Australian Government

Australian Transport Safety Bureau

ATSB TRANSPORT SAFETY REPORT

Rail Statistics – RR-2008-011(2)
Final

Australian Rail Safety Occurrence Data
1 January 2001 to 31 December 2008

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Abstract

This report tables rail safety occurrence data by State and Territory between 1 January 2001 and 31 December 2008. Data is adjusted biannually to reflect new information that comes to light during the reporting period. There is a lag period of approximately 3 to 4 months between the end of the 6-monthly reporting period and publication of this data. The data is presented as counts, and normalised using kilometres travelled and number of track kilometres. Data presented in this report conforms to *ON-S1: Occurrence Notification Standard 1* (2004) and *OC-G1: Occurrence Classification Guideline 1* (2008). This report excludes tram and light rail or monorail operations.

DEFINITIONS AND ABBREVIATIONS

Definitions

Jurisdiction	This means an Australian State or Territory

Abbreviations

ARO	Accredited rail operator
ATSB	Australian Transport Safety Bureau
DIRN	Defined Interstate Rail Network
KM	Kilometres
NA	Not applicable
OC-G	Occurrence Classification Guideline
ON-S	Occurrence Notification Standard
RSR	Rail Safety Regulations (Victoria)
RSRP	Rail Safety Regulators' Panel
SPAD	Signal passed at danger

INTRODUCTION

The responsibility for rail safety in Australia is shared by government and industry. To assist in maintaining and continuously improving rail safety, governments from each State and the Northern Territory have implemented rail safety legislation and established a rail safety regulator. The regulators are responsible for establishing standards in rail safety management and monitoring the industry's compliance with those standards in order to meet community expectations and maintain public confidence.

Industry is responsible for addressing risks to safety by identifying and implementing the most effective and efficient solutions via their safety management systems. It is accountable for achieving required safety outcomes.

As part of this process of shared responsibility, industry reports rail safety occurrences to the regulators. The regulators and operators use this data to assist with their safety analyses and programs.

The present count data is designed to assist rail safety professionals and researchers in understanding and mitigating risk. In addition, it can be used for international comparative research, while informing the public about emerging issues in rail safety. The present data set contains frequency counts of the following safety-critical event types:

- derailments;
- collisions;
- level crossing occurrences;
- signals passed at danger (SPAD);
- loading irregularities; and
- track and civil infrastructure irregularities.

As the data was collected and published on a jurisdictional basis, frequency counts for each of the above occurrences (except for SPADs) are normalised according to the size of the industry. The normalising data used was:

- train kilometres;
- freight train kilometres;
- passenger train kilometres; and
- total track kilometres.

In addition, frequency counts are provided for:

- fatalities; and
- serious personal injuries.

The data comprises railway safety occurrences in Australia from 1 January 2001 to 31 December 2008. The first table of each set contains occurrence frequency counts by state and territory, and the second contains counts normalised by appropriate activity data, where available. Rail regulators have provided this data to the Australian Transport Safety Bureau (ATSB) for national publications.

The definitions for data provided in each of the categories for the period:

- 1 January 2001 to 30 June 2008 are taken from Occurrence Notification Standard 1 (ON-S1, 2004 Rail Safety Regulators' Panel); and
- 1 July 2008 to 31 December 2008 are taken from Occurrence Classification Guideline 1 (OC-G1, July 2008 Rail Safety Regulators' Panel).

The ON-S1 was revised in 2008 to clarify definition and terminology issues discovered in ON-S1 (2004) and to further support uniform reporting of rail safety occurrences across Australia. The OC-G1 was developed as a separate document from ON-S1 in order to exclusively deal with the classification of data. A revised ON-S1 (July 2008) is also available, which deals with the notification of occurrences to the regulator by rail transport operators.

The change of classification rules from ON-S1 (2004) to OC-G1 (2008) for the rail safety occurrences contained in this report means that:

Tables 23 and 24, Track Infrastructure Irregularities have previously incorporated both running lines and yard occurrences. Data submitted under the OC-G1 (2008) only includes running line figures for the latter categories; therefore, a decline in numbers for 2008 in comparison to previous years may be apparent.

Tables 21 and 22, Loading Irregularities, under the OC-G1 (2008) definitions now includes 'Loose Load Fastening', which had not been included in this category under the ON-S1 (2004); therefore, with this addition a rise in Load Irregularity occurrences may be apparent.

Disclaimer

The data contained in the tables of this report is subject to review and amendment as additional or more detailed information becomes available through investigations and enquiries into occurrences or as regulators undertake data audits as part of their quality processes in relation to data management. This review may, in some instances, result in occurrences being re-classified and, therefore, historical data in this report may vary to previously published reports.

This data is supplied to the ATSB by state and territory rail safety regulators. The ATSB accepts no liability for any loss or damage suffered by any person or corporation resulting from the use of this data.

