FORM 37

Rule 60(1)

FINDING INTO DEATH WITH INQUEST

Section 67 of the ***Coroners Act 2008***

Court reference: 303/06

Inquest into the Death of TREVOR JAMES DAY

Place of death:	'Fernside', Fernside Road, Highlands, Victoria 3660
Hearing Date:	29-31 July 2008 and 8 September 2008 at Coroners Court, Coronial Services Centre, Southbank
Appearances:	Sergeant Therese Fitzgerald, SCAU - Assisting the Coroner
	Mr T. Woodward of Counsel - on behalf of the CFA (Maddocks Lawyers)
	Mr M. Wardell, Solicitor - on behalf of Mr Edwin Hocking
Findings of:	AUDREY JAMIESON, Coroner
Delivered on:	27 April 2010
Delivered at:	Melbourne

FORM 37

Rule 60(1)

FINDING INTO DEATH WITH INQUEST[1]

Section 67 of the ***Coroners Act 2008***

Court reference: 303/06

In the Coroners Court of Victoria at Melbourne

I, AUDREY JAMIESON, Coroner

having investigated the death of:

Details of deceased:

Surname: DAY
First Name: TREVOR
Address: Lot 7, Yapeen Road, Muckleford 3451

AND having held an inquest in relation to this death on 29-31 July 2008 and 8 September 2008

at Southbank

find that the identity of the deceased was **TREVOR JAMES DAY**

and death occurred on **23 January 2006**

on private property known as 'Fernside', Fernside Road, Highlands, Victoria 3660 from:

1a. HEAD INJURIES SUSTAINED IN MOTOR VEHICLE ACCIDENT (PASSENGER)

in the following summary of circumstances:

1. Trevor James Day died from injuries sustained when the Country Fire Authority (CFA) tanker in which he was a front seat passenger, slipped from the constructed control line it was traversing and rolled several times. During the roll, Trevor Day was ejected through the front windscreen. He was not wearing a seatbelt.

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[1] The Finding does not purport to refer to all aspects of the evidence obtained in the course of the investigation and inquest. The material relied upon included statements, and documents tendered in evidence together with the Transcript of Proceedings and submissions of legal representatives/Counsel and the Coroner's Assistant. The absence of reference to any particular aspect of the evidence, either obtained through a witness or tendered in evidence does not infer that it has not been considered.

2. The death of Trevor Day was a *reportable death*[2] as defined within section 3 *Coroners Act 1985* (the Act).

3. The investigation into the circumstances surrounding the death of Trevor Day identified a number of issues deserving of greater enquiry. These issues included driver training of CFA members, the wearing of seatbelts in CFA vehicles, the use of a two-wheel drive vehicle in off-road conditions, the adequacy of briefings and communications between volunteers in the field and the use of lead vehicles. Other technical/mechanical issues identified included the release of the cabin locking mechanism during the rollover, and the lack of an early warning rollover system.

4. An Inquest was held under section 17(2)[3] of the Act.

JURISDICTION - *Coroners Act 1985*:

5. The statutory role of a coroner is investigative and inquisitorial rather than adjudicative and adversarial that is, the role most often associated with judicial officers. Coroners are required to investigate matters in their jurisdiction and, in the case of death the Act provides that a coroner must find, if possible, the identity of the deceased, how the death occurred, the cause of death and the particulars needed to register the death.[4]

6. The primary function of a coroner is to direct the investigation into and make findings concerning the facts relevant to the role statutory. It is not the role of a coroner to lay or apportion blame, but to establish cause.

7. A secondary role, if appropriate, is to comment on any other matter connected with the death being investigated, including public health or safety or the administration of justice.

8. A coroner is not permitted to include in a finding any statement that a person is or may be guilty of an offence.[5] Similarly, it is not the role of the Coroner to make any specific findings on whether there has been any negligence giving rise to the death under investigation.

9. However, a coroner may report to the Attorney-General[6] on a death which they have investigated or make recommendations to any Minister or statutory authority on any matter

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[2] "reportable death" means a death-
(a) where the body is in Victoria; or
(b) that occurred in Victoria; or
(c) the cause of which occurred in Victoria; or
(d) of a person who ordinarily resided in Victoria at the time of death-
being a death-
(e) **that appears to have been unexpected, unnatural or violent or to have resulted, directly or indirectly, from accident or injury**; or.....

[3] s.17(2) A coroner who has jurisdiction to investigate a death may hold an inquest if the coroner believes it is desirable.

