OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION:	**Inquest into the death of Paul Gerard Joseph Robinson**
TITLE OF COURT:	Coroner's Court
JURISDICTION:	Caloundra
FILE NO	4454/07(3)
DELIVERED ON:	24 June 2010
DELIVERED AT:	Caloundra
HEARING DATES:	20 October 2009, 26-28 October 2009, 2 November 2009, 1-5 March 2010 and 8 -10 March 2010.
FINDINGS OF:	J A Hodgins, Coroner
CATCHWORDS:	CORONERS: inquest - Truck roll-over, driver error, truck maintenance, faulty brakes & inadequate signage
REPRESENTATION:	
Counsel Assisting:	J Tate, Crown Law
Woodlands Pty Ltd	Mr R A Mulholland SC i/b Butler, McDermot & Egan
Fair and Safe Work Queensland:	Mr P Matthews & Mr T Cvetkovski
Queensland Transport:	Mr MD Nicolson i/b Mr Lang, Crown Law
Mrs S Robinson	Mr T Mahon
Mrs A Jeremy	

Introduction

[1] These are my findings in relation to the death of Paul Gerard Joseph Robinson ("Paul"). These findings seek to explain how his death occurred and consider whether any changes to policies or practices could reduce the likelihood of deaths occurring in similar circumstances in the future. The findings will be given to the family of the person who died and to each of the persons or organizations granted leave to appear at the inquest. A copy of the findings will be placed on the website of the Office of the State Coroner.

The Coroner's Jurisdiction

[2] A coroner has jurisdiction to inquire into the cause and the circumstances of a reportable death. If possible he/she is required to find:-

- whether a death in fact happened;
- the identity of the deceased;
- when, where and how the death occurred; and
- what caused the person to die.

[3] An inquest is not a trial between opposing parties but an inquiry into the death. In a leading English case[1] it was described in this way:-

> *"It is an inquisitorial process, a process of investigation quite unlike a criminal trial where the prosecutor accuses and the accused defends… The function of an inquest is to seek out and record as many of the facts concerning the death as the public interest requires"*

[4] The focus is on discovering what happened, not on ascribing guilt, attributing blame or apportioning liability. The purpose is to inform the family and the public of how the death occurred with a view to reducing the likelihood of similar deaths. As a result, a coroner is authorised to make preventive recommendations concerning public health or safety, the administration of justice or ways to prevent deaths from happening in similar circumstances in future[2].

[5] A coroner must not include in the findings or any comments or recommendations or statements that a person is or may be guilty of an offence or civilly liable for something[3]. However, if, as a result of considering the information gathered during an inquest, a coroner reasonably suspects that a person may be guilty of a criminal offence; the coroner must refer the information to the appropriate prosecuting authority[4].

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[1] R v South London Coroner; ex parte Thompson (1986) 126 S.J.625
[2] s 46 Coroners Act 2003
[3] s 45(5) and 46(3) Coroner Act 2003
[4] s 48 Coroners Act 2003

[6] Proceedings in a coroner's court are not bound by the rules of evidence because the court may inform itself in any way it considers appropriate[5]. That doesn't mean that any and every piece of information however unreliable will be admitted into evidence and acted upon. However, it does give a coroner greater scope to receive information that may not be admissible in other proceedings and to have regard to its provenance when determining what weight should be given to the information. This flexibility is a consequence of an inquest being a fact-finding exercise rather than a means of apportioning guilt: an inquiry rather than a trial.

[7] A coroner is to apply the civil standard of proof, namely the balance of probabilities. The approach though is that the more significant the issue to be determined, the more serious an allegation or the more inherently unlikely an occurrence, the clearer and more persuasive the evidence needed for the trial of fact to be sufficiently satisfied that it has been proven to the civil standard[6].

[8] A coroner is also obliged to comply with the rules of natural justice and to act judicially[7]. No findings adverse to the interest of any party may be made without that party first being given a right to be heard in opposition to that finding. It includes being given an opportunity to make submissions against findings that might be damaging to the reputation of any individual or organisation.

The evidence

[9] All the evidence given during the inquest has been considered. Reference will be made to the evidence considered appropriate to record in these reasons and necessary to understand the findings made.

Queensland Police Service Investigation

[10] Senior Constable Christensen, Forensic Crash Unit, Colum conducted the forensic investigation into the accident.

[11] On arrival at the scene at 9:40pm he took up with Senior Constable Russell who was the first police officer to attend. He observed members of the Queensland Fire and Rescue Service extricating the entrapped body of Paul from the truck. He carried out an examination of the truck and the scene and recorded his findings. Gouge and scrape marks were noted on the roadway, as well as tyre markings. Measurements and a map were subsequently made of the tyre markings. He directed Senior Constable Russell to video record the rear nearside wheel of the truck in rotational mode.

[12] A police photographer was directed to take photos of the truck and the scene. A QPS mechanic was engaged to carry out a detailed inspection. Assistance was sought from Workplace Health and Safety Queensland and Queensland Transport. Statements were taken from persons who attended the scene, employees of Woodlands and other relevant persons.

[5] s 37 Coroners Act 2003
[6] Briginshaw v Briginshaw (1938) 60 CLR 336 at 361 Sir Owen Dixon J
[7] Harmsworth v State Coroner [1989] VR 989 at 994

[13] At the completion of the investigation, Senior Constable Christiansen compiled a detailed report for the Coroner[8].

Mechanical engineer's report

[14] Dr Grigg, mechanical engineer was engaged on behalf of Woodlands to prepare an expert report on the cause of the accident[9]. Dr Grigg has theoretical and practical expertise in motor vehicle investigation. His report was of great assistance in determining the factors that led to the accident.

Accident

[15] Paul was contracted through Forum A Pty Ltd to drive trucks for Woodlands HR Pty Ltd ("Woodlands"). The arrangement commenced on 11 September 2007.

[16] On 25 September 2007, Paul was rostered to commence his shift at 3.00pm. He did not commence at that time due to the truck having a mechanical problem and was re-scheduled for a start at 10.00pm. Shortly after 6.00pm he received a telephone call to attend to commence the shift. He arrived at the workplace at approximately 6.45pm and attended to the loading of 13.12 tonne of horse pellets on to the hoppers of the truck. The total weight of the truck was 26.3tonnes. He then departed for delivery to a farm at Kenilworth.

[17] Whilst descending the Maleny Kenilworth Road, Conondale about 8.30pm Paul lost control of the truck negotiating a left hand bend and the truck overturned. The driver's side of the truck came into collision with the bitumen surface of the roadway and then slid in a north-west direction before coming into collision with the W-beam guard rail positioned on the northern side of the east bound lane.

[18] The impact caused dislodgment of the W-beam and the truck continued over the embankment. The front portion of the truck came into collision with a large tree entrapping Paul. Emergency services arrived. However, during extrication Paul was pronounced deceased.

[19] It was dark at the time of the incident. Weather conditions were fine and clear. The road surface was dry bitumen in good condition. Paul's truck was the only vehicle on the roadway travelling in a westerly direction. No other vehicle attributed in any way to the cause of the incident.