DATA

Fatal and serious personal injuries

Fatalities

Table 1: Biannual count of Australian rail fatalities by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	2	0	4	0	2	0	20	28
	Jul-Dec	3	0	1	2	8	0	14	28
2002	Jan-Jun	2	0	1	1	4	0	21	29
	Jul-Dec	1	1	5	1	10	0	11	29
2003	Jan-Jun	2	0	2	2	4	0	16	26
	Jul-Dec	2	0	3	0	6	0	11	22
2004	Jan-Jun	0	0	0	1	7	0	11	19
	Jul-Dec	2	1	4	0	5	0	13	25
2005	Jan-Jun	1	0	2	0	5	0	5	13
	Jul-Dec	5	0	3	0	9	0	6	23
2006	Jan-Jun	5	0	2	2	7	0	5	21
	Jul-Dec	4	0	2	2	7	1	4	20
2007	Jan-Jun	0	0	3	3	15	0	4	25
	Jul-Dec	3	0	0	0	4	0	4	11
2008	Jan-Jun	3	0	1	0	11	0	4	19
	Jul-Dec	3	0	0	0	6	0	5	14
Total		38	2	33	14	110	1	154	352

Serious personal injuries

Table 2: Biannual count of Australian rail serious injuries by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW
2001	Jan-Jun	18	0	3	8	15	0	NA
	Jul-Dec	9	0	4	10	16	0	NA
2002	Jan-Jun	8	0	5	5	15	0	NA
	Jul-Dec	6	0	34	13	11	0	NA
2003	Jan-Jun	6	0	0	4	14	0	NA
	Jul-Dec	5	1	1	2	17	1	NA
2004	Jan-Jun	4	0	2	4	7	0	NA
	Jul-Dec	37	0	7	11	2	0	NA
2005	Jan-Jun	4	1	8	0	12	0	NA
	Jul-Dec	3	0	2	0	40	0	NA
2006	Jan-Jun	3	0	1	2	35	0	NA
	Jul-Dec	3	4	0	7	77	0	NA
2007	Jan-Jun	4	0	1	2	88	0	NA
	Jul-Dec	8	0	2	2	70	0	NA
2008	Jan-Jun	5	0	1	0	55	0	NA
	Jul-Dec	4	0	0	2	38	0	NA
Total		127	6	71	72	512	1	NA

Running line derailments

Table 3: Biannual count of Australian running line derailments by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	22	1	19	7	12	7	41	109
	Jul-Dec	25	0	13	9	6	3	34	90
2002	Jan-Jun	29	0	18	16	9	8	50	130
	Jul-Dec	27	0	15	20	12	7	43	124
2003	Jan-Jun	26	3	12	11	8	4	29	93
	Jul-Dec	14	2	9	12	8	3	21	69
2004	Jan-Jun	17	2	12	8	14	6	32	91
	Jul-Dec	20	2	8	10	9	3	39	91
2005	Jan-Jun	15	0	11	8	15	2	25	76
	Jul-Dec	11	0	10	8	8	3	30	70
2006	Jan-Jun	14	0	7	6	7	3	16	53
	Jul-Dec	10	2	5	11	14	3	21	66
2007	Jan-Jun	14	0	11	6	7	6	22	66
	Jul-Dec	20	0	9	9	13	5	22	78
2008	Jan-Jun	20	1	5	11	9	8	17	71
	Jul-Dec	14	0	7	7	8	4	10	50
Total		298	13	171	159	159	75	452	1,327

Table 4: Normalised biannual rate of Australian running line derailments per million km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	1.15	12.99	2.42	0.90	0.65	15.22	1.26	1.26
	Jul-Dec	1.24	0.00	1.52	1.03	0.33	6.52	1.05	1.01
2002	Jan-Jun	1.50	0.00	2.15	1.60	0.48	17.39	1.56	1.46
	Jul-Dec	1.36	0.00	1.68	2.11	0.62	15.22	1.38	1.39
2003	Jan-Jun	1.38	33.33	1.48	1.13	0.43	8.33	0.96	1.08
	Jul-Dec	0.71	21.28	1.12	1.13	0.42	6.00	0.68	0.78
2004	Jan-Jun	0.89	3.05	1.43	0.74	0.74	10.91	1.02	1.01
	Jul-Dec	0.99	3.76	0.92	0.84	0.47	5.45	1.25	0.99
2005	Jan-Jun	0.78	0.00	1.25	0.69	0.79	3.42	0.81	0.84
	Jul-Dec	0.54	0.00	1.15	0.64	0.42	5.22	1.01	0.76
2006	Jan-Jun	0.76	0.00	0.79	0.51	0.37	5.26	0.55	0.60
	Jul-Dec	0.49	2.90	0.58	0.86	0.73	6.52	0.70	0.72
2007	Jan-Jun	0.73	0.00	1.32	0.48	0.37	13.33	0.76	0.74
	Jul-Dec	0.96	0.00	1.03	0.68	0.71	10.64	0.72	0.84
2008	Jan-Jun	1.02	1.27	0.58	0.67	0.50	18.26	0.55	0.75
	Jul-Dec	0.63	0.00	0.78	0.42	0.45	9.70	0.34	0.52
Rate all periods		0.94	1.79	1.25	0.85	0.53	9.52	0.92	0.92