[4] See section 19(1) (a)-(d)

[5] See section 19(3)

[6] See section 21(1)

connected with the death including public health or safety or the administration of justice[7] and a coroner must report to the Director of Public Prosecutions if they have formed the belief that an indictable offence has been committed in connection with the death.[8]

10. Mr Day's identity, date and place of death were confirmed at the outset of the investigation. No additional formal coronial investigation was required.

BACKGROUND & SURROUNDING CIRCUMSTANCES:

11. Mr Trevor James Day was born on 18 March 1965. He was 42 years old at the time of his death. He lived at Lot 7, Yapeen Road, Muckleford with his wife Tracey Lea Day. The couple have four children.

12. Trevor Day was the Brigade Captain of Campbell's Creek[9] Urban Fire Brigade which is located within CFA Region 15 as part of the Midlands/Wimmera Area.

13. The CFA has approximately 60,000 members including 570 career fire fighters and over 59,000 volunteers.[10]

14. On Sunday 22 January 2006, Captain Day contacted Campbell's Creek Volunteer Fire Fighters, Edwin Hocking, Maryanne Murdoch and Daniel Jenkins, requesting their assistance in forming a relief crew for the Campbell's Creek Tanker One[11] for the following day. The Campbell's Creek tanker was already at a fire at Newbridge as part of Region 15 Strike Team 1561.

15. On Monday 23 January 2006, at approximately 6.00am, the four members of Campbell's Creek Fire Brigade met at their station. They departed soon after by bus via Guildford and Newstead to Newbridge to relieve the existing strike team. Strike team 1561 was led by Craig Hepburn from Newstead Brigade and consisted of the Campbell's Creek Tanker One, Guilford Tanker, Newstead Tanker and Newstead Car - a Ford Courier 4 wheel drive. Craig Hepburn advised his Strike Team that they had been redirected to fire fighting operations at Highlands[12].

16. At approximately 9.00am, the Strike Team departed Newbridge for the Highlands area. Crew Leader, Captain Day was driving Campbell's Creek Tanker One, registration MWB-743. The track width of Tanker One was 2.3 metres.

17. Captain Day's passenger was Volunteer Fire Fighter Edwin Hocking. Volunteer Fire Fighters Murdoch and Jenkins travelled to the Highlands area on the Strike Team bus with other Strike Team members.

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[7] See section 21(2)

[8] See section 21(3)

[9] Campbell's Creek is approximately three kilometres south of Castlemaine

[10] Transcript of Proceedings @ p. 312 - Deputy Chief Officer Greg Esnouf

[11] The Campbell's Creek Tanker One was an Isuzu, rear wheel drive (2 wheel drive) FSR rigid (fire tanker) fitted out as a standard type CFA fire fighting vehicle, and fitted with a 2000 litre tank, powered by a diesel engine.

[12] Highlands is located approximately 15 kilometres north of Yea township and 30 kilometres southeast of Seymour.

18. At approximately midday, the Strike Team arrived at Highlands then proceeded to the staging area at Blue Tops Road. After a briefing and lunch break they were assigned blacking-out duties[13] in the *Fernside* sector, on the western flank of the Granite Hills fire, in the Waggs Range near Highlands in Region 12. The *Fernside* sector was deemed suitable for the two-wheel drive Campbell's Creek Tanker One.

19. At approximately 3.40pm, the Strike team were instructed by Craig Hepburn to move further north to a gully which he had identified as requiring blacking out. Edwin Hocking drove the Campbell's Creek tanker in the *Fernside* sector. Captain Day was the front seat passenger and Maryanne Murdoch and Daniel Jenkins were seated in the rear of the vehicle in the Rollover Protection Structure (ROPS)[14]

20. Tanker One had already been refilled with water for the second time that day from a dam (Dam 1).[15] Heading towards this area[16] the Campbell's Creek tanker approached the western side of a second dam (Dam 2)[17] from the south, travelled east along the dam wall, passed to the right of a large granite rock and then entered onto a constructed control line, made across the slope of a hill which travelled north from the eastern end of the dam wall.

21. The constructed control line had been made earlier in the day. North of Dam 2, a bulldozer, followed by a grader cut into the side of the hill to a width of between 2.5 - 3 metres - described as one (1) cut wide[18]; resulting in a variable gradient or cross slope between 15- 20 degrees. Fill from the grader blade was placed on the low or western side of the hill where it had gathered to a depth between 200 - 300 millimetres, creating a soft and unstable verge. CFA Sector Commander, John Barnard and his driver, Maurice Welsh had reconnoitered this control line prior to the Strike Team's arrival, traversing it on three occasions in a recreational type four-wheel drive and had deemed it safe for tankers to travel on for fire fighting purposes.