At the scene

[20] Jonathan Anthonysz was the first person to the scene. Just before 8:30pm he was talking on the phone on the back patio of his home which is a short distance below the scene. He heard the truck coming down the hill and then a large explosion which was the truck going over followed by a second bang which was the truck hitting the guard rail. He remembers hearing lots of air coming out of the truck, a hissing sound. The clutch could be heard roaring

[8] Exhibit 1
[9] Report dated 23 February 2010 Exhibit No. 17

as if it were in low gear and lots of high revs from the engine. He called triple O.

[21] As he drove his car along his driveway to the accident scene, he could not see anything except a massive cloud of dirt dust just folding down the hill and the stink of brakes.

[22] He went down to the truck and could see that he could not do anything for Paul. He went back home and rang triple O again. He then went back to the scene where he saw David Johnson and Ashleigh Nichols.

[23] As the truck came down the road, he recalled hearing the selectors taking on a new gear. The revs of the truck indicate the truck was gearing down.

[24] Mr Houlihan in his evidence said that the excessive hissing sound was the engine over revving due to excessive speed for the gear engaged. The truck was not slowing down.

[25] David Johnson and Ashleigh Nichols were driving the road, noticed the scrape marks on the road and the safety rail missing. The back end of the truck was over the embankment. David Johnson went down to Paul and saw that he was badly pinned from the waist down under the steering wheel. Paul was still alive and coherent. He released Paul's seat belt, as well as attempting to assist him and comfort him.

[26] Senior Constable Russell was the first response police officer to the scene.

[27] James Houlihan, Tow Truck driver, Claytons Towing Service arrived at the scene after 10:00pm, approximately 10:15pm. He was an impressive witness demonstrating considerable mechanical and tow truck experience having attended hundreds of accidents. He had a thorough practical understanding of the driving and mechanics of trucks.

[28] He examined the truck to prepare it for towing. He disconnected the tail shaft at its rear universal joint and observed that the push rods of the rear power brake chambers were fully extended and that the brake drums were cool indicating failure. He rotated the rear wheel of the truck without the insertion of the release tool into the power/air chamber. James Houlihan said that the brakes were out of adjustment. He subsequently fitted the caging tools into the rear ends of the maxi brake so as to compress the brake springs to allow free rotation of the wheels when towing. He towed the truck back to Claytons Towing yard at Bli Bli.

[29] He said that he touched all the brake drums on the drive axles and, whereas those on the front drive axle were quite warm, those on the rear drive axle were "almost cold" indicating to him that the front brakes had been operating and the rear had not been operating very well at all. He acknowledged that he had only felt the drums on the upturned side of the vehicle. He further conceded that the brakes described as cold may have been operating but how efficiently was not known.

[30] The submission that his evidence about the warmth of the brakes was unreliable is not accepted. He arrived at the scene within two hours of the accident. At what time he inspected the brakes is an unknown. What is known is that he felt a difference in the temperature between the front and rear brakes. Also Senior Constable Christiansen confirmed that the brakes were of different temperature. The brakes were not working efficiently.

[31] The variation in heat indicated to this experienced vehicle examiner/mechanic that the front brakes had operated to a certain degree and the rear brakes had not been operating very well at all due to lack of adjustment or linings or both.

[32] Also the evidence of tyre markings on the roadway is consistent with the notion advanced from James Houlihan's evidence that the front brakes were working and that some of the back brakes were working. To what extent the brakes were working is unknown.

Tyre Markings

[33] Tyre markings were observed commencing on the descent of the westbound lane extending for a distance of 231 metres prior to the truck overturning. The tyre markings were of light texture indicating brake application. Senior Constable Christensen and Senior Constable Knight took measurements of the tyre markings and a map was prepared[10].

[34] The tyre markings commence with dual rear wheel marks, being on the passenger side, the mark nearest the curb 35 metres and the outside of the dual wheel 37 metres. On the driver's side, the inside wheel measurement was 17 metres and the outside wheel measurement 19 metres. The markings indicate the passenger side tyre was off the bitumen.

[35] The next markings indicate scuffing the road, like a bouncing effect. This may have been due to shifting of the load causing bouncing to the rear drive wheels. The subsequent markings were single lines, on the driver's side being 19 metres in length and on the passenger's side 13 metres in length.

[36] The next markings were dual rear wheel markings being 7 metres on the passenger side and 6 metres on the inside of the wheel. Next were rear dual wheel marks again being 12 metres on the passenger side and 11 metres on the inside of the wheel.

[37] The front steer wheel is the next marking being 21 metres in length.

[38] The rear dual wheel marks occur next with the passenger side 21 metres in length and the driver's side 58 metres in length. This marking crosses over the front steer wheel marking. This braking then continues for another 45 metres, then 8 metres and then 11 metres. The last steer wheel marking is 62 metres in length. The last dual rear wheel marking is 26 metres in length.

[39] Dr Grigg in his evidence was of the view that the dual markings indicated rear brake application. On the curve, prior to where the rollover occurred

[10] Exhibit 3

there is an indication of yawing, indicating the truck was having difficulty in making the curve. This may have been due to the truck being at a higher speed than the advisory speed or Paul realising the speed was too high and took corrective action. The markings are consistent with an experienced driver trying to flatten out the curve as he approached it by getting over to the right to obtain more radius to get around the curve and then cut back across it.

Analysis

[40] The brakes were out of adjustment and operated unevenly. A difference in temperature was observed between the front and rear brakes. An experienced mechanic noticed the difference in temperature, which indicated uneven application and that the brakes were not working efficiently. He was able to rotate the rear wheel without the insertion of the release tool into the power/air chamber. Also, the tyre markings were not as would have been expected. The tyre markings were light. The tyre markings indicate brake application; but not heavy brake application. A truck of such weight would expect to leave a heavier tyre marking in colour. The extent of brake application influences the degree of tyre marking. The front brakes worked more effectively than the rear brakes.

Autopsy findings

[41] On 28 September 2007 an autopsy was carried out by Dr Van Vuuren at the John Tonge Centre. He found there were multiple abrasions, lacerations and bruises. Internally, there were fractured ribs, spinal vertebrae fracture and total laceration of the popliteal artery and vein. The cause of death was multiple injuries.

Maleny Kenilworth Road

[42] The incident occurred on the Maleny Kenilworth Road 172 metres east of Upper Cedar Creek Road. The roadway consisted of two lanes, one lane for eastbound traffic and one lane for west bound traffic. A speed limit of 100 kilometres per hour applied. Advisory signs were installed at the commencement of the descent and the conclusion of the descent:-

- "VERY STEEP DESCENT NEXT 4.04km" with a diagram showing a 10% gradient at the commencement of the descent. The sign is located near the Curramore/Kidman Creek road turnoff;

- "TRUCKS &BUSES MUST USE LOW GEAR" followed by a 60km located at chainage 8.69km i.e. 3.75 km prior to incident sight;

- "TRUCKS USE LOW GEAR" and diagram showing steep gradient located 100m after the commencement of the level section prior to the final descent; and.