Running line collisions

Collisions with trains

Table 5: Running line collisions with train, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0	0	0	1	2	0	3	6
	Jul-Dec	1	0	1	0	0	0	3	5
2002	Jan-Jun	3	0	1	1	1	0	3	9
	Jul-Dec	3	0	0	0	0	0	4	7
2003	Jan-Jun	3	0	1	1	4	0	1	10
	Jul-Dec	4	0	0	0	2	0	2	8
2004	Jan-Jun	0	0	0	0	1	1	3	5
	Jul-Dec	1	0	0	0	0	0	0	1
2005	Jan-Jun	4	1	1	3	1	1	2	13
	Jul-Dec	2	0	0	1	2	0	2	7
2006	Jan-Jun	0	0	0	0	2	0	2	4
	Jul-Dec	1	0	3	3	0	3	4	14
2007	Jan-Jun	0	0	0	2	1	0	3	6
	Jul-Dec	0	0	0	2	4	0	4	10
2008	Jan-Jun	1	0	0	2	4	0	3	10
	Jul-Dec	1	1	0	2	2	0	5	11
Total		24	2	7	18	26	5	44	126

Table 6: Normalised running line collisions with train, biannual rate per million train km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0.00	0.00	0.00	0.13	0.11	0.00	0.09	0.07
	Jul-Dec	0.05	0.00	0.12	0.00	0.00	0.00	0.09	0.06
2002	Jan-Jun	0.16	0.00	0.12	0.10	0.05	0.00	0.09	0.10
	Jul-Dec	0.15	0.00	0.00	0.00	0.00	0.00	0.13	0.08
2003	Jan-Jun	0.16	0.00	0.12	0.10	0.21	0.00	0.03	0.12
	Jul-Dec	0.20	0.00	0.00	0.00	0.10	0.00	0.07	0.09
2004	Jan-Jun	0.00	0.00	0.00	0.00	0.05	1.82	0.10	0.06
	Jul-Dec	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01
2005	Jan-Jun	0.21	1.80	0.11	0.26	0.05	1.71	0.06	0.14
	Jul-Dec	0.10	0.00	0.00	0.08	0.10	0.00	0.07	0.08
2006	Jan-Jun	0.00	0.00	0.00	0.00	0.10	0.00	0.07	0.05
	Jul-Dec	0.05	0.00	0.35	0.23	0.00	6.52	0.13	0.15
2007	Jan-Jun	0.00	0.00	0.00	0.16	0.05	0.00	0.10	0.07
	Jul-Dec	0.00	0.00	0.00	0.15	0.22	0.00	0.13	0.11
2008	Jan-Jun	0.05	0.00	0.00	0.12	0.22	0.00	0.10	0.11
	Jul-Dec	0.05	1.13	0.00	0.12	0.11	0.00	0.17	0.11
Rate all periods		0.08	0.28	0.05	0.10	0.09	0.63	0.09	0.09

Collisions with rolling stock

Table 7: Running line collisions with rolling stock, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	1	0	0	0	0	0	0	1
	Jul-Dec	5	0	0	0	1	0	0	6
2002	Jan-Jun	1	0	0	0	0	0	1	2
	Jul-Dec	1	0	0	1	2	0	1	5
2003	Jan-Jun	0	0	0	0	0	0	0	0
	Jul-Dec	1	0	0	0	2	0	0	3
2004	Jan-Jun	1	0	0	0	3	0	0	4
	Jul-Dec	2	0	0	1	4	1	0	8
2005	Jan-Jun	2	0	0	1	2	0	0	5
	Jul-Dec	1	0	1	0	5	0	0	7
2006	Jan-Jun	0	0	0	1	9	0	0	10
	Jul-Dec	2	0	0	0	2	0	1	5
2007	Jan-Jun	0	0	1	0	1	0	0	2
	Jul-Dec	1	0	0	2	1	0	0	4
2008	Jan-Jun	1	0	0	0	5	1	0	7
	Jul-Dec	0	0	0	0	1	0	0	1
Total		19	0	2	6	38	2	3	70