22. As Campbell's Creek Tanker One entered the constructed control line its path was to the left or the low side resulting in the near side wheels travelling in the soft fill. The fill subsided resulting in a sideways movement[19] of the rear passenger side wheels which in turn caused the front of the tanker to drag across the constructed control line and then commence to roll down the slope. The tanker completed one roll of 270 degrees during which one Volunteer Fire Fighter[20] was thrown out

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[13] Blacking out duties requires the team to locate and extinquish any hot spots such as trees, logs and fence posts etc which are likely to flare and cause the fire to take hold again.

[14] The R.O.P.S. is fitted to the rear of the tanker immediately behind the cabin, and faces towards the rear of the tanker. It is fitted with lap seat belts and enables Volunteer Fire Fighters to be seated while the tanker moves throughout a fire ground.

[15] Referred to as Dam 1 during the Inquest.

[16] See Exhibit 2 & 3

[17] Referred to as Dam 2 during the Inquest

[18] See Transcript of Proceedings - pp 62-64

[19] Often referred to as "crabbing" during the course of the Inquest.

[20] Maryanne Murdoch stated that she was thrown from her seated position in the ROPS during the first roll. (see Exhibit 15 @ p.8). Daniel Jenkins could not recall being thrown from the vehicle but recalls landing near Ms Murdoch (See Exhibit 16 @ p.4).

of the ROPS. The tanker landed on its off side and performed another roll of 270 degrees during which the second Volunteer Fire Fighter was thrown from the ROPS. The taker has landed, rolling onto its roof and then rolled 180 degrees, landing back on its wheels[21], coming to rest approximately 20 metres from the constructed control line.

23. Captain Day sustained significant injuries during the process. He and Edwin Hocking were both thrown around in the cabin. During the roll, Captain Day was partially ejected through the passenger door window resulting in his head making contact with the ground. The cabin safety catch and cab-securing device separated resulting in both Volunteer Fire Fighters falling out of the windscreen opening onto the ground in front of the tanker after it had come to rest.

24. Several CFA members witnessed the incident. CFA Strike Team leader Craig Hepburn radioed for assistance. First Aid was initiated by members Jason McGrath, Ashley Ludeman and Tefor Prest. Their attempts to assist Trevor Day were to no avail. He died at the scene.

25. Volunteer Fire Fighter and driver, Edwin Hocking, and the other crew members received non-life threatening injuries.

26. Captain Day was not wearing his seatbelt at the time of the collision. None of the other Volunteer Fire Fighters of Campbell's Creek Tanker One were wearing their seatbelts.

INVESTIGATIONS[22]:

(a) The medical investigation into the cause of death:

27. Dr Shelley Robertson, Senior Forensic Pathologist, at the Victorian Institute of Forensic Medicine, performed an autopsy. Dr Robertson summarised her postmortem findings as follows:

1. Head injury with scalp lacerations, skull fractures and diffuse brain injury.
2. No other significant injuries.
3. No significant natural disease.

28. Dr Robertson attributed the medical cause of death to *multiple injuries sustained in motor vehicle accident (passenger).* She commented that there was evidence to suggest that Captain Day had sustained at least some of the head injuries whilst within the cabin of the vehicle, prior to be ejected through the windscreen. She also expressed the opinion that the nature and severity of Captain Day's injuries were such that death would have supervened rapidly.

29. Toxicological analysis was negative for alcohol and common drugs and poisons.

(b) The CFA investigation:

30. Fire Officer (F/O) Glenn Jennings - State Co-ordinator Driving & Vehicle Operations (Fiskville) attended the scene of the collision that evening and conducted an investigation into the incident on behalf of the CFA. F/O Jennings' completed *Motor Vehicle Collision Investigation Final Report* was provided to the State Coroners' Office.

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[21] See Exhibit 10

[22] Investigation includes Inquest - Section 3 *Coroners Act 1985*

(c) The Victoria Police investigation:

31. A mechanical inspection of the Campbell's Creek Tanker was performed by Senior Constable (S/C) Leigh Booth[23] of the Mechanical Investigation Unit of Victoria Police. S/C Booth found that the tanker would have been classed as unroadworthy at the time of the collision due to a loss of tension in the front springs however, he found no fault that could have caused or contributed to the incident.

32. Acting Sergeant (A/Sergeant) Lindon Walker of the Major Collision Investigation Unit of Victoria Police conducted the investigation on behalf of the coroner and provided a Brief of Evidence to the court.