- "END TRUCK & BUS LOW GEAR AREA" at conclusion of descent at base of Upper Cedar Creek Road at chainage 12.75km.

[43] The roadway gradient at the area of impact is an 11.2% descent for vehicles travelling in a westerly direction.

[44] The location of the incident is at a sharp left hand bend near the end of a steep descent of 4 kilometres.

[45] Dr Grigg described the road from the top of the range as containing three steep sections broken up by two level sections, as follows:-

- The first steep section commences from the top of the range. This point is 100m past the sign "Very Steep Descent next 4.04km use low gear". The length of this section is 1.2km and ends at Devil's Elbow. The grade is about 10%.
- The first level section is .4km in length, with a slight crest.
- The middle steep section is .4km in length.
- The second level section is .45km in length.
- The final steep descent is 1.25km in length. It has two left hand curves of similar radius. The grade is about 10%.

[46] There are several 60kph advisory signs and curve signs along the upper portion of the road. About 100m from the commencement of the second level section is a sign showing steep gradient and "Trucks Use Low gear". An advisory speed posted on the curve sign is 50kph. There is an arrow sign on the left-hand bend prior to the accident bend; but not on the accident bend.

[47] At the top of the descent is the warning of a long steep descent for the next 4.04km. There is a warning of a steep descent and trucks use low gear prior to the commencement of the level section and then the steep descent doesn't happen as it is a level section. For about .4km it is level and then the steep descent happens. Dr Grigg felt "It's almost like a trap, that he – he's got a warning which looks like a false warning, and then suddenly he is into it"[11]. He therefore considered that the sign should be moved closer to the top of the decline to the scene. The existing signage was too far (about 350m) from the commencement of the final decline. Dr Grigg acknowledged that he had not referred to the Manual of Uniform Traffic Control Devices to determine whether the existing signage contravened its requirements.

[48] Kumar Panchal in his report for Queensland Transport dated 11 March 2008 set out a diagram of the road that details the signage and conditions of the road at the time. The report noted that the road had not been the subject of repeated accidents. There were two prior accidents on this section of the road, namely 22 July 2007 and 9 July 2004. Both previous accidents were single vehicle accidents involving motor cycles. On neither occasion was the person involved in the accident fatally injured.

[49] A number of persons experienced in driving trucks gave evidence[12]. The common theme was that an experienced truck driver descending the Maleny

[11] T 6-96

[12] Christensen T 2-71/74, Houlihan T 3-11/12, 115/116, Wild T 8-112/113, English T 9-55/56 and Francis T 4-42/43, 53/54

Kenilworth road would engage a low gear at the top of the range and remain in that gear until the bottom. Stephen Houlihan said[13]:-

"*Gear selection at the top of the hill is a critical thing especially in that type of country".*

Graeme Wild who did Paul's induction emphasised[14]:-

"*You just be aware at the top and stay – find yourself your lowest gear and just stay in that gear, even when you do flatten out, just stay in that gear, even when you do flatten out, just stay in that gear and it'll take you another minute to get along that flat section, but …..you're still in control of everything when you hit this other steep section".*

He agreed that a sense of needing to be cautious was second nature to an experienced truck driver.

Analysis

[50] The Maleny-Kenilworth Road descent is a steep descent and needed to be approached with caution. An experienced driver would put his truck into low gear at the top of the range and keep it in that gear on the descent. While the number of accidents on the road had been minimal, Dr Grigg felt the signage prior to the final descent should have been located closer to the descent. This opinion is agreed with. Where the signage is currently located is almost like a trap, like a false warning. The warning signage at the top of the range would indicate to an experienced driver to put the truck in a low gear and stay in that gear until the foot of the range.

Driver

Experience

[51] Paul was born on 18 July 1957. He enlisted in the Australian Army on 4 July 1977 and honourably discharged in July 2003. His army service was as a member of the Royal Australian Corps of Transport. He gained experience in the operation of numerous types of heavy vehicles. Competency level had been achieved in the operation of a loaded multiple-axle trailer.

[52] On discharge, he undertook courses conducted by Mining Training Services, Joondalup, Western Australia – namely "Conduct Haul Truck Operations" and "Conduct Front End Loader Operations".

[53] Paul commenced employment through Forum-A Pty Ltd, a labour hiring company, on 10 September 2007. This employment was for sixteen days until his death on 25 September 2007.

Induction

[54] On 31 January 2006, Mr Elks, Managing Director, Woodlands signed off on a HSEQ Job Risk Analysis which identified for driving trucks that the action be implemented was:-

[13] T 3-110
[14] T 8-112/113

"Instruction/supervision in driving techniques/safe delivery routes for up to 1 week, so far as is practically possible, to familiarise drivers with all delivery routes and associated risks."

[55] Graeme Wild was responsible for Paul's induction. He was selected on the basis he was an experienced driver and had worked for Woodlands for many years. He showed Paul the yard procedures, safety checks on the trucks and delivery procedures. Paul was taken by him on a number of occasions down the Kidaman Creek Road route known as "suicide road", when going to the farms near Kenilworth. This was the destination Paul was heading to on 25 September 2007. He emphasised to Paul that this route was the safe route to the farms near Kenilworth. He had no knowledge of Paul having travelled the Maleny-Kenilworth Road while working for Woodlands. He suggested that Paul may have missed the turn and then continued along the Maleny-Kenilworth Road.

[56] Graeme Wild said that Paul took a while to get used to the gears. It was simply not knowing where the gears were and not getting the right revolutions of the engine to let it go in properly. In the field at times he experienced difficulty with finding the gears and would crunch them. However, he was satisfied as to Paul's competency once he got used to the trucks.

[57] Neil Smith also showed Paul the delivery routes and requirements; but did not take Paul to the farms near Kenilworth and thus did not travel the Kidaman Creek road with Paul.

[58] Both these experienced drivers with Woodlands preferred the Kidaman Creek Road.

Analysis

[59] Paul was an experienced truck driver competent to drive the truck. His induction was carried out by an experienced and cautious driver of trucks. Whilst his instructor did not have an instructor qualification for training, he was well able to carry out Paul's induction. He did refer to Paul initially crunching gears; but was satisfied as to his competency once he got used to the truck.

[60] He was informed and shown the preferred route by experienced drivers to the farms near Kenilworth was the Kidaman Creek Road. There was no evidence that he had previously driven a truck on the Maleny-Kenilworth Road. Also, there was no evidence that he had familiarity with the road or familiarity with driving a loaded truck on this road, let alone at night. Consistent with the lack of record keeping at Woodlands, no record was kept of the training given to Paul or the assessment that he was competent to drive the trucks and was familiar with delivery routes.

Truck

[61] The truck driven by Paul was an International 2350G Iveco Acco model year 01/2006 Registration Number 764-UFZ purchased on 16 January 2006.

After the truck was purchased from Hi-Way 1 it was fitted out and was initially serviced by them under the manufacturer's warranty. Thereafter mechanical servicing in the main was carried out by Woodlands.

[62] The truck was equipped with a 6 cylinder Cummins diesel engine driving the rear axle with an 11 speed manual gear box. The engine was equipped with an exhaust brake.