Table 8: Normalised running line collisions with rolling stock, biannual rate per million train km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01
	Jul-Dec	0.25	0.00	0.00	0.00	0.05	0.00	0.00	0.07
2002	Jan-Jun	0.05	0.00	0.00	0.00	0.00	0.00	0.03	0.02
	Jul-Dec	0.05	0.00	0.00	0.11	0.10	0.00	0.03	0.06
2003	Jan-Jun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Jul-Dec	0.05	0.00	0.00	0.00	0.10	0.00	0.00	0.03
2004	Jan-Jun	0.05	0.00	0.00	0.00	0.16	0.00	0.00	0.04
	Jul-Dec	0.10	0.00	0.00	0.08	0.21	1.82	0.00	0.09
2005	Jan-Jun	0.10	0.00	0.00	0.09	0.10	0.00	0.00	0.06
	Jul-Dec	0.05	0.00	0.11	0.00	0.26	0.00	0.00	0.08
2006	Jan-Jun	0.00	0.00	0.00	0.08	0.47	0.00	0.00	0.11
	Jul-Dec	0.10	0.00	0.00	0.00	0.10	0.00	0.03	0.05
2007	Jan-Jun	0.00	0.00	0.12	0.00	0.05	0.00	0.00	0.02
	Jul-Dec	0.05	0.00	0.00	0.15	0.05	0.00	0.00	0.04
2008	Jan-Jun	0.05	0.00	0.00	0.00	0.28	2.28	0.00	0.07
	Jul-Dec	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.01
Rate all periods		0.06	0.00	0.01	0.03	0.13	0.25	0.01	0.05

Collisions with person

Table 9: Running line collisions with person (not at a level crossing), biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	4	0	0	1	2	0	17	24
	Jul-Dec	3	0	2	3	9	0	22	39
2002	Jan-Jun	5	0	2	0	5	0	25	37
	Jul-Dec	5	0	1	2	8	0	16	32
2003	Jan-Jun	3	0	0	0	6	0	12	21
	Jul-Dec	6	0	1	0	7	0	16	30
2004	Jan-Jun	3	0	1	1	3	0	14	22
	Jul-Dec	4	1	0	2	6	0	18	31
2005	Jan-Jun	0	1	2	0	10	0	10	23
	Jul-Dec	5	0	3	0	8	0	10	26
2006	Jan-Jun	6	0	1	1	8	0	8	24
	Jul-Dec	1	0	2	2	7	0	9	21
2007	Jan-Jun	1	0	2	1	11	0	6	21
	Jul-Dec	4	0	1	0	11	0	3	19
2008	Jan-Jun	5	0	0	0	7	1	8	21
	Jul-Dec	3	0	2	0	15	0	11	31
Total		58	2	20	13	123	1	205	422

Table 10: Normalised running line collisions with person (not at a level crossing), biannual rate per million train km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0.21	0.00	0.00	0.13	0.11	0.00	0.52	0.28
	Jul-Dec	0.15	0.00	0.23	0.34	0.49	0.00	0.68	0.44
2002	Jan-Jun	0.26	0.00	0.24	0.00	0.27	0.00	0.78	0.42
	Jul-Dec	0.25	0.00	0.11	0.21	0.42	0.00	0.51	0.36
2003	Jan-Jun	0.16	0.00	0.00	0.00	0.32	0.00	0.40	0.24
	Jul-Dec	0.30	0.00	0.12	0.00	0.37	0.00	0.52	0.34
2004	Jan-Jun	0.16	0.00	0.12	0.09	0.16	0.00	0.45	0.25
	Jul-Dec	0.20	1.88	0.00	0.17	0.32	0.00	0.58	0.34
2005	Jan-Jun	0.00	1.80	0.23	0.00	0.52	0.00	0.32	0.25
	Jul-Dec	0.24	0.00	0.34	0.00	0.42	0.00	0.34	0.28
2006	Jan-Jun	0.33	0.00	0.11	0.08	0.42	0.00	0.27	0.27
	Jul-Dec	0.05	0.00	0.23	0.16	0.37	0.00	0.30	0.23
2007	Jan-Jun	0.05	0.00	0.24	0.08	0.58	0.00	0.21	0.24
	Jul-Dec	0.19	0.00	0.11	0.00	0.60	0.00	0.10	0.20
2008	Jan-Jun	0.26	0.00	0.00	0.00	0.39	2.28	0.26	0.22
	Jul-Dec	0.14	0.00	0.22	0.00	0.84	0.00	0.37	0.32
Rate all periods		0.18	0.28	0.15	0.07	0.41	0.13	0.42	0.29

Collisions with infrastructure

Table 11: Running line collisions with infrastructure, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	3	0	1	2	1	0	12	19
	Jul-Dec	10	0	3	2	2	0	10	27
2002	Jan-Jun	6	0	3	1	0	0	10	20
	Jul-Dec	8	0	1	1	0	1	13	24
2003	Jan-Jun	4	0	0	0	9	0	21	34
	Jul-Dec	7	0	0	0	15	0	16	38
2004	Jan-Jun	3	0	3	9	11	0	10	36
	Jul-Dec	10	0	0	8	14	1	18	51
2005	Jan-Jun	3	0	1	1	12	0	22	39
	Jul-Dec	3	0	3	2	28	0	28	64
2006	Jan-Jun	2	0	2	3	15	0	23	45
	Jul-Dec	4	0	1	5	21	0	31	62
2007	Jan-Jun	12	0	1	1	20	0	17	51
	Jul-Dec	15	0	2	2	21	0	8	48
2008	Jan-Jun	21	0	2	3	39	0	16	81
	Jul-Dec	18	0	1	3	35	0	15	72
Total		129	0	24	43	243	2	270	711

