



NO. 93-125
GISBORNE YARD SHUNT
COLLISION WITH MOTOR VEHICLE
GISBORNE
8 DECEMBER 1993

ABSTRACT

A shunting locomotive collided with a car on the Stanley Road level crossing, Gisborne, on 8 December 1993, fatally injuring the motorist. The safety issue identified in the investigation was the risk to railway shunting staff of riding on the footplates of locomotives while crossing over public roads. A recommendation that event recorders should be fitted to shunting locomotives which travel on main lines or over public level crossings is also made.

TRANSPORT ACCIDENT INVESTIGATION COMMISSION

RAIL ACCIDENT REPORT NO. 93-125

Train Type and Number: Gisborne Yard Shunt

Locomotive: DSC 2490

Date and Time: 8 December 1993, 1015 hours NZDT

Location: Gisborne
388.95km Palmerston North-Gisborne Line

Type of Occurrence: Collision with motor vehicle

Persons on Board: Crew: 2
Passengers: Nil

Injuries: Crew: Nil
Passengers: Nil
Others#: 1 fatal

Nature of Damage: Substantial to motor car and crossing alarm control box

Information Sources: Transport Accident Investigation
Commission field investigation

Investigator in Charge: Mr W J D Guest

Occupant of motor vehicle

1. NARRATIVE

1.1 The Gisborne Yard shunting locomotive operated within Gisborne City, shunting wagons for New Zealand Rail's own yard, and for a number of private sidings of local firms. In the normal course of its work it crosses a number of level crossings within the city.

1.2 The shunt had not worked during the period 0800 hours to 1200 hours for about six months prior to the week beginning Monday 6 December. However, a new transport contract for New Zealand Rail Limited led to the reinstatement of the morning service.

1.3 On the morning of Wednesday 8 December 1993 the locomotive was proceeding south from the station yard to collect wagons from Matawhero. The headlight was illuminated in accordance with New Zealand Rail Limited's usual practice. The weather was lightly overcast and the visibility was good.

1.4 As the shunt approached the Stanley Road level crossing at about 1015 hours, the Locomotive Engineer saw a light truck pass over the track. He felt concerned that the crossing alarms might not be working, so he applied the brakes immediately.

1.5 The Locomotive Engineer remarked on the passage of the truck to the Shunter who was riding in the cab, but both men then observed that the level crossing alarms were working. The Locomotive Engineer released the brakes and proceeded at a speed he estimated as 30 km/h.

1.6 The Shunter did not always ride in the cab of the locomotive, but often rode on the exposed footplate at the front of the locomotive, particularly if shunting work was to be undertaken at locations closer to Gisborne than Matawhero.

1.7 The Locomotive Engineer's view of the road approaches to the crossing was limited by buildings and vehicles on both sides of the track.

1.8 About 30 metres from the crossing the Locomotive Engineer sounded the horn for an estimated three seconds.

1.9 The speed of the locomotive and the time of the brake application cannot be confirmed, as the locomotive was not fitted with an event recorder. The event

recorders used by New Zealand Rail Limited do not record the operation of the horn or the headlights, although they can be modified to do so. Speed and brake applications are measured.

1.10 As the locomotive entered the crossing, the Shunter saw a car approaching the track from the left hand side. He did not have time to call an effective warning to the Locomotive Engineer before the collision.

1.11 The Locomotive Engineer was sitting on the right hand side of the cab, and could not have seen the car approach because the engine hood of the locomotive blocked his view. At the same time as the Shunter began to say something, the Locomotive Engineer heard and felt the locomotive hit the car. He immediately applied the brakes, and the locomotive came to a halt 86 metres further along the track.

1.12 The car was thrown forward approximately ten metres, slightly to the left of the track. It hit the control box for the crossing alarms, destroying it and breaking its concrete base.

1.13 The emergency services which were contacted by a number of nearby persons responded promptly.

1.14 Stanley Road was straight in the vicinity of the crossing, and intersected the railway almost at right angles. The flashing lights of the crossing alarms were positioned to be clearly visible on the approaches to the crossing.

1.15 A building close to the railway limited the motorist's view of rail vehicles approaching the crossing from the direction in which the locomotive was travelling.

1.16 The driver of the car had travelled along Stanley Road for some distance approaching the crossing at a constant speed. He may have been lulled into a false sense of security by the passage over the crossing of the truck going in the opposite direction, or by the fact that there had been no shunting movements in the morning for a number of months. However, he did not appear to have seen the flashing lights of the crossing alarms, which were clearly visible, or the locomotive, and did not make any attempt to stop before the crossing.

2. FINDINGS

- 2.1 The train was being operated properly prior to the accident.
- 2.2 The crossing alarms were working normally.
- 2.3 The driver of the car did not appear to have observed the flashing lights of the crossing alarm as he drove towards the crossing.
- 2.4 A nearby building restricted the motorist's and the locomotive crew's views of each other.

- 2.5 The Locomotive Engineer had no opportunity to stop the locomotive to avoid the collision.
- 2.6 If the Shunter had been travelling on the footplate, he would almost certainly have been injured in the accident.
- 2.7 The absence of an event recorder on the locomotive prevented confirmation of the speed and brake applications.

3. SAFETY RECOMMENDATIONS

3.1 It was recommended to New Zealand Rail Limited that:

3.1.1 Shunting locomotives which travel along main lines or regularly pass over level crossings on public roads be fitted with event recorders (030/94), and

3.1.2 Locomotive event recorders include capability to record the illumination of headlights and the sounding of the horn as well as the speed and brake pressure information currently recorded (031/94), and

3.1.3 Shunters be advised not to ride on the leading footplate of locomotives as they pass over public level crossings unless they are required to pilot the train movement at low speed (032/94).

New Zealand Rail Limited responded as follows:

3.1.1 *New Zealand Rail Limited will not be fitting event recorders to shunt locomotives.*

3.1.2 *It is not practical at this stage, although possible, to modify our current loco event recorders to include a record of head light illumination and sounding of the horn. However with the considerations of a new generation event recorder these two additional aspects would be investigated in a new proposal. A final decision would be made at the time of this analysis at some future date.*

3.1.3 *The recommendation is covered in the rail operating code section 5, instruction 10 dated 1 October 1992—no further action is considered necessary.*

23 March 1994

M F Dunphy
Chief Commissioner