM TO NORMALIZE. I SHUT IT OFF AND HAVEN'T TRIED TO DRIVE IT SINCE. \*TR

**TOYOTA Model : RAV4 Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10310200 Number of Deaths: 0 Date of Failure: January 18, 2010 VIN :  
JTMBK31V476... Component: VEHICLE SPEED CONTROL**

**Summary:**

SUDDEN ACCELERATION OF A 2007 TOYOTA RAV-4; HAS HAPPENED THREE TIMES, THIS IS THE LATEST INCIDENT; HAS HAPPENED AFTER GOING OVER A VERY SMALL BUMP IN THE ROAD AT LESS THAN 10 MILES PER HOUR. \*TR

**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No  
Number of Injuries: 0 ODI ID Number : 10435380 Number of Deaths: 0 Date of Failure: August 8, 2011 VIN :  
5TEUU42N87Z... Component: VEHICLE SPEED CONTROL**

**Summary:**

2007 TOYOTA TACOMA SUA (SUDDEN UNINTENDED ACCELERATION) MY INCIDENT STARTED FROM A NEAR STANDSTILL WITH MY RIGHT FOOT FIRMLY ON THE BRAKE. AS A FORMALLY TRAINED OBSERVER AND TROUBLESHOOTER OF AIRCRAFT ELECTRONIC SYSTEMS, IT IS MY OPINION THAT THIS VEHICLE DELIVERED UNINITIATED STIMULUS TO THE ELECTRONIC THROTTLE CONTROL SYSTEM. I AM 100% POSITIVE ABOUT THIS FINDING AS I PERSONALLY EXPERIENCED THIS FAILURE WITH A CLEAR MIND AND EXCELLENT VANTAGE POINT. I WAS FINALLY ABLE TO STOP THIS VEHICLE AFTER VIOLENT AND AGGRESSIVE BRAKING WAS APPLIED WHILE CONTACTING A CEMENT PICNIC TABLE. THIS FINALLY OCCURRED JUST SHORT OF A 267 FOOT CLIFF/HILL POINTING INTO A RESERVOIR. THIS IS MY SECOND ENTRY INTO THE NHTSA DATABASE CONCERNING THE UNINTENDED ACCELERATION OF A 2007 TOYOTA TACOMA. I HAVE NOW BEEN THROUGH THE ENTIRE TOYOTA PROCESS AND HAVE HAD ALL RECALLS AND INVESTIGATIONS PERFORMED. DAMAGE FROM THE ACCIDENT DUE TO SUA HAS BEEN REPAIRED. TOYOTA FINDINGS WERE CONCLUSIVE. "COULD NOT DUPLICATE". THIS MEANS THEY DO NOT HAVE TO DO ANYTHING AT ALL. I HAVE TO DATE ENGAGED IN EXTENSIVE RESEARCH OF THIS PHENOMENON AND I AM SHOCKED AS TO THE FINDINGS RECENTLY ANNOUNCED BY RAY LAHOOD AND NASA THAT EXONERATES ELECTRONICS AS A POSSIBLE ISSUE. I HAVE BEEN SUPPORTING, MAINTAINING AND TROUBLESHOOTING ELECTRONIC PROBLEMS SINCE 1980 AND CONSIDER MYSELF A CREDIBLE PROFESSIONAL TECHNICIAN. THIS WAS DEFINITELY AN ELECTRONIC GHOST IN THE MACHINE. \*TR



**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No  
Number of Injuries: 1 ODI ID Number : 10419128 Number of Deaths: 0 Date of Failure: August 11, 2011 VIN :  
5TEUU42N87Z... Component: VEHICLE SPEED CONTROL**