Table 12: Normalised running line collisions with infrastructure, biannual rate per million train km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0.16	0.00	0.13	0.26	0.05	0.00	0.37	0.22
	Jul-Dec	0.50	0.00	0.35	0.23	0.11	0.00	0.31	0.30
2002	Jan-Jun	0.31	0.00	0.36	0.10	0.00	0.00	0.31	0.23
	Jul-Dec	0.40	0.00	0.11	0.11	0.00	2.17	0.42	0.27
2003	Jan-Jun	0.21	0.00	0.00	0.00	0.48	0.00	0.70	0.39
	Jul-Dec	0.35	0.00	0.00	0.00	0.79	0.00	0.52	0.43
2004	Jan-Jun	0.16	0.00	0.36	0.83	0.58	0.00	0.32	0.40
	Jul-Dec	0.49	0.00	0.00	0.67	0.74	1.82	0.58	0.55
2005	Jan-Jun	0.16	0.00	0.11	0.09	0.63	0.00	0.71	0.43
	Jul-Dec	0.15	0.00	0.34	0.16	1.47	0.00	0.94	0.70
2006	Jan-Jun	0.11	0.00	0.22	0.25	0.79	0.00	0.79	0.51
	Jul-Dec	0.20	0.00	0.12	0.39	1.10	0.00	1.04	0.67
2007	Jan-Jun	0.63	0.00	0.12	0.08	1.05	0.00	0.59	0.57
	Jul-Dec	0.72	0.00	0.23	0.15	1.14	0.00	0.26	0.52
2008	Jan-Jun	1.07	0.00	0.23	0.18	2.19	0.00	0.52	0.86
	Jul-Dec	0.81	0.00	0.11	0.18	1.96	0.00	0.51	0.75
Rate all periods		0.41	0.00	0.18	0.23	0.81	0.25	0.55	0.49

Collisions with road vehicle

Table 13: Running line collisions with road vehicle (not at a level crossing), biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	1	1	2	2	2	0	0	19
	Jul-Dec	4	0	0	0	1	0	0	17
2002	Jan-Jun	0	0	0	1	0	0	1	9
	Jul-Dec	0	0	2	3	3	0	1	21
2003	Jan-Jun	0	0	0	0	0	0	1	6
	Jul-Dec	1	0	0	4	1	0	1	14
2004	Jan-Jun	3	0	0	2	3	0	2	15
	Jul-Dec	3	2	0	1	4	3	0	16
2005	Jan-Jun	1	0	0	2	4	0	0	9
	Jul-Dec	4	0	1	0	2	0	1	7
2006	Jan-Jun	1	0	1	0	0	0	1	4
	Jul-Dec	0	0	4	1	3	0	3	11
2007	Jan-Jun	2	0	0	1	0	0	1	5
	Jul-Dec	2	0	1	0	1	0	0	6
2008	Jan-Jun	1	0	1	1	1	1	2	7
	Jul-Dec	0	0	1	0	2	0	0	2
Total		23	3	13	18	27	4	14	168

Table 14: Normalised running line collisions with road vehicle (not at a level crossing), biannual rate per million train km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0.05	12.99	0.25	0.26	0.11	0.00	0.00	0.22
	Jul-Dec	0.20	0.00	0.00	0.00	0.05	0.00	0.00	0.19
2002	Jan-Jun	0.00	0.00	0.00	0.10	0.00	0.00	0.03	0.10
	Jul-Dec	0.00	0.00	0.22	0.32	0.16	0.00	0.03	0.24
2003	Jan-Jun	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07
	Jul-Dec	0.05	0.00	0.00	0.38	0.05	0.00	0.03	0.16
2004	Jan-Jun	0.16	0.00	0.00	0.18	0.16	0.00	0.06	0.17
	Jul-Dec	0.15	3.76	0.00	0.08	0.21	5.45	0.00	0.17
2005	Jan-Jun	0.05	0.00	0.00	0.17	0.21	0.00	0.00	0.10
	Jul-Dec	0.20	0.00	0.11	0.00	0.10	0.00	0.03	0.08
2006	Jan-Jun	0.05	0.00	0.11	0.00	0.00	0.00	0.03	0.05
	Jul-Dec	0.00	0.00	0.46	0.08	0.16	0.00	0.10	0.12
2007	Jan-Jun	0.10	0.00	0.00	0.08	0.00	0.00	0.03	0.06
	Jul-Dec	0.10	0.00	0.11	0.00	0.05	0.00	0.00	0.06
2008	Jan-Jun	0.05	0.00	0.12	0.06	0.06	2.28	0.07	0.07
	Jul-Dec	0.00	0.00	0.11	0.00	0.11	0.00	0.00	0.02
Rate all periods		0.07	0.41	0.10	0.10	0.09	0.51	0.03	0.12