33. A/Sergeant Walker's investigation led him to conclude that the collision was caused as a consequence of Volunteer Fire Fighter Edwin Hocking driving Tanker One too far to the left of the constructed control line. In this position, the tanker travelled into the accumulated loose fill which could not support of the vehicle. The wheels commenced sliding down the slope and the tanker commenced its roll. A/Sergeant Walker stated:

> *I am of the opinion this rollover event occurred due to the incorrect line taken by the driver Edwin Hocking, when he began travelling on the fire control line. The correct line should have been to the high (eastern) side of the fire control line. Had this line been taken then all wheels of the tanker would have remained on firm, compacted ground.*
> *Once the rollover event began, no input by the driver would have changed the final outcome.*[24]

(d) The Inquest heard *viva voce* evidence from 10 witnesses:

- John Barnard, CFA Captain, Sector Commander - Fernside Sector,
- Maurice Welsh, CFA 2nd Lieutenant - Sector Commander's driver,
- Glen Jennings, CFA Investigating Fire Officer,
- Craig Hepburn, CFA Lieutenant - Strike Team leader 1561,
- Edwin Hocking, CFA Volunteer Fire Fighter - Driver of the Campbells Creek tanker,
- Maryanne Murdoch, CFA Volunteer Fire Fighter - crew member seated in ROPS of the tanker,
- Daniel Jenkins, CFA Volunteer Fire Fighter - crew member seated in ROPS of the tanker,
- Leading Senior Constable Leigh Booth, Mechanical Investigation Unit, Victoria Police,
- Leading Senior Constable (L/S/C) Lindon Walker[25], Investigating Officer, Major Collision Investigation Unit, Victoria Police, and
- Greg Esnouf, CFA Deputy Chief Officer.

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[23] See Exhibit 19

[24] See Exhibit 20 / p.132 Inquest Brief

[25] L/S/C Walker was an Acting Segeant at the time he investigated the fatality.

FINDINGS, COMMENTS & RECOMMENDATIONS:

The constructed control line:

34. I make no criticism of those responsible for the construction of the control line.

35. I make no criticism of Sector Commander Barnard or his driver, 2nd Lieutenant Maurice Welsh who reconnoitered the area and drove that section of track earlier in the day, making an assessment of its safety.

36. I make no criticism of Strike Team Leader Craig Hepburn who directed Campbell's Creek Tanker One to go along the constructed control line, heading towards the north for blacking-out duties.

Edwin Hocking's driving experience:

37. I was advised and accept that Edwin Hocking's driving experience had not been accurately recorded. He had undertaken off-road driver training both inside and outside the CFA and had *substantial training driving the CFA Campbells Creek tanker in off-road conditions.*[26]

Driver training and competence:

38. The issue of driver training and competence was examined. I was informed that the brigade captains are responsible for identifying those members both qualified and competent for driving tankers in various conditions. Many members have undertaken the CFA's off-road driver training. Many come to the organisation with experience and competence obtained elsewhere including those members who live and work on the land and by necessity, have gained experience in off-road driving. The assessment of driving competencies is not however, a formal process of all CFA personnel.

39. The CFA envisage the assessment of all personnel as a *goal* for the organisation but there are a number of constraints on the goal being realised in particular, the constraint of time, that is, volunteers finding the time out of their normal working lives to attend a driving training course.

40. I accept that formal driving training for its volunteers is a challenge for the CFA. I accept that they have systems in place for offering and encouraging volunteer members to undertake the training and that at the brigade level, brigade captains take steps to identify members with prior learning and experience and have the necessary competencies. The Chief Officers Standard Operating Procedure (SOP) 12.03 at 3.3, allows brigade captains to endorse volunteers to drive and operate any CFA vehicle. The criteria for providing this endorsement is not set out in the SOP. The CFA's quest to gain and retain volunteers and accommodate the inconvenience of attending for formal training, has the potential to result in an ad hoc approach to providing the endorsement. For example, I am asked to *assume* Captain Day had endorsed Edwin Hocking as per the requirements of SOP 12.3 by the mere fact that he was driving Tanker One at the time of the fatal incident. No formal documentation signed by Captain Day was produced to support the endorsement.

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[26] See Transcript of Proceedings @ p. 340 - Submissions of Mr Woodward

41. Prior learning and driving experience on the land do not equate to competencies obtained through formal training. The experience is quite different. Inevitably, drivers of CFA vehicles are required to drive in dangerous circumstances while at the same time, being responsible for the safety of their colleagues. The nature of these responsibilities warrants mandating formal driving training. Endorsement to drive and operate any CFA vehicle as per SOP 12.03-3.3 should operate only until the volunteer has been given a reasonable time and reasonable assistance to attend a formal driving training course. Endorsement under SOP 12.03-3.3 should be strengthened by requiring a driving skills assessment to be performed by dedicated accredited CFA personnel outside the brigade where the volunteer is stationed.