[63] Dual air S cam brakes were fitted. Spring activated park/emergency brakes were fitted to the second steer and the rear (drive) wheels. A compressor provided air to the braking system. The air brake system was such that multiple brake applications of even very short duration had the potential to deplete the air from the system since a certain amount of air is lost on each application.

[64] The evidence of the drivers who had driven the truck was that there had not been problems in driving the truck. Sterling Francis who was critical of the maintenance of the Woodlands trucks, had driven the truck many times and had not experienced any mechanical or braking problems.

[65] On 25 September 2007 Graeme Wild drove the truck to the McIntyre farm, near Kenilworth via the Kidaman Creek road without experiencing any brake problems. The truck broke down at the McIntyre farm and the mechanic Michael Brown was called out to fix the problem. He performed checks and found moisture in one of the main supply plugs from the ECM. He rectified the problem; but noted in his notebook "needs diagnostic check asap".

[66] Senior Constable Christensen sought to obtain records from Woodlands on the mechanical servicing of the truck. After contacting Mr Elks, Managing director he attended upon the officer authorised to release the information, Graham Nicholson, accountant. On 29 November 2007 he was provided with copies of:-

- pro forma Daily Vehicle Maintenance Checklist;
- Time sheet pay periods ending 18 and 21 September 2007;
- Tax Invoices indicating loading of truck; and
- Vehicle Service Book.

[67] While a signed statement was obtained from the mechanic Michael Brown on 10 July 2008; no statement was ever obtained from the head mechanic Graham Pacey. Michael Brown's statement principally related to the incident at McIntyre farm on 25 September 2007; but did say that servicing of the truck occurred at 250 hour intervals. This contrasted with Graham Pacey's evidence at the hearing that servicing occurred at 300 hour intervals.

[68] The documentation provided by Graham Nicholson was well short of the information that the company had in it's possession. It is noted that Mr Elks spoke to Senior Constable Christensen on 28 November 2007 and indicated that he had received information from a contact in Brisbane from Queensland Transport that FCU member's had alleged that his machinery including trucks were defective. Mr Elks further advised that such comment would be denied and that the report to the Coroner is based on fact and fact only. This telephone conversation highlights the understandable concern

that the company had as to what would come out of the investigation. The company and its employees were less than fulsome in its co-operation and diligence in supplying information to Senior Constable Christiansen.

[69] An example of the lack of diligence was that up until the ninth day of hearing was it appreciated that the time sheets would provide information on the servicing of the truck. The Vehicle Service Book and Job Cards were very incomplete and poorly recorded details of servicing. Production of such documents so late in the piece left open the contention made by the representative of the widow that the documents had been concocted. Having heard evidence from Michael Brown and Graham Pacey and after examining the documents, this assertion is not accepted. It was simply poor record keeping.

[70] Given the farcical situation that evolved with the production of the time sheets on the tenth day of the hearing; it is somewhat surprising that Mr Elks could have even contemplated not getting an adverse report when Mr Molenaar conducted his audit in November 2007. That audit is not inconsistent with the poor quality of the mechanical servicing documentation produced at the hearing. The management desire to undertake a self-accreditation was not matched with follow through in the workshop. Realistically, it would not seem to be uncommon for such systems to take several years to bed down, as it would require considerable training effort, cultural change and extra work from the employees in recording information to the requisite standard. The further review of Peter Simmons of Coastal Training & Audit Services conducted in January 2008 bears out that the company had some considerable way to go in the recording of necessary information.

[71] The source documents evidencing the services performed on the truck were:-

- Vehicle Service Book;
- Job Card; and
- Mechanical Time sheets.

[72] Little credence could be given to the Daily Vehicle Maintenance Checklists as the evidence at the hearing was that they were used haphazardly and not accurately completed. Other services were performed on the truck from time to time by the vehicle supplier Hi-Way 1.

[73] From the beginning of 2007 the following mechanical services were performed on the truck:-

6 January 2007	Service tie rod, air leak (4 5 hrs)
15 January 2007	G box oil top up & check (.25hr)
16 January 2007	R&R rear tyres & rims (1.5 hr)
2 February 2007	Top up gear box & hyd oils (1hr)
7 February 2007	parts & services, PTO pump, Diff Oils & brakes (10 hr)
23 February 2007	Fix rod end & tyres. Fill hydraulic oil (3hr)
26 February 2007	Service

9 March 2007	Check exhaust, drain air tanks, hyd oil (2hr)
21 March 2007	Replace tyre (.5 hr)
26 March 2007	Tyres, hyd oil, lights (2.5 hrs)
4 April 2007	Serviced, greased, checked all oil & fluid levels were correct (6 hrs)
11 April 2007	Finish off service, greased all nipples on truck (3hrs)
18 April 2007	Ex manifold, gaskets, r& R drive belt (9.5 hrs)
24 April 2007	Adjust front brakes, AC belt, buzzer 3 hrs)
15 May 2007	Tyres (.5hr)
16 May 2007	Service and check steering (3.5 hrs)
22 May 2007	Service, R& R fuel 7 water filters (2.5hrs)
12 June 2007	Adjust clutch (1hr)
18 June 2007	Oil leaks, tyres (2hrs)
20 June 2007	Air leaks, drain water out of air system (1.5 hrs)
21 June 2007	ECM check by Hi-Way 1
16 July 2007	Tyres etc (1hr)
18 July 2007	R&R rear axle drive tyres x 4 (1hr)
26 July 2007	Adjust brakes, start service (1hr)
10 August 2007	Repair air brake & light (2hrs)
21 August 2007	Adjust brakes, service engine (2.5 hrs)
7 September 2007	Injector lines (7.5 hrs)
10 September 2007	Fuel leaks, top up oil (2hrs)
25 September 2007	Go to property, get truck started etc (3.5 hrs).

For each of the services, the names of the mechanic who performed the service is recorded.

Analysis

[74] The truck was regularly serviced on a monthly basis. The brakes were last adjusted on 21 August 2007 and were due for a further adjustment. The last recording of drainage of water out of the air system was on 20 June 2007.

[75] Both Michael Brown and Graham Pacey gave evidence that the truck was regularly and adequately serviced by reference to the Vehicle Service Book, Job Card or Tine Sheet. Michael Brown was able to confirm that he had mistakenly recorded a service in the Vehicle Service Book as having occurred on 21 July 2007, instead of 21 August 2007. His version was supported by the entry in his notebook[15].

Mechanical Inspection

[76] Mr Georgas a Vehicle Inspection Officer with the Queensland Police Service inspected the truck at Claytons Towing, Bli Bli on 3 October 2007. Mr

[15] Exhibit No. 34

Georgas is the holder of A Grade Motor Mechanics Certificate and has over fifteen years mechanical experience. He is a member of the Institute of Automotive Mechanical Engineers and a licensed motor vehicle examiner, approved by the Department of Transport. His position requires him to inspect vehicles involved in accidents and look for contributing factors.

[77] Mr Georgas was tasked to do a mechanical inspection of the trucks and in the Task Summary report it was remarked "allegations of faulty brakes loss of air"[16]. Three reports were prepared[17].