Level crossing occurrences

Road vehicle collisions

Table 15: Road vehicle collisions at level crossings biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	8	0	8	1	27	1	9	54
	Jul-Dec	14	0	9	0	9	0	6	38
2002	Jan-Jun	9	0	5	5	18	1	11	49
	Jul-Dec	12	1	6	0	16	2	7	44
2003	Jan-Jun	11	0	4	2	8	2	3	30
	Jul-Dec	9	0	7	1	27	1	9	54
2004	Jan-Jun	2	1	6	1	22	1	5	38
	Jul-Dec	11	0	5	1	8	2	8	35
2005	Jan-Jun	14	0	3	2	11	3	4	37
	Jul-Dec	7	0	5	4	15	2	2	35
2006	Jan-Jun	8	0	3	1	13	3	7	35
	Jul-Dec	14	2	7	3	14	2	2	44
2007	Jan-Jun	6	0	3	3	11	1	6	30
	Jul-Dec	7	0	3	2	8	1	4	25
2008	Jan-Jun	9	0	4	2	13	1	2	31
	Jul-Dec	9	1	1	2	9	2	3	27
Total		150	5	79	30	229	25	88	606

Table 16: Normalised road vehicle collisions at level crossings, biannual rate per million train km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0.42	0.00	1.02	0.13	1.46	2.17	0.28	0.63
	Jul-Dec	0.69	0.00	1.05	0.00	0.49	0.00	0.18	0.43
2002	Jan-Jun	0.47	0.00	0.60	0.50	0.96	2.17	0.34	0.55
	Jul-Dec	0.61	10.87	0.67	0.00	0.83	4.35	0.22	0.49
2003	Jan-Jun	0.59	0.00	0.49	0.21	0.43	4.17	0.10	0.35
	Jul-Dec	0.45	0.00	0.87	0.09	1.42	2.00	0.29	0.61
2004	Jan-Jun	0.10	1.52	0.71	0.09	1.17	1.82	0.16	0.42
	Jul-Dec	0.54	0.00	0.57	0.08	0.42	3.64	0.26	0.38
2005	Jan-Jun	0.73	0.00	0.34	0.17	0.58	5.14	0.13	0.41
	Jul-Dec	0.34	0.00	0.57	0.32	0.79	3.48	0.07	0.38
2006	Jan-Jun	0.44	0.00	0.34	0.08	0.68	5.26	0.24	0.40
	Jul-Dec	0.69	2.90	0.81	0.23	0.73	4.35	0.07	0.48
2007	Jan-Jun	0.31	0.00	0.36	0.24	0.58	2.22	0.21	0.34
	Jul-Dec	0.34	0.00	0.34	0.15	0.43	2.13	0.13	0.27
2008	Jan-Jun	0.46	0.00	0.47	0.12	0.73	2.28	0.07	0.33
	Jul-Dec	0.41	1.13	0.11	0.12	0.50	4.85	0.10	0.28
Rate all periods		0.47	0.69	0.58	0.16	0.76	3.17	0.18	0.42

Level crossing collisions with person

Table 17: Level crossing collisions with person, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	1	0	3	0	2	0	0	6
	Jul-Dec	2	0	0	1	5	0	0	8
2002	Jan-Jun	0	0	2	0	2	0	1	5
	Jul-Dec	1	0	1	2	4	0	0	8
2003	Jan-Jun	1	0	1	0	1	0	0	3
	Jul-Dec	1	0	3	0	3	1	2	10
2004	Jan-Jun	0	0	1	0	2	0	1	4
	Jul-Dec	2	0	1	0	1	0	0	4
2005	Jan-Jun	0	0	2	0	2	0	0	4
	Jul-Dec	0	0	0	0	2	0	0	2
2006	Jan-Jun	0	0	1	0	4	0	0	5
	Jul-Dec	2	0	1	0	1	0	0	4
2007	Jan-Jun	0	0	1	2	2	0	0	5
	Jul-Dec	0	0	0	0	3	0	1	4
2008	Jan-Jun	0	0	1	0	4	0	0	5
	Jul-Dec	0	0	0	0	1	0	0	1
Total		10	0	18	5	39	1	5	78