**Summary:**

WHILE ON A CAMPING TRIP MY 2007 TOYOTA TACOMA SUFFERED A SUDDEN UNINTENDED ACCELERATION EVENT. WHILE APPLYING THE BRAKES AND COMING TO A STOP THE TACOMA SUDDENLY ACCELERATED AND FLEW OVER TWO GOOD SIZE BOULDERS A CAST IRON FIRE PIT AND CAME TO A REST AFTER HITTING A SOLID CONCRETE PICNIC TABLE. A REPORT WAS FILED WITH COHO CAMPGROUND HOSTS ACTING AS TO GO ON FILE WITH THE WASHINGTON STATE FORESTRY DEPARTMENT. THIS EVEN OCCURRED AT THE WYNOOCHEE DAM AND RESERVOIR LOCATED IN THE PACIFIC NORTHWEST OF WASHINGTON STATE. THE TRUCK WAS REMANDED TO TOYOTA OF OLYMPIA WASHINGTON AND THE INSURANCE CARRIER WAS NOTIFIED. THE TRUCK WAS DUE FOR THE WELL DOCUMENTED TOYOTA FLOOR MAT, GAS PEDAL AND BRAKING ACCELERATION OVERRIDE MODIFICATION. NOW LISTEN CAREFULLY HERE...THE FLOOR MATS WERE HEAVY DUTY RUBBER NON-TOYOTA BRAND MATS. THEY WERE NOT IMPEDING THE GAS PEDAL IN ANY WAY SHAPE OR FORM. THE TRUCK ACCELERATED INSTANTLY WHILE BRAKING AND ALMOST AT A DEAD STOP. REVIEW OF NHTSA FINDINGS ON THIS ISSUE ARE SHOCKING. I DID NOT HIT THE ACCELERATOR BY MISTAKE, THERE IS A HUGE DIFFERENCE IN THE SIZE, FEEL AND CONSISTENCY OF THESE TWO INCREDIBLY DIFFERENT PEDALS. MANY CHILDREN AND CAMPERS WERE PRESENT IN THIS CAMPGROUND, THE SHEER LUCK THAT NO ONE WAS KILLED IS A MATTER OF FATE. THE FACT I AM WRITING YOU FROM MY LIVING ROOM AND NOT A JAIL CELL WHILE BEING HELD FOR VEHICULAR MANSLAUGHTER IS A MIRACLE. THIS IS NOT DRIVER ERROR, YOU HAVE A BUNCH OF 4 WHEEL TIME BOMBS OUT THERE TRAVERSING THE NATIONS HIGHWAYS. WITH OVER 30 YEARS IN TECHNICAL ELECTRONIC SYSTEMS I ASSURE YOU THIS TRUCK ACCELERATED FROM AN ALMOST DEAD STOP WHILE MY RIGHT FOOT WAS ON THE GIGANTIC BREAK PEDAL, NOT THE LITTLE TINY GAS PEDAL. HEAR ME, BELIEVE ME..... END OF STORY.

**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10218962 Number of Deaths: 0 Date of Failure: February 23, 2008 VIN :  
5TEUU42N07Z... Component: VEHICLE SPEED CONTROL**

**Summary:**

I'VE NOTICED THAT MY 2007 TOYOTA TACOMA EXTENDED CAB WILL ON OCCASION LURCH FORWARD WHILE AT A COMPLETE STOP. IT SEEMS TO HAPPEN WHEN THE AIR CONDITIONER OR DEFROST UNIT IS ACTIVATED. I ASSUME IT IS THE INCREASE IN ENGINE SPEED WHEN THE COMPRESSOR KICKS IN. TO DATE I JUST HAVE TO PUSH HARDER ON THE BRAKE PEDDLE. I HOPE IT DOESN'T GET ANY WORSE. WHEN IT HAPPENS AS IT DOES SUDDENLY, IT USUALLY CATCHES YOU OFF GUARD. IF YOUR REACTION TIME ISN'T FAST ENOUGH OR YOU PANIC, YOU COULD LOSE CONTROL OF THE VEHICLE. WHEN IT HAPPENS, THE VEHICLE WILL USUALLY MOVE ABOUT 6" AHEAD. \*TR

**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10207528 Number of Deaths: 0 Date of Failure: October 30, 2007 VIN :  
5TELU42N97Z... Component: VEHICLE SPEED CONTROL**

**Summary:**

ON NUMEROUS OCCASIONS TRUCK WILL SURGE FORWARD SLIGHTLY WHEN AT A COMPLETE STOP WITH BRAKES APPLIED. \*TR

**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10202283 Number of Deaths: 0 Date of Failure: September 7, 2007 VIN :  
5TELU42N67Z... Component: VEHICLE SPEED CONTROL**

**Summary:**

NUMEROUS OCCASIONS WHERE MY 2007 TOYOTA TACOMA WILL LURCH FORWARD WHEN AT A STOP LIGHT.