[78] Impact damage was observed to the front and right hand side of the truck with damage to the front bull bar, cabin, doors, roof, grain bin, steering and suspension. He found that the truck braking system was air operated, equipped with drum brakes on all wheels. The air braking system was depleted of air due to foot brake valve housing, connecting air lines, and left hand front brake hose impact damage. The airbrake system was charged and all impact damaged hosing was sealed and audible air leaks were detected at the quick release valves which supplied the drive axle brakes.

[79] The left hand front brake chamber was bent due to impact damage and he was unable to check the left hand front steer axle brake adjustment due to impact damage.

Pushrods

[80] The ideal push rod travel for the truck's braking system, according to the Australian Air Brake Code of Practice, was between 36 millimetres, being at the lower end of the range and 44 millimetres at the maximum. This pushrod length indicates the brakes are correctly adjusted and are working at optimum efficiency. As the push rod measurements exceed 44 millimetres the truck's braking system is progressively getting less effective. The maximum pushrod travel is approximately 63.5 millimetres.

[81] Mr Georgas noticed that all dual brake chambers fitted to the truck were "over stroked" and requiring adjustment as indicated by the pushrod stroke alerts. The dual brake chamber pushrods were marked with red paint. In the applied position if this red paint is visible it indicates that the brake slack adjusters require adjustment.

[82] The right hand front steer axle brake adjustment was checked manually and it was within manufacturers specifications at 32 millimetres. The remainder of the brake pushrod measurements significantly exceeded the optimum 44 millimetres pushrod travel. That is six out of eight pushrods required adjustment.

[83] The left hand steer axle 2 was 58 millimetres and right hand side steer axle was 53 millimetres. The left hand side drive axle 1 was 60 millimetres and right hand side drive axle 1 was also 60 millimetres. The left hand side drive (rear) axle was 57 millimetres and right hand side drive (rear) axle was 57 millimetres. The front drive axle brakes were grossly out of adjustment and

[16] Senior Constable Christensen in the Task Summary Report Exhibit 15
[17] !3 November 2007, 1 October 2009 and 9 October 2009.

these wheels could be rotated by hand when the brakes were fully applied. The rear of the truck was raised at the inspection site and the rear drive axles could be turned by hand with the park brake applied which indicated that the brake shoes were grossly out of adjustment and not making sufficient contact with the brake drums.

[84] The maxi chamber brake adjusters were worn and the rear drive brake hoses were damaged (not leaking) as they were rubbing against the body during suspension travel. There was excessive free play (2-3mm) in the slack adjusters.

[85] Dr Grigg accepted Mr Georgas's statement that the ideal push rod travel for the truck's braking system was between 35 and 44mm. The maximum push rod travel for the brake type was 63.5mm. He noted that although some of the measured travel approached the limit; none reached it. Nevertheless, the braking efficiency would have been decreased because of the reduction in leverage that could be applied via the push rod to the S-cam and consequently, in the force that could be generated to push the shoes onto the drum. The optimum possible reduction was around 30%.

Brake Linings

[86] All brake linings were reported to have been in a satisfactory condition. Mr Georgas concluded that all brake linings were in a satisfactory condition by viewing the thickness of the inner sides of the linings without removing the brake drum. He was unable to recall whether he made his inspection through the inspection window or by taking a cover plate off. He did not feel it was necessary to remove eight sets of wheels to carry out such an inspection.

[87] Dr Grigg criticised Mr Georgas for not removing each of the wheels, which would have taken up to eight hours. Dr Grigg said that the condition of the brake adjustments found after the crash would be affected by the extent of the wear on the brakes that were operating during the descent. His opinion was that it was a significant failure not to take the wheels off to remove the drums and examine them and the brake linings because it meant that a proper assessment of the condition of the brakes could not be made. Such an inspection would have enabled a better visual inspection of the brake linings and brake drums on all eight wheels.

[88] However, Michael Brown, an experienced mechanic said that the normal practice when servicing trucks was to view the state of brake linings by inspection through the inspection window. Mr Georgas was satisfied that his inspection of the brake linings was such that he was able to conclude that the brake linings were in a satisfactory condition. His inspection practice was in line with the practice of the experienced mechanic Michael Brown. Also, it is consistent with the finding that the truck had been regularly serviced, albeit at the time of the incident the truck was due for a regular service. Therefore, the contention that Mr Georgas did not make a proper assessment of the brake linings is not accepted.

Water in air tanks

[89] A large amount of water (measurable in litres) was found in the air tank reservoirs adjacent to the left-hand side chassis rail. The water was not caught in a container and sprayed out under pressure. Mr Georgas was unable to measure the amount of water in the air wet tanks. He produced a photo which indicated a considerable amount of water came out[18]. The photo shows the area of water and the soil being muddy, consistent with the amount of water stated by Mr Georgas.

[90] Mr Georgas said that it was not uncommon for trucks to produce two and a-half litres of water per day; but that much more than two and a-half litres came out. The water ran for a few minutes and he was stunned as to how long it ran.

[91] He noted that the wet tank drain pull cord was located inboard and it required that the driver/mechanic crawl under the truck to access it.

[92] Dr Grigg estimated the capacity of air receivers as around 35 litres each, making a total with four air receivers of 140 litres. He thought that if there were three litres of water in the receivers, the capacity available for the air would have been reduced by a few percent. His view was that was really not very significant. Further, even if there were 10L of water in the system, the wet tank would not even be half full and it was problematical whether even allowing for sloshing effects that water would find its way through the dry tanks into the brakes themselves. Dr Grigg did not place much reliance on the evidence of air and water leaks because of the possibility of accident damage.

[93] After hearing the evidence on draining the wet tank from Graeme Wild and Trevor English, the conclusion is reached that draining the water tank was not a regular practice. Graeme Wild's evidence varied from draining the water tank every day to every second or third day. Mr Georgas said that to drain the water tank, a driver would have to crawl under the truck to drain the water. Graeme Wild thought there was a chain on the wet tank. Trevor English claimed that he used a broom stick to drain the cock of the wet tank.

[94] Dr Grigg's conclusion in this area does not give sufficient regard to the evidence of Mr Georgas supported by the photographic evidence. Dr Grigg has underestimated the volume of water found in the air tanks. Mr Georgas says he could not measure the volume As each wet tank could accumulate 3-5 litres of water a day, over a few days the build up of water would have been much more than Dr Grigg took into account.. As such, the volume of water would have diminished the braking efficiency. To what extent is unknown.

Tyres

[95] All tyres were in a satisfactory tread condition. Tests conducted indicated that of the tyres still inflated, the tyre pressure was satisfactory.

[18] Photo 094 Exhibit Number 16

Air Compressor

[96] Mr Georgas removed the air compressor on 5 October 2007 and the ECM on 9 October 2007 as requested and delivered them to Cummins South Pacific, Darra for further testing. On removal, he turned the compressor by hand to check that it was not seized. He did not have the diagnostic equipment to evaluate the efficiency of the compressor.