Table 18: Normalised level crossing collisions with person, rate per million train km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	0.05	0.00	0.38	0.00	0.11	0.00	0.00	0.07
	Jul-Dec	0.10	0.00	0.00	0.11	0.27	0.00	0.00	0.09
2002	Jan-Jun	0.00	0.00	0.24	0.00	0.11	0.00	0.03	0.06
	Jul-Dec	0.05	0.00	0.11	0.21	0.21	0.00	0.00	0.09
2003	Jan-Jun	0.05	0.00	0.12	0.00	0.05	0.00	0.00	0.03
	Jul-Dec	0.05	0.00	0.37	0.00	0.16	2.00	0.07	0.11
2004	Jan-Jun	0.00	0.00	0.12	0.00	0.11	0.00	0.03	0.04
	Jul-Dec	0.10	0.00	0.11	0.00	0.05	0.00	0.00	0.04
2005	Jan-Jun	0.00	0.00	0.23	0.00	0.10	0.00	0.00	0.04
	Jul-Dec	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.02
2006	Jan-Jun	0.00	0.00	0.11	0.00	0.21	0.00	0.00	0.06
	Jul-Dec	0.10	0.00	0.12	0.00	0.05	0.00	0.00	0.04
2007	Jan-Jun	0.00	0.00	0.12	0.16	0.10	0.00	0.00	0.06
	Jul-Dec	0.00	0.00	0.00	0.00	0.16	0.00	0.03	0.04
2008	Jan-Jun	0.00	0.00	0.12	0.00	0.22	0.00	0.00	0.05
	Jul-Dec	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.01
Rate all periods		0.03	0.00	0.13	0.03	0.13	0.13	0.01	0.05

Signals passed at danger (SPAD)

Driver misjudged, completely missed and starting against signal (human error)

Table 19: Driver misjudged, completely missed and starting against signal, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW
2001	Jan-Jun	85	NA	11	12	9	NA	48
	Jul-Dec	96	NA	15	8	22	NA	80
2002	Jan-Jun	62	NA	12	7	23	NA	46
	Jul-Dec	64	NA	9	10	19	NA	53
2003	Jan-Jun	52	NA	7	9	17	NA	47
	Jul-Dec	57	NA	20	11	16	NA	89
2004	Jan-Jun	63	NA	9	21	16	NA	128
	Jul-Dec	63	NA	12	30	19	NA	104
2005	Jan-Jun	48	NA	9	18	16	NA	105
	Jul-Dec	62	NA	14	25	28	NA	110
2006	Jan-Jun	61	NA	12	23	23	NA	95
	Jul-Dec	53	NA	10	15	23	NA	99
2007	Jan-Jun	53	NA	9	15	25	NA	119
	Jul-Dec	65	NA	20	28	36	NA	126
2008	Jan-Jun	68	NA	16	19	27	NA	99
	Jul-Dec	49	NA	16	21	30	NA	133
Total		1,001	NA	201	272	349	NA	1,481

Signal restored as train approaches

Table 20: Signal restored as train approaches, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW
2001	Jan-Jun	126	NA	15	33	51	NA	5
	Jul-Dec	131	NA	13	32	81	NA	9
2002	Jan-Jun	147	NA	18	28	61	NA	11
	Jul-Dec	137	NA	18	21	75	NA	13
2003	Jan-Jun	126	NA	11	64	69	NA	17
	Jul-Dec	134	NA	17	43	97	NA	58
2004	Jan-Jun	156	NA	21	41	77	NA	119
	Jul-Dec	161	NA	20	34	56	NA	114
2005	Jan-Jun	120	NA	21	56	58	NA	103
	Jul-Dec	153	NA	19	35	48	NA	112
2006	Jan-Jun	151	NA	18	41	56	NA	110
	Jul-Dec	142	NA	13	47	53	NA	66
2007	Jan-Jun	138	NA	10	31	68	NA	92
	Jul-Dec	149	NA	18	53	88	NA	102
2008	Jan-Jun	134	NA	17	50	45	NA	129
	Jul-Dec	171	NA	18	40	70	NA	109
Total		2,276	NA	267	649	1,053	NA	1,169

Loading irregularities

Table 21: Loading irregularities, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	99	0	7	10	5	0	32	153
	Jul-Dec	105	0	5	17	1	0	19	147
2002	Jan-Jun	110	1	11	8	5	1	37	173
	Jul-Dec	116	0	11	10	1	0	64	202
2003	Jan-Jun	88	1	9	9	4	0	59	170
	Jul-Dec	74	0	20	6	3	0	106	209
2004	Jan-Jun	86	10	29	13	5	0	94	237
	Jul-Dec	82	8	19	25	8	0	91	233
2005	Jan-Jun	84	4	28	17	18	3	81	235
	Jul-Dec	72	7	35	37	15	5	97	268
2006	Jan-Jun	48	7	38	53	18	3	61	228
	Jul-Dec	81	4	43	40	22	2	90	282
2007	Jan-Jun	80	4	33	47	16	0	88	268
	Jul-Dec	58	2	28	22	13	2	87	212
2008	Jan-Jun	78	5	29	32	8	1	82	235
	Jul-Dec	64	4	42	24	11	2	139	286
Total		1,325	57	387	370	153	19	1,227	3,538

