QUEENSLAND COURTS

CORONERS COURT

FINDINGS OF INVESTIGATION

CITATION:	**Non-inquest findings into the death of Ms D**
TITLE OF COURT:	Coroners Court
JURISDICTION:	Brisbane
DATE:	1 November 2016
FILE NO(s):	2106/647
FINDINGS OF:	John Lock, Deputy State Coroner
CATCHWORDS:	CORONERS: Investigation, motor vehicle accident, engaging the handbrake, placing the automatic transmission in park

Events of 13 February 2016

Ms D was aged 47.

On 13 February 2016, Ms D was standing on a footpath when she was struck by a motor vehicle that had been pushed backwards by another vehicle that had rolled downhill. This latter vehicle probably had its handbrake partly engaged and was in a stationary position with no occupants in the vehicle.

The vehicle that was pushed backwards ran over Ms D by the rear left tyre. Ms D died at the scene despite first aid being tendered.

Autopsy examination

An autopsy examination found that the cause of death was due to cardiorespiratory failure precipitated by multiple rib fractures rendering the chest wall incapable of effectively expanding the lungs and oxygenating the blood.

Forensic Crash Unit (FCU) investigation

The FCU investigated the cause of the tragic death. The incident occurred at Stan Topper Park, Pomona during the course of market day.

A Nissan Patrol wagon had been driven to the park and left parked by its owner who was attending the market area. At the time of leaving the vehicle he said to police he had engaged the handbrake but it is apparent the automatic transmission was in neutral and not in gear or ‘P’ for park. The owner had been sitting in the vehicle for some little time before exiting and he believed the vehicle was securely stopped by the handbrake.

A short time later the vehicle started to move forward down a hill towards the market stall. The vehicle hit another vehicle, which was forced backwards and struck Ms D.

A mechanical inspection was carried out. A number of vehicle defects were found. The vehicle was in an unsatisfactory mechanical condition due to some rear brake assembly contamination and wear to the steering input coupling splines. Neither of these defects were considered to be contributory to the cause of the incident.

The handbrake mechanism appeared to operate satisfactorily. During further inspection it was noted that the handbrake was operational, however was adjusted to the extent of requiring it to be engaged seven stops into the ratchet mechanism prior to the handbrake becoming fully effective. At the sixth ratchet the handbrake provided some minimal resistance and the vehicle was able to be pushed with some effort.

Inspection of the brake mechanism failed to show significant wear in the ratchet teeth indicating that it is unlikely that the handbrake disengaged or moved from the ‘between’ ratchet stops, for instance from seven to six.

The FCU investigator considered that if the handbrake was partly applied in the sixth position, there may have been sufficient resistance, if combined with other external forces, to prevent the vehicle from moving from its initial parked position.

Examination of the area in the general vicinity where the vehicle was parked prior to

rolling down the slope, located numerous small rocks, tree roots and minor ground undulations, which may have provided sufficient force, additional to the partly applied handbrake, to prevent the vehicle from moving from its rest position. The FCU investigator opined it is probable that even a small external force could be sufficient to cause the vehicle to start moving. Once moving, the handbrake would have provided little resistance to the vehicle accelerating down the slope.

Conclusion

The Queensland Road Rules provide a driver must, before leaving a vehicle apply the vehicle's parking brake effectively. Placing the vehicle in gear, or in Park if an automatic vehicle, is not a requirement of the regulation, although it is a well-known practice to secure a vehicle from moving in the event of a parking brake failure to place the vehicle in gear or Park.

The handbrake mechanism is unlikely to have moved from a ratchet position higher up the range to a lower range where it failed, as the teeth of the mechanism were not worn. It was opined by the FCU that the braking mechanism may have been partly applied to up to the sixth ratchet, which may have been just holding the vehicle with the help of the environment where it was parked and causing the driver to believe it was restrained. However, it is clear that a short time later the position of the vehicle on the hill and with its weight were sufficient for the vehicle to move.

This tragic incident would have been prevented if the driver had:

1. Engaged the handbrake into the seventh ratchet setting or higher, and/or
2. Placed the automatic transmission in Park.

John Lock
Deputy State Coroner
Brisbane
1 November 2016