[97] Dr Grigg considered it a low possibility that a faulty air compressor significantly contributed to low air pressure in the truck's bra king system. Tyre markings indicated that the air brakes were working. The drivers of the truck prior to Paul did not notice any deficiency in the compressor. No earlier braking issues were noted. The slight leakage in the pressurised air system when tested may have been due to damage in the truck rollover.

Steering system & Suspension System

[98] Upon inspection the steering input shaft at the power steering drive axle was broken due to impact damage. No steering system defects were found. The right hand side drive axle shock absorber was bent and leaking due to impact damage. The suspension otherwise was in a satisfactory condition.

Mr Georgas's Conclusion

[99] Mr Georgas concluded that the truck was in a dangerous mechanical condition due to braking system defects:-

- all maxi-brakes were "out of adjustment";
- excessive water in the air braking system;
- air leaks at the drive axle quick release valves.

[100] These defects would have considerably reduced the efficiency of the braking system and would have significantly increased the stopping distance of the truck. He further was of the opinion that the braking system had not been serviced or maintained recently.

Analysis

[101] Mr Georgas was of the view that the braking system had not been serviced or maintained recently. Although the Vehicle Service Book had been poorly kept, in that it did not reflect the maintenance performed on the truck, the truck was last serviced on 21 August 2007. The truck was due for a service. It is highly likely that the descent down the Maleny-Kenilworth Road resulted in some further degradation of the brakes. However, the conclusion is reached that the brakes were in need of re-adjustment at the top of the descent. The effect of the poor brake adjustment was to cause some brakes to run hot i.e. the front brakes and for brake fade to occur. This is consistent with the tyre markings. Thus when Paul needed to rely on the brakes they

were found wanting. In addition, the volume of water in the air tank added to the braking inefficiency

[102] There was acceptance by Dr Grigg that the brakes being out of adjustment would have reduced the efficiency of the braking system. The stopping distance of the truck would have increased due to the need for re-adjustment. Also, when the brakes were very hot the stopping distance would be greater. The poor brake adjustment had the potential to affect brake balance and cause some brakes to fade. Dr Grigg's estimate was that the potential effect was no more than 15 or 20%. He conceded that one of the factors contributing to the accident was reduced braking capability of the truck. Dr Grigg would not go as far as Mr Georgas's finding that the defects considerably reduced the braking system. He thought that view was a relatively extreme view. He incorrectly characterised Mr Georgas's evidence as giving the impression that the truck would have had almost no brakes at all. Mr Georgas said that the defects should have significantly increased the stopping distance of the truck. As Dr Grigg pointed out there were skid marks, albeit light not dark as would be expected. Also, Mr Houlihan attested that some were warm and some cold when felt which supports that some brakes were out of reasonable adjustment levels.

Electronic Control Module (ECM)

[103] The Cummins engine in the truck had an Electronic Control Module ("ECM") installed. The main function of an ECM is to control engine fuelling (metering and timing). Engine control is by a set of programs (algorithms). The engine hours are metered in hours: minutes: seconds (not time of day). A history is provided of electronic fault codes which define when the system is "out of range". It also records "engine derate" which is normally caused by an out of range engine system.

[104] Mr Mursell, Electronic Products and Systems Manager, Cummins Engine Company analysed the data from the ECM. This was for the four hours prior to 638:18:28 engine hours, which was the last reading after the crash had occurred.

[105] At 6434 hours a number of fault codes issued, which related to the breakdown of the truck at the McIntyre farm. The fault codes issued were "hard starting problem" and "engine derate". The fuel problem was rectified by the mechanic Michael Brown. There was no similar problem after that time.

[106] At 6437 hours there were fault codes "low coolant level sensor" and "engine derate". The engine was idling and the coolant level was at a satisfactory temperature. The low coolant level did not lead at any stage to engine overheating.

[107] At 6438:14:03 hours the truck was travelling at 32 kph, 3034 rpm, clutch depressed, brake released and throttle closed. At 3034 rpm the engine was over-speed. Within a second the engine speed had risen to 3211 rpm and the fuel solenoid had shut down while the clutch was still depressed and the brakes released. This was four minutes twenty-four seconds prior to when the crash occurred. This over-speed probably happened when Paul was

attempting to engage the gears and the truck's speed was too high to allow the selection of a lower gear. No further over-speed was recorded for the remainder of the journey.

[108] At 6438:18:27 hours the truck was travelling at 32 kph and 1299 rpm. A throttle pedal fault code was recorded consistent with the circuit being shorted. This reading and the reading one second later relate to the engine condition after the crash had occurred.

[109] Mr Mursell was of the view for the four hours prior to the accident, the truck would have been extremely hard to drive. The engine was stalling and the engine had a throttle pedal fault making it difficult to control the truck. As such, there would have been difficulty in selecting the correct gear to descend a hill. The correct revolutions per minute of the engine to change gear would have been hard to achieve.

[110] Dr Grigg was of a different view in that once Michael Brown had fixed the fuel problem at the McIntyre farm, there was no evidence of engine faults from the ECM data, apart from the over-speed. The level of and temperature of the coolant in the engine were traversed at the hearing also. However, the data does support the proposition that once the fuel problem was fixed, no further fuel problems were reported. Mr Wild who drove the truck to the McIntyre farm, was able to deliver the truck back to the depot at Beerwah without any further issues. Upon loading of the truck, Paul was able to negotiate his way up through Maleny. The absence of data during the descent down the range does not support the notion that Paul would have had difficulty with the engine and also had difficulty in changing gear.

[111] The recording of the over-speed at 6438:14:03 hours has some significance; because it leads to inferences being drawn of the speed of the truck as it descended the range. The ECM data shows at 6438:14:03 hours the truck was travelling at 32kph. Four minutes twenty-four seconds later at 6438:18:27 hours the truck speed was 18km/hr. Dr Grigg makes the obvious point that the truck would not have capsized at 18kph. Dr Grigg's view is that the engine over speed occurred when the truck was at the top of the range and probably happened when Paul was attempting to engage the gears and the truck's speed was too high to allow the selection of a lower gear. He calculated the average speed for the truck's journey to the crash site on the basis that the over speed occurred at the top (50.5kph) and calculated other average speeds that assumed other locations for the over speed. Five locations were considered. Apart from the top of the range, each of the other possibilities was eliminated, as the speed necessary to support such a conclusion was too out of proportion. For example, selecting Devil's elbow as the location of the over speed would require an average speed of 34.1kph, which is too low. From the top of the range, the average speed to the accident location is calculated at 50.5kph.

[112] He was further of the opinion that there was a high probability that the speed when the capsize occurred was 55 kph or higher. This would mean that a slightly lower speed further up could still result in the same average speed. A higher speed on the level sections would also be possible.

[113] The truck was going too fast to negotiate the final bend on the descent and as a consequence overturned. The truck negotiated a bend of similar radius to the final bend, which was 600m further back on the final steep section. Having gone round this bend, it is reasonable to infer that the speed of the truck must have increased approaching the final bend. Load shift is a possibility; but there does not seem to be any reason for the horse pellets to have shifted. For the truck to have capsized at a speed of 55kph or greater, at this speed the truck must have been in a high range gear. Fifth or sixth seems likely on Dr Grigg's calculations[19]. With the tyre markings indicating some brake application, the speed beforehand would have been in excess of 55kph.