AUTOMATIC TRANSMISSION, AND ON THE BRAKE. FEELS AS IF I HAVE BEEN TAPPED BY SOMEONE BEHIND ME. IT HAS NEVER RESULTED IN AN ACCIDENT, BUT I WILL NOT LET MY WIFE DRIVE THIS VEHICLE BECAUSE OF THIS SITUATION. \*JB

**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No  
Number of Injuries: 1 ODI ID Number : 10201655 Number of Deaths: 0 Date of Failure: June 8, 2007 VIN :  
5TELU42N67Z... Component: VEHICLE SPEED CONTROL**

**Summary:**

OVER A PERIOD OF SEVERAL MONTHS AFTER PURCHASING A NEW 2007 TOYOTA TACOMA, I EXPERIENCED FIVE INCIDENTS OF BRAKE/ACCELERATION PROBLEMS FINALLY RESULTING IN A CRASH. FIRST INCIDENT: STOPPED AT A TRAFFIC LIGHT WITH MY FOOT ON THE BRAKE, THE TRUCK LUNGED FORWARD A FEW FEET. THE DEALERSHIP TOLD ME THEY COULD NOT FIND ANY PROBLEM. A MONTH LATER, STOPPED IN A GAS STATION DRIVE WITH MY FOOT ON THE BRAKE WAITING TO EXIT, THE REAR WHEELS BEGAN SPINNING OUT OF CONTROL. I PRESSED ON THE BRAKE AS HARD AS I POSSIBLY COULD TO KEEP FROM ENTERING TRAFFIC. THREE WEEKS LATER, APPROACHING THE BOTTOM OF A HILLY SHARP TURN, I TAPPED THE BRAKES TO SLOW DOWN. AGAIN THE REAR WHEELS ACCELERATED TO A HIGH RATE OF SPEED. I COULD NOT STOP THE TRUCK TO KEEP FROM STRIKING A VAN IN FRONT OF ME SO I CROSSED OVER A DOUBLE YELLOW LINE TO AVOID A COLLISION. IT TOOK ABOUT A THOUSAND YARDS TO GAIN CONTROL. THE DEALERSHIP SAID, "WE CAN'T FIX THE PROBLEM" UNTIL WE CAN DUPLICATE IT". I CALLED TOYOTA OF AMERICA, AGAIN ONLY TO BE TOLD THAT TOYOTA COULD DO NOTHING. THE FOURTH INCIDENT OCCURRED ON AN ENTRANCE RAMP TO A HIGHWAY. I TAPPED THE BRAKES TO SLOW DOWN. THE VEHICLE ACCELERATED TO A HIGH RATE OF SPEED. I GOT IT UNDER CONTROL QUICKLY. FINALLY THE FIFTH AND FINAL INCIDENT. COMING OUT OF NASHVILLE WHERE IT WAS RAINING HARD, I GOT FURTHER NORTHBOUND ON THE I-24 WHERE IT WAS RAINING LESS AND THE PAVEMENT WAS WET. WHILE IN THE SHOULDER LANE, A VEHICLE IN THE LEFT LANE STARTED MOVING OVER TO THE RIGHT CAUSING ME TO TAP MY BRAKES. THE REAR WHEELS ACCELERATED TO A VERY HIGH RATE OF SPEED CAUSING THE TRUCK TO HYDROPLANE. THE REAR END OF THE TRUCK SPUN AROUND TO THE LEFT AND, STILL ACCELERATING ON ITS OWN, DROVE INTO THE EMBANKMENT, FIRST SKIDDING SIDEWAYS THEN THE TRUCK BEGAN TO ROLL SEVERAL TIMES. IT STRUCK A RUT CAUSING IT TO GO AIRBORNE FINALLY LANDING ON ITS ROOF. IT ROLLED SEVERAL MORE TIMES COMING TO A STOP IN A DITCH ON THE DRIVERS DOOR. I WAS TRANSPORTED TO THE HOSPITAL. \*JB