RECOMMENDATION (1):

42. **I recommend** that the CFA review the Chief Officers SOP 12.03 *Driving CFA Vehicles* with a view to enabling the endorsement for driving CFA vehicles to suitably identified volunteers, on a temporary/interim basis only until such time as can be arranged for the volunteer to attend a formal accredited driving training course and that such endorsement be performed by accredited personnel outside of the volunteer's dedicated brigade.

CFA briefing systems:

43. The process of giving **Red Flag warnings**, the type of critical situations that they are used for, and the effective transmission of the warning down the chain of command was dealt with by Mr Craig Hepburn[27]. He stated that a Red Flag warning would not generally be used for something to do with a track unless there was some known real danger such as it being impasssable or had collapsed. It was not practical to use the Red Flag warning system for only a change to the conditions of a track because the system was more appropriately utilised for matters of significant danger or risk such as wildfires, the presence of asbestos in a building, sudden wind changes or the presence of mine shafts[28].

44. I accept that there was nothing out of the ordinary known about the constructed control line where the incident occurred which would have warranted the use of a Red Flag warning in this case.

45. The evidence and submissions about the practical application of **central briefings** was that a change in track conditions would not of itself, warrant the utilisation of this logistically problematic procedure. According to Deputy Chief Officer Esnouf, the CFA has:

> *a very good process of briefings called SMEACS*[29]*..... We encourage (sic) this to be done on a cascading way so that the briefings occur from the operations officer in the field to the next level down which is the sector commanders to the strike team leaders to the crew leaders and then to the crew.*[30]

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27 Transcript of Proceedings @ p.122

28 Transcript of Evidence @ pp 93-94

29 SMEAC = Situation, Mission, Execution, Administration, Communication

30 Transcript of Proceedings @ pp317-318

46. **I find** that there was a cascading of information in relation to the condition of the track from Mr Walsh who told the Sector Commander, Craig Hepburn, that he was concerned that the track over the dam bank was narrow and curving and where there was a bit of undozed track he *felt a bit concerned that people took the right track and not just thought we can drive anywhere.*[31]

47. The cascading of information continued when Craig Hepburn subsequently passed this information on to the drivers of the Newstead and Campbell's Creek tankers. Captain Day was the driver at the time. Once he endorsed Mr Hocking as the driver of Tanker One it was his responsibility to pass this information on to Mr Hocking. Mr Hocking stated that he did not get this information from Captain Day either when he took over the driving of Tanker One or while approaching the constructed control line with Captain Day sitting next to him in the cabin of their vehicle. According to Edwin Hocking's evidence, all Captain Day told him was where they were going to work that is, *across the wall and dam, down the other side.*[32] They did not have a conversation about getting on to the constructed control line[33] / getting on to the track.[34]

48. The cascading of information intended by the CFA briefing system appears to have broken down in this situation. Despite Captain Day having a reputation of putting safety first[35] he has not, according to Edwin Hocking, passed on the information about the safety of the track given to him by Craig Hepburn. Why he did not pass this information on to Mr Hocking is difficult to comprehend but if the cascading of this information to Mr Hocking had occurred, his approach onto the constructed control line may have been different.

49. Briefings are intended to ensure the safety of all fire fighters. Track maintenance and track safety must be effectively communicated to all drivers and all potential drivers.

RECOMMENDATION (2):

50. **I recommend** that the CFA review the ability and use of its briefing systems and, in particular, the use of radio communication, to accommodate and ensure effective communication about track safety/changes even in situations where the issuing of a Red Flag is not warranted.

Use of a Lead vehicle:

51. The Sector Commander and his driver had been along the constructed control line north of Dam 2 in their four-wheel drive, earlier in the day and conveyed information about the line to Strike Team Leader Craig Hepburn. There did not appear to be any necessity for a lead vehicle for Tanker One. The Sector Commander was leading another tanker back to the origin of the fire at the time Tanker One entered the constructed control line north of Dam 2.

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[31] Transcript of Proceedings @ p.91

[32] Transcript of Proceedings at p.147

[33] Transcript of Proceedings @ p. 144

[34] Transcript of proceedings @ p.148

[35] Transcript of proceedings @ p. 144

52. When asked about any possible benefit of having a lead vehicle for Tanker One, Mr Welsh conceded that there could be:

> *a benefit when you're going to where you're going to start work, but once the trucks are there and they're doing their job, they're just poking along and - at their own pace and putting out (sic) hot spots and fires (sic) they have come across, so the lead vehicle's really of no benefit in that situation...*[36]

53. One of the roles of the Sector Commander's vehicle was to otherwise drive around and identify areas that needed the attention of a tanker and then direct them to those areas.