[114] Where the over-speed occurred is not certain.. However, selection of the place of over-speed enabled Dr Grigg to make some estimates of the probable speed of the truck and the gear it was in on the descent. Although Mr Georgas on inspection of the switch of the gear knob noted it was in the high range, this observation is not conclusive that the gear was in the high range at the time of the accident.

Analysis

[115] The ECM is a system designed to protect the engine. It controls engine fuelling. The Cummins ECM expert Mr Mursell thought that the truck would have been difficult to drive and that Paul would have had difficulty in selecting the correct gear to descend the range. The ECM recorded the over-speed which most likely occurred at the top of the range. There is no data from the over-speed point until the truck rolled over. The absence of data between the two points does not enable a finding to be made that there were problems with the engine on the descent. Also, no finding can be made that there was difficulty in gear selection. It may have been that data was lost with the roll-over; but that is unlikely.

[116] Dr Grigg's analysis supports the finding that the over-speed occurred at the top of the range. It further supports a finding at that point the truck was put into a high gear and remained in that gear until it was approaching the final bend, when a gear selection was made. In this high gear, the truck was travelling too fast for the final bend.

Accreditation Scheme

[117] In Queensland, there are two systems allowing heavy vehicles to operate on Queensland roads:-

- the statutory system; and
- the alternate compliance system.

[118] The statutory system requires annual inspection by transport inspectors employed by the Department of Transport and Main Roads. Inspections take place at a departmental compliance inspection station.

[19] Exhibits 18 and 25

[119] The alternate scheme relevant is the National Heavy Vehicle Accreditation Scheme (NVHAS) which consists of three mutually exclusive modules:-

- Mass Management;
- Maintenance Management; and
- Fatigue Management.

[120] NVHAS is a national scheme. The NVHAS Business Rules administered by the National Transport Commission, govern the scheme. The business rules set the conditions of the scheme and every member of the scheme must adhere to the scheme. One of the main attractors and benefit of the NVHAS Maintenance Module is that an operator e.g. Woodlands Enterprises Pty Ltd does not have to present vehicles for annual inspection by Transport inspectors for the issuing of a certificate of inspection. The NVHAS Maintenance Management Standards stipulate that appropriately qualified persons must carry out the maintenance of vehicles to ensure that they meet roadworthy requirements.

[121] When applying to join the NVHAS Maintenance Module, an operator has to provide a third part auditor's report on the operator's proposed management system. The management system takes into account nine standards – daily check, fault recording and reporting, fault repair, maintenance schedules and methods, records and documentation, responsibilities, internal review training and education and fuel quality.

[122] Within the first six months of being accredited to the NVHAS Maintenance Module, the operator is required to engage a third party auditor to audit their management systems. The audit report is provided to the department of Transport and Main roads. Details of the audit are checked and any non-compliance of standards is investigated further. Audits are of the operator's systems and records kept by the operator. They do not involve inspections of the vehicles within the NVHAS.

[123] Woodlands in January 2006 applied to join the NVHAS Maintenance Management Scheme. On 20 January 2006 Peter Simmons of Coastal Training and Audit Services completed an audit report and concluded that Woodlands Enterprises Pty Ltd satisfied the requirements of the standards for entry into the scheme. On 1 March 2006 the company was notified of its acceptance into the scheme from 28 February 2006 until 28 February 2008.

[124] On 31 March 2006 the company applied to add 13 additional vehicles to its maintenance accreditation, including Iveco truck registration number 764 JFZ and these vehicles were added to its accreditation from 20 April 2006.

[125] A six-month compliance audit was conducted by Mr Alton Stanley of Transport Compliance solutions on 21 August 2006. The areas identified for improvement were records and documentation and internal review. It was noted that the company's system showed a strong commitment to NVHAS

maintenance management and to continuous improvement. Mr Stanley recommended accreditation should be continued.

[126] Subsequent to the incident on 25 September 2007, the Department commissioned Mr Paul Molenaar of iComply to do a triggered audit of the company's NVHAS maintenance modules and which was carried out on 7 and 8 November 2007. Mr Molenaar concluded that whilst the company had procured a comprehensive maintenance management system, it had not been effectively integrated throughout its transport operations and the company was non-compliant with its own system and the majority of the maintenance management standards required by the NVHAS Maintenance Scheme. Major non-conformances identified were:-

- Daily check
- Fault recording and reporting
- Fault repair
- Maintenance schedules and methods
- Records and documentation
- Responsibilities
- Internal review
- Training and education.

[127] For the truck only four fortnightly Daily Check forms were completed and available for inspection since being entered into the system in January 2006. Also, for this form drivers had not formally recorded checking the braking system prior to departure and operating the vehicle on a public roadway. The auditor noted that this item is often missed when completing the Daily check form.

[128] The maintenance documentation for the truck consisted of:

Service Book entries

No entry inspection report

1 Job Card Report

1 Service Sheet A B or C not known – dated 23/6/07 partially completed

No Annual Inspection Report.

[129] On 26 November 2007 the company was notified of the cancellation of NVHAS maintenance module approval. The company contested the decision. On 17 December the company was provisionally reinstated to 31 January 2008. The Department commissioned a further compliance audit on 17 January 2008 by Peter Simmons. His report noted conformance verified for all but four of the requirements of the standard and minor non-conformance requiring rectification of daily checks, fault recording and reporting, maintenance schedules and methods and records and documentation. The audit showed faults still remaining with documentation not being completed. Also, not all scheduled servicing was able to be identified from the records that were kept. The company was reinstated by 6 February 2008.

[130] Queensland Transport did not report back to Senior Constable Christensen the result of Mr Molenaar's audit.

Inter- Agency Co-operation

[131] The Forensic Crash Unit of the Queensland Police Service was the lead forensic investigation unit into the accident. It provided the first response. Also, under the Police Powers and Responsibility Act 2000 it had powers to secure, restrict and otherwise preserve accident scenes; and issue relevant warrants and seizure notices. It has the forensic tools to determine the cause of traffic incidents on public roads. The initial assessment based on findings at the scene of the accident was that brake failure occurred. This was subsequently reinforced by the police mechanic who examined the truck. However, as the investigation progressed it turned into a wider investigation into the maintenance program and condition of the trucks at Woodlands. Such an investigation was beyond the core capabilities and resources of the officers of the Forensic Crash Unit.

[132] Senior Constable Christiansen sought help from two sources – Workplace Health and Safety Queensland (now known as Fair and Safe Work Queensland) and Queensland Transport. With the benefit of hindsight, a conference of responsible officers at management level should have been held at an early stage to develop a co-ordinated team approach to the investigation. Rather, what occurred was that a silo approach was taken by each agency, limited by the policy and legislation restrictions in each jurisdiction. It was not a professional approach to the investigative needs arising from the accident. Partly, the approach taken was blinkered by the categorisation that the investigation was of a motor vehicle accident; whereas there was a need to investigate beyond the normal paradigm.