**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10187789 Number of Deaths: 0 Date of Failure: April 12, 2007 VIN : Not  
Available Component: VEHICLE SPEED CONTROL**

**Summary:**

THIS IS NOT A FAILURE, BUT SOMETHING I SEE AS A SAFETY ISSUE.. WHEN I AM STOPPING AT A STOP LIGHT/ STOP SIGN AND AM IN DRIV WITH THE AIR CONDITIONER (A/C) ON THE TRUCK WILL SURGE FORWARD AND I HAVE TO PUSH THE BRAKES DOWN HARDER. THIS ONLY HAPPENS WHEN THE A/C IS ON, AND SEEMS TO COME FROM THE INCREASE IN ENGINE RPMS WHEN THE COMPRESSOR KICKS ON. THIS IS VERY UNSAFE AND COULD CAUSE ME TO REAR END SOMEONE. \*AK

**TOYOTA Model : TACOMA Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : No Fire : No  
Number of Injuries: 0 ODI ID Number : 10181486 Number of Deaths: 0 Date of Failure: January 24, 2007 VIN :  
5TELU42N17Z... Component: VEHICLE SPEED CONTROL**

**Summary:**

I WAS STOPPED WAITING FOR ONCOMING TRAFFIC AT RT. 136 WEST NEWTON PA. WITH MY FOOT ON THE BRAKE THE TRUCK ACCELERATED SO HARD THE BRAKE WOULD NOT HOLD IT EVEN WITH FULL PRESSURE APPLIED. THE ONCOMING CAR MISSED ME BY INCHES. AFTER TRYING TO GET TOYOTA TO TAKE CARE OF IT WITH NO LUCK, I TRADED THE TRUCK IN WITH ONLY 3000 MILES ON IT. I AM VERY CONCERNED THAT THE TRUCK WILL BE SOLD TO SOMEONE THAT MAY HAVE THE SAME PROBLEM AND NOT BE AS FORTUNATE AS I WAS. \*JB SEE ALSO 10180652 \*DSY

**TOYOTA Model : YARIS Year : 2007 Manufacturer : TOYOTA MOTOR CORPORATION Crash : Yes Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10402840 Number of Deaths: 0 Date of Failure: May 20, 2011 VIN : Not**  
**Available Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 TOYOTA YARIS. THE CONTACT STATED THAT WHILE DRIVING INTO A PARKING SPACE THE VEHICLE SUDDENLY ACCELERATED. HE TRIED TO ENGAGE THE BRAKES BUT THE VEHICLE DID NOT STOP UNTIL IT CRASH INTO A BUILDING. NONE OF THE AIR BAGS DEPLOYED. A POLICE REPORT WAS FILED. NO ONE WAS INJURED. THE VEHICLE WAS TOWED TO A LOCAL MECHANIC WHO WAS UNABLE TO DIAGNOSE THE FAILURE. THE MANUFACTURER WAS NOT MADE AWARE OF THE FAILURE. THE VEHICLE IDENTIFICATION NUMBER WAS NOT AVAILABLE. THE VEHICLE WAS NOT REPAIRED. THE FAILURE AND CURRENT MILEAGE WAS 100,000.

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## **VOLKSWAGEN**

**VOLKSWAGEN Model : PASSAT Year : 2007 Manufacturer : VOLKSWAGEN OF AMERICA, INC Crash : Yes Fire : No**  
**Number of Injuries: 0 ODI ID Number : 10226687 Number of Deaths: 0 Date of Failure: March 29, 2008 VIN : Not**  
**Available Component: VEHICLE SPEED CONTROL**