54. I accept that a lead vehicle for Tanker One on 23 January 2006 was not available or deemed necessary given the earlier assessment of the constructed control line and the nature of the duties Tanker One was to perform. I also accept that it cannot be definitively stated that a lead vehicle would have made any difference to the outcome on the day. The width of the two vehicles varied - the margin for error varied - Tanker One was still at greater risk than the four-wheel drive by failing to keep to the high side of the constructed control line. A lead vehicle could have provided guidance to the direction Mr Hocking drove Tanker One, but a lead vehicle could not have prevented the roll once it commenced.

Use of two-wheel drive tanker v. four-wheel drive:

55. I accept the evidence of John Barnard[37], Craig Hepburn[38] and Glen Jennings[39] that the conditions on the day were suitable for a two-wheel drive tanker, as long as the tanker did not leave the *dozed trail*/constructed control line. Edwin Hocking did not feel unsafe being in a two-wheel drive on the constructed control line - it neither appeared dangerous or unsuitable for Tanker One[40].

56. Whilst there may be some reservations within the CFA about the ongoing use of two-wheel drive tankers due to their terrain and traction limitations, Mr Jennings gave evidence that two-wheel drives have also been used safely by the CFA for many years and in conditions more severe than presented to the team of Tanker One on 23 January 2006. He knew of no policy or trend within the CFA to only purchase four-wheel drives into the future.

57. **I find** that the use of a two-wheel drive tanker on the constructed control line north of Dam 2, was reasonable in the circumstances.

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36 Transcript of Proceedings @ p.56

37 Transcript of Proceedings @ pp13-14

38 Transcript of Proceedings @ pp 98-99

39 Transcript of Proceedings @ pp 264-265

40 Transcript of Proceedings @ p.137

58. I also accept Mr Jenning's evidence that the use of a two-wheel drive made no difference to the circumstances that led to the vehicle rolling. He stated:

> *Tyre marks indicate that the vehicle was being steered in a line slightly to the right. Any vehicle*[41] *on this line would have rolled over once the rear wheels left the constructed control line.*[42]

Roadworthy status of Tanker One:

59. L/S/C Booth[43] assessed Tanker One as unroadworthy by reason of flat springs however, he was emphatic that the springs *has no bearing on this incident.*[44]

60. I accept L/S/C Booth's evidence that the springs had no bearing on the incident and in the circumstances, accept Mr Woodward's submissions on this aspect of the evidence, that I need not form a concluded view on the roadworthiness of the vehicle.

Cabin locking mechanism:

61. The cabin safety catch and cab-securing device separated during the roll causing the cabin to raise forward resulting in Captain Day and Edwin Hocking falling through the windscreen opening onto the ground in front of the cabin, after the vehicle had come to rest.

62. Mr Jennings gave evidence that this was the first incident within the CFA since 1987 where the cabin locking mechanism had released during a rollover. The risk of a repeat of this type of incident was assessed as low[45] by Mr Jennings. The introduction of a tether strap as an additional safety mechanism to backup the cabin locking mechanism and prevent the cabin tilting forward, was suggested by L/S/C Booth but this proposition was considered problematic by the CFA. Tankers with the Roll Over Protection cabin such as the Campbell's Creek Tanker One, presented potential mechanical access and occupational health and safety issues by the placement of such a device in an already cluttered space. A suitable place on the chassis to secure such a device was also seen as problematic. I was also informed that these tankers are being phased out by the CFA albeit over a number of years, and replaced with twin cabin trucks with hydraulic rams.

63. The CFA's resistance to L/S/C Booth's suggestion on the basis of the low risk assessment was more convincing than their submissions, in the absence of substantive evidence, about the lack of space. Nevertheless, there is little or any evidence of a contribution to Captain Day's fatal injuries from the tilting of the cabin during the rollover. Mr Jennings' investigation found no evidence that the tilting of the cabin during the rollover contributed in any way to Captain Day's fatal injuries. Dr Robertson's report was accepted without her being called to give evidence. Although she does not exclude the possibility of some injuries being sustained after Captain Day fell through the

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41 My emphasis

42 See Exhibit 17 @ p.24 and Transcript of Proceedings @ p. 252

43 See Exhibit 19

44 Transcript of Proceedings @ p. 273

45 Transcript of Proceedings @ p. 215

windscreen onto the ground, I interpret her comments as attributing the significant fatal injuries to having occurred within the cabin of the vehicle.

64. On the weight of the evidence, **I find** that the rising of the cabin during rollover did not contribute to Captain Day's fatal injuries. Accordingly, I make no comment or recommendation in relation to any possible improvement/reinforcement of the cabin locking mechanism however, to ensure that the possibility of improvement is not lost, I accept Mr Woodward's invitation to make a recommendation regarding liaison between the CFA and Victoria Police for these purposes.