[133] Queensland Transport did not become involved until Senior Constable Christensen contacted Mr Huxham of Queensland Transport by email on 8 October 2007. A request was made that Queensland Transport conduct a full audit of Woodlands maintenance program and the condition of the trucks owned by the company and provide written advice of the audit. The action taken by Mr Huxham was to refer the request to the NVHAS Accreditation Section for urgent auditing of Woodlands. Queensland Transport did not

report back to Senior Constable Christiansen the results of the audit conducted by Mr Molenaar.

[134] There is much force in the submission made on behalf of Workplace Health and Safety Queensland that it was odd that a full investigation was not automatically triggered by the regulators of the NVHAS Accreditation scheme on the evening Paul died. Queensland Transport officers had an extensive array of statutory requirements:-

- Transport Operations (Road Use Management) Act 1995;
- Transport Operations (Road Use Management – Vehicle Standards and Safety) Regulation 1999;
- Transport Operations (Mass Dimensions and Loading) Regulation 2005;
- Transport Operations (Road use Management – Fatigue Management) Regulation 2008;
- Australian Design Rules;
- National Heavy Vehicle Accreditation Scheme (NVHAS) Maintenance Management Guide.

[135] Workplace Health and Safety Queensland was requested to do a full and extensive audit of Woodlands and report its findings to Senior Constable Christiansen. Inspector Raymond Kickbush delegated Inspector John Bishop to do a material and plant handling assessment. No instructions were given to look at the truck Paul was driving. There was consistent liaising with Senior constable Christensen.

[136] Inspector Bishop performed a "Materials Handling" assessment on 19 November 2007 at the request of Workplace Health and Safety Queensland. He was instructed to focus upon the plant maintenance systems and process. It focussed upon plant such as forklifts, pallet jacks and trolleys and involved the assessment of elements including operator competencies, plant condition, operating environment and plant maintenance. Inquiries were made about items of plant generally including maintenance of mechanical items including trucks. Inquiries were also made with Woodlands staff about servicing at its workshop Two findings were made. The first was that there was no system failure at Woodlands requiring intervention. The second was that jurisdictionally other agencies (namely Queensland Transport) ought to have intervened. Improvement notices were issued on training, instruction and information for workers regarding forklift data plates and liquid petroleum gas decanting.

[137] A conference occurred with QPS on 20 November 2007. Information obtained from QPS included vehicle service records for the truck.

[138] Inspector Kickbush at no time had contact with Queensland Transport but was aware that Senior Constable Christiansen had made a request for assistance to Queensland Transport.

Findings required by s 45 Coroners Act 2003

[139] The deceased person was Paul Gerard Joseph Robinson who was born on 18 July 1957

[140] Paul died on the Maleny-Kenilworth Road, Conondale on 25 September 2007.

[141] He died due to multiple injuries sustained in a motor vehicle accident. The cause of the accident was due to a number of factors combining.

[142] Paul was an experienced driver of trucks; but was not familiar with driving the truck on the Maleny-Kenilworth Road, let alone at night.

[143] Experienced drivers of trucks upon seeing the warning signage at the top of the range on the Maleny-Kenilworth road would have engaged the truck in low gear.

[144] An engine over speed as recorded by the ECM system occurred at the top of the range when Paul was attempting to engage the gears. The truck was put in a high gear; not a low gear. The non-selection of a low gear created the serious risk of losing control of the truck during its descent.

[145] The sign “Steep Descent Trucks Use Low Gear” placed about 100m after the commencement of the second level section on the descent was not placed close enough to the final decline, so as to alert a driver to the further steep decline and the need to ensure a truck was not travelling too fast.

[146] Paul managed to negotiate the truck down the range, including a similar bend 600m prior to the accident bend. During the descent there were two level sections where there was an opportunity to decrease the truck speed.

[147] Upon approaching the last bend on the descent, signage indicated the severity of the curve. The brakes were applied and a lower gear selected. The truck did not slow enough to make the bend; due to the brakes needing adjustment and the volume of water in the air tanks. The truck was in a high gear when it capsized and travelling at least 55 kph. If the brakes had not been faulty, it is unknown whether the truck would have slowed sufficiently to have made the bend.

Recommendations

[148] A number of recommendations were made during the course of the hearing. Each has been considered.

1. Briefing of mechanical examiner

[149] Senior Constable Christiansen submitted a request for a mechanical examination of the truck. The mechanical examiner Mr Georgas was given minimal information in advance of his inspection. He was informed “Allegation of faulty brakes loss of air”. While he was informed the location of the accident and that it was a fatal accident, he was not provided with photos, nor was he given information as to the route the truck took, in particular the descent down the range.

[150] Dr Grigg thought that wherever the condition of brakes was an issue in future cases that the mechanical examiner be made aware of the circumstances of the accident so that consideration could be given to

dismantling the brakes and actually inspecting the linings and drums. This recommendation has some strength. While the ultimate decision might have been not to inspect any further than Mr Georgas did in this instance, by being fully informed of the circumstance of the accident, a decision could have been reached to allocate more time and resources to the examination of the truck. Even with the added knowledge, it is possible that the same amount of time would have been given. At least, it would have been a better informed decision.

***Recommendation*:** That when a request is made for a mechanical examination of an accident vehicle, that the request set out the known circumstances of the accident.

2. Signage

[151] Criticism was made by Dr Grigg of the positioning of the warning sign on the level section prior to the final descent. He recommended a sign be added prior to the final decline. This recommendation is agreed with. Queensland transport is reviewing the signage for all roads with declines in the South East Queensland as part of its management of hazardous grades.

Recommendation: That Queensland Transport considers Dr Grigg's recommendation as part of its review of signage for declines in South East Queensland.

3. Inter-Agency Co-operation

[152] Senior Constable Christiansen needed assistance as his investigation progressed. It progressed beyond the scope of a truck roll-over to the investigation of a company's vehicle maintenance. He was not equipped and did not have the resources to perform this aspect of the investigation. His core capability was in the investigation of motor vehicle accidents. The agency with the higher level of statutory responsibility for motor vehicles, Queensland Transport did not even report back to senior Constable Christiansen the findings made on the audit of the company's accreditation system. Workforce Health and safety merely audited plant and materials.

[153] Lessons need to be learned by all agencies involved of a better way to work together in the future in such a situation as unfolded in this instance. A more co-operative approach is needed. There needs to be a commitment at senior level to commit resources to ensure a more co-operative professional investigation is carried out.

Recommendation: Senior officers of Queensland Police Service, Workplace Health and Safety Queensland and Queensland Transport confer and develop an action plan to ensure inter-agency co-operation occurs through allocation of resources and priority to ensure timely investigation of any future truck accident.

Concluding remarks

[154] I thank Counsel assisting and all those who participated in this inquest. I acknowledge and thank Senior Constable Christensen for his efforts and dedication to the investigation.

[155] All proceedings in the coronial jurisdiction are sad proceedings. My sympathy and condolences are expressed to Paul's wife and their children, and the family of Paul in their sad loss.

I close this inquest.

J A Hodgins
Coroner
Caloundra
24 June 2010