**Summary:**

TL\*THE CONTACT OWNS A 2007 VOLKSWAGEN PASSAT. WHILE APPROACHING A STOP, THE ENGINE BEGAN TO REV AND THE RPM NEEDLE INCREASED. THE VEHICLE WAS IN DRIVE AND THE BRAKE PEDAL WAS DEPRESSED AT THE TIME. THE CONTACT PLACED THE VEHICLE INTO PARK AND TURNED OFF THE ENGINE. WHEN HE RESTARTED THE VEHICLE, IT SEEMED TO OPERATE NORMALLY. AFTER A FEW DAYS, THE FAILURE RECURRED. THE DEALER STATED THAT THE CAUSE OF THE FAILURE WAS DUE TO A RECALL ON THE ENGINE FOR UNINTENDED ACCELERATION. THE VEHICLE WAS REPAIRED, BUT THE CONTACT WAS UNSURE OF WHAT WAS ACTUALLY REPAIRED. THREE WEEKS AFTER THE REPAIRS WERE MADE, THE FAILURE RECURRED, THE VEHICLE JERKED FORWARD AND CRASHED INTO THE BUMPER OF THE PRECEDING VEHICLE. THE DEALER WAS NOTIFIED AND THE VEHICLE HAS REMAINED THERE EVER SINCE. NO REPAIRS HAVE BEEN MADE YET BECAUSE THE DIAGNOSTIC RESULTS INDICATE THAT NOTHING IS WRONG WITH THE VEHICLE. THE VIN AND RECALL NUMBER WERE UNKNOWN. THE FAILURE MILEAGE WAS 11,434.

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## Appendix 4

Typed copy of letter provided to A. F. Anderson by the DEFENDANT

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From            Technical Services Manager (Lloyd Robinson)  
                 Mitsubishi Motors New Zealand Ltd  
                 16/4/2012

To              Constable Laurence Vautier  
                 Strategic Traffic Unit  
                 Wellington Police

Dear Laurence

Vehicle Crash registration number DUE 287

Mitsubishi Motors Corporation have manufactured approximately 630,000 Outlander vehicles up to March 2012 from 2 production facilities ,one in Japan and one in the Netherlands.

Of these vehicles there have been 10 reports globally of unexplained acceleration. One case was determined to be caused by incorrect floor mat fitment, whilst the other cases cannot be substantiated nor have any faults been found after investigating the vehicles.

A total of 23 cases for incorrect brake action have also been globally, 15 of those could not be faulted. A further 6 cases for further heavy brake pedal effort which resulted in a recall for a certain range of vehicles to replace the brake booster check valve which does not involve the vehicle in question. In only two cases were any defective parts found, one for brake fluid leaking from the master cylinder and the other for internal parts of the brake booster being defective.

In NZ we have sold 6006 Outlander vehicles of all models and have only this one case alleged as having an unexplained acceleration. This was not brought to our attention until March 2012 when we were contacted by our dealer. We have not had the opportunity for any inspections to assess this vehicles condition to this date.

Yours sincerely  
Lloyd Robinson

Technical Services Manager

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## Appendix 5

### **An Electronic Cause for Sudden Unintended Acceleration**

**by**

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11 April 2012**

**Abstract:** An electronic cause for sudden unintended acceleration is presented. At low vehicle speeds, when the engine is at idle, the alternator cannot supply all the current required by the vehicle's electrical system. In this case, the battery must supply the additional current, and the system voltage is determined by the battery voltage. If the battery state of charge is weak, the battery voltage will be low, and the inrush current caused by one of the vehicle's electrical functions (e.g., an electric motor) starting up will cause a large negative voltage spike on the battery supply line. This voltage spike can pass through the ECM voltage regulators and lead to a brownout error in the CPUs if the CPUs are not properly held in reset by the ECM supply. The brownout error can cause faulty operation of the CPUs, keep-alive memory, and/or EEPROM memory, leading to a software error that causes unpredictable engine operation, such as sudden acceleration. At high vehicle speeds, when the alternator is setting the system voltage, worn or bouncing brushes inside the alternator can interrupt the alternator field current and produce a large negative voltage spike on the alternator output that causes a brownout error in the CPUs. These two causes provide an alternative explanation to driver error for many observations associated with sudden unintended acceleration in vehicles with electronically controlled throttles similar to Toyota's ETCS-i system.

Copies of this discussion memorandum and its appendices can be obtained as pdf files from Mr R

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