RECOMMENDATION (3):

65. **I recommend** that periodic liaison occur between the CFA, and the Major Collision Investigation Unit (MCIU) and Mechanical Investigation Unit of Victoria Police with a view to identifying, reviewing and improving mechanical and/or engineering features of CFA vehicles for the purposes of improving the safety of the same.

Early Rollover Warning Device:

66. Tanker One was not fitted with an inclinometer or rollover warning device. The CFA did not have these devices available to them. Mr Jennings' report identified discussions about *whether an early rollover system could prevent this type of incident in the future.*[46] He stated:

> *There is no doubt that any system that alerts drivers that they are approaching a cross slope angle near 15 degrees will benefit drivers and CFA.*[47]

67. Mr Jennings advocated for further research on commercially available and affordable options. Mr Woodward submitted that that the CFA was giving the introduction of the devices *proper attention within the limits of its current funding*[48]. Expedition of this program could only be done at the expense of other equally important programs or with the allocation of additional discreet funding otherwise, the CFA could only progress on a *steady as she goes basis.* No priority would be given to the introduction of early rollover warning devices.

68. There was no evidence lead that there was anything atypical about either the terrain where this incident occurred or of the constructed control line. The photographic evidence of the scene depicted relatively innocuous scenes of country Victoria. The potential *for this type of incident in the future* seems highly probable and warrants the implementation or injection of additional preventative safety measures.

RECOMMENDATION (4):

69. Noting that the CFA investigator has identified the potential preventative value of early rollover warning systems within CFA tankers, **I recommend** that the Minister for Police and Emergency Services allocate whatever additional discrete assistance is deemed necessary, to enable the CFA to expedite the program process to complete their research into early warning rollover devices with the aim of installing them into all CFA tankers.

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[46] Exhibit 17 @ p. 24

[47] *op cit*

[48] Transcript of Proceedings @ p.347

Seatbelts:

70. At the time of and prior to, Captain Day's death, Standard Operating Procedure (SOP) 12.03, was in existence. The *Scope* of the SOP states that it applies to *all CFA members driving CFA vehicles whilst involved in CFA operational activities*. Procedure 6 within SOP 12.03 states:

> *Drivers and passengers in the cabin of vehicles shall wear seatbelts at all times, unless they hold a written exemption as allowed under state legislation. The driver is however, exempt while reversing. Crew members outside the cabin shall be seated in the rollover protection structure of a firefighting vehicle and shall wear seatbelts at all times unless directly involved in "pump and roll" operations.*

71. None of the Campbell's Creek crew complied with Procedure 6 of SOP 12.03. The Captain of the brigade did not comply as a passenger in the cabin. The driver, Edwin Hocking, did not comply - he was not reversing the vehicle. Neither Captain Day or Edwin Hocking had a written exemption. The crew in the rollover protection structure were not involved in pump and roll activities as Tanker One traversed the constructed control line north of Dam 2. Neither Maryanne Murdoch or Daniel Jenkins wore a seatbelt.

72. Despite the existence of the SOP and other publications by the CFA about the importance of wearing seatbelts[49], there was a widely held view amongst the CFA members giving evidence, that they were not required to wear a seatbelt on the fire ground.

73. According to Mr Jennings, the evidence of these members reflects a widely held view amongst all CFA members. He stated:

> *...it is general practice in (sic) the CFA that when involved in fire ground operations, all crew members, including the driver, do not consistently wear seatbelts. I make this statement based upon answers received to my questions when conducting legislation and policy training around the state.*[50]

74. The *general practice* is contrary to the SOP and reflects adversely on the CFA leadership at the brigade level. Mr Hocking had not changed his views about the need to wear seatbelts on fire grounds since his Captain's death and he demonstrated a clear contempt to the suggestion that there may be some merit to "leading by example" despite having been promoted to the position of Brigade Captain after Captain Day's death.[51] In closing submissions Mr Wardell informed me that on reflection, Mr Hocking had had a shift in attitude to the wearing of seatbelts, embraces the SOP on the wearing of seatbelts and has now taken any initiative to educate and encourage other CFA personnel to follow the SOP.

75. Mr Wardell's delivery of his client's revised sentiments was welcomed however, the fact that Mr Hocking had not reflected on the issue prior to giving evidence is not only disappointing but l

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[49] See attachment to Exhibit 21

[50] Transcript of Proceedings @ p.206

[51] Transcript of Proceedings @ pp 166-167

suspect, indicative of the level of entrenchment of the culture that has failed to embrace the SOP and its purpose - the safety of CFA members.

76. Mr Woodward, in submissions, stated that the CFA had *recognised the need to redouble its efforts to bring about cultural change* in what he had described as *significant pockets of resistance or non compliance among CFA members to wearing seatbelts whenever vehicles leave public roads and commence fireground activities.*[52]

77. I accept that there has been some attitudinal change amongst the members following Captain Day's death however, it is clear that more needs to be done.

78. I accept that the CFA has recognised the need to do more to educate its members such as reviewing and redefining the *pump and roll exception* within the SOP so that it should be more readily understood. Mr Esnouf also referred to a number other steps being undertaken by the CFA in an attempt to improve compliance with the requirements to wear seatbelts, including high visibility seatbelts and seatbelt reminder systems[53].

79. Education of its members, in particular its volunteers, is clearly another challenge for the CFA. I was advised by Mr Woodward during closing submissions that the CFA were producing a DVD on the importance of wearing seatbelts that was due to be released prior to the 2008 fire season. I subsequently received a package of information including the DVD, a Seatbelts Frequently Asked Questions sheet and a revised CFA Standard Operating procedure 12.03 - *Driving and Travelling in CFA Vehicles.* A covering letter from Russell Rees, Chief Officer, informed me that:

> *Each Captain of the 1,209 CFA Brigades around the State have been sent three copies of the DVD together with a covering letter, the relevant Chief Officer's Standard Operating Procedure and a list of Frequently Asked Questions on seatbelts (sic). Captains have been requested to show the video to brigade members, discuss the messages and direct their members to wear seatbelts in accordance with Chief Officer's Standard Operating Procedure 12.03 - Driving and Travelling in CFA vehicles.*

80. I was also informed that the DVD had been shown at a number of pre-season briefings with DSE and CFA high-level personnel. The Chief Officer stated that:

> *The CFA believes that the broad distribution of this video, coupled with strong support throughout the operational chain of command, will go a considerable way towards increasing the safety of CFA members operating in CFA vehicles.*

81. **I commend** the actions the CFA have taken in response to Captain Day's death being, in particular, the work they have done to try to rectify the lack of knowledge about the application of SOP 12.03 and to improve a culture that promoted unsafe practices amongst the volunteers who give up their time, and regrettably at times, their lives, to help protect Victoria from the ravages of bushfires. **I encourage** the CFA's ongoing work in this area. Periodic reinforcement is an important component of all health and safety education.

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[52] Transcript of Proceedings @ p. 351

[53] Exhibit 21

RECOMMENDATION (5):

82. **I recommend** that the job description for CFA brigade captains include the responsibility for the endorsement and enforcement of the Chief Officer's Standard Operating Procedures.

CONCLUDING FINDINGS:

83. I accept and adopt the opinion of A/Sergeant Walker that the rollover of Tanker One occurred due to the incorrect line taken by the driver, Edwin Hocking. The tanker should have been driven to the high side of the track where the ground was more solid. Mr Hocking acknowledged as much.

84. **I find** that the constructed control line could have been safely traversed but also acknowledge that the margin for error was only approximately 500 millimetres. **I find** Mr Hocking made an error of judgement. The width of the track did not allow for such an indulgence.

85. **I accept and adopt** the medical cause of death as identified by Dr Shelley Robertson and **I find** that **TREVOR JAMES DAY** died from head injuries sustained in a motor vehicle accident in which he was a passenger.

86. Having regard to the nature of the injuries he sustained in circumstances where he was unrestrained in the cabin of the tanker, **I find** that it highly probable that Captain Day would have survived the rollover of Campbell's Creek Tanker One had he been wearing his seatbelt. The use of seatbelts is an accepted preventative measure against serious injury and death including in heavy vehicles.[54] It was a feasible prevention option in the circumstances and as such, **I find** that Trevor Day's death was preventable.

87. There is a direct correlation between the culture and adopted practices of many CFA members and Captain Day's failure to wear his seatbelt. Having regard to his own status within the organisation he must bear some responsibility for that culture and ultimately, responsible for his own failure to wear his seatbelt.

AUDREY JAMIESON
CORONER
Dated: 27 April 2010

[54] Road Traffic Authority (2003), *Heavy Vehicle safety: Issues and Countermeasures*- New South Wales

DISTRIBUTION OF FINDINGS:

Mrs Tracey Lea Day

Legal Representatives of the Country Fire Authority and Mr Edwin Hocking

The Attorney General, The Honourable Rob Hulls

The Honourable Tim Holding, Minister for Sustainability and Environment

The Honourable Bob Cameron, Minister for Police and Emergency Services

Mr Bruce Esplin, Emergency Services Commissioner

Investigating Officer: Leading Senior Constable Lindon Walker