Table 22: Loading irregularities, biannual rate per million freight km travelled by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	7.89	0.00	2.05	2.23	1.54	0.00	3.28	4.50
	Jul-Dec	8.06	0.00	1.36	3.62	0.34	0.00	1.99	4.27
2002	Jan-Jun	8.88	16.13	3.33	1.31	1.70	2.22	3.97	5.00
	Jul-Dec	9.16	0.00	3.11	1.58	0.35	0.00	7.95	5.95
2003	Jan-Jun	7.47	15.87	3.03	1.49	1.57	0.00	8.02	5.44
	Jul-Dec	5.85	0.00	6.70	0.89	1.13	0.00	13.62	6.27
2004	Jan-Jun	7.11	17.64	8.46	1.83	1.89	0.00	11.07	6.81
	Jul-Dec	6.18	18.56	4.91	3.29	3.14	0.00	9.53	6.17
2005	Jan-Jun	6.67	9.37	6.97	2.30	6.51	5.63	8.23	6.25
	Jul-Dec	5.32	15.77	9.09	4.65	5.42	9.47	10.54	7.00
2006	Jan-Jun	4.12	16.24	8.95	7.47	6.51	5.77	6.39	6.29
	Jul-Dec	6.08	7.68	11.03	5.09	7.96	4.65	9.46	7.36
2007	Jan-Jun	6.50	7.17	8.32	6.22	5.78	0.00	10.39	7.43
	Jul-Dec	4.18	3.13	7.00	2.70	5.42	4.44	9.69	5.51
2008	Jan-Jun	6.18	8.08	7.35	3.76	3.45	2.52	9.16	6.29
	Jul-Dec	4.31	5.55	10.15	2.85	6.59	5.09	15.12	7.26
Rate all periods		6.46	9.96	6.53	3.30	3.59	2.57	8.55	6.14

Track infrastructure irregularities

Table 23: Track and civil infrastructure irregularities, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	108	0	73	23	12	0	171	387
	Jul-Dec	181	0	76	57	5	0	125	444
2002	Jan-Jun	176	1	111	60	55	0	218	621
	Jul-Dec	242	5	128	118	66	0	280	839
2003	Jan-Jun	158	0	155	116	65	0	246	740
	Jul-Dec	150	2	132	178	72	0	228	762
2004	Jan-Jun	165	4	208	182	69	0	246	874
	Jul-Dec	227	7	161	119	65	0	173	752
2005	Jan-Jun	144	5	70	122	36	0	167	544
	Jul-Dec	159	6	72	86	26	6	195	550
2006	Jan-Jun	81	5	95	110	50	7	200	548
	Jul-Dec	99	12	102	68	43	12	184	520
2007	Jan-Jun	89	9	82	135	51	22	204	592
	Jul-Dec	90	9	53	90	58	8	195	503
2008	Jan-Jun	63	19	73	130	69	10	193	557
	Jul-Dec	273	8	67	131	66	8	207	762
Total		2,405	92	1,658	1,725	808	73	3,232	9,995

Table 24: Track and civil infrastructure irregularities, biannual rate per 1,000 km of track by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	11.26	0.00	14.90	3.19	2.18	0.00	17.45	10.13
	Jul-Dec	18.87	0.00	15.51	7.90	0.91	0.00	12.76	11.63
2002	Jan-Jun	18.34	3.58	22.65	7.14	10.00	0.00	22.24	15.78
	Jul-Dec	25.17	17.92	26.12	14.05	12.00	0.00	28.57	21.31
2003	Jan-Jun	16.19	0.00	31.66	15.16	11.82	0.00	25.10	19.09
	Jul-Dec	15.39	2.00	26.96	23.26	13.10	0.00	23.27	19.30
2004	Jan-Jun	16.31	2.31	42.66	23.79	12.55	0.00	25.10	21.55
	Jul-Dec	22.40	4.04	33.02	15.56	11.82	0.00	17.65	18.54
2005	Jan-Jun	14.20	2.88	14.60	15.86	5.42	0.00	17.04	13.07
	Jul-Dec	15.87	3.44	15.07	11.18	3.91	7.44	19.90	13.26
2006	Jan-Jun	7.47	2.87	19.90	14.01	7.52	10.29	20.41	12.95
	Jul-Dec	9.12	6.90	21.38	8.66	6.47	17.65	18.78	12.28
2007	Jan-Jun	8.19	5.20	17.19	17.25	7.67	32.35	20.82	13.99
	Jul-Dec	8.28	5.19	11.11	11.37	8.72	11.76	19.90	11.86
2008	Jan-Jun	5.80	10.96	15.59	15.85	10.38	14.71	19.69	13.07
	Jul-Dec	27.61	4.61	14.92	15.95	9.93	11.63	21.12	18.38
Rate all periods[1]		14.80	4.65	21.54	13.79	8.32	5.73	20.61	15.35

[1] The denominator in this figure is the addition of all track kilometres over 8 years between 1 January 2001 and 31 December 2008.

Rail industry activity

Total train km

Table 25: Number of million total train km travelled, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	19.200	0.077	7.849	7.801	18.509	0.460	32.420	86.316
	Jul-Dec	20.190	0.081	8.572	8.698	18.322	0.460	32.470	88.793
2002	Jan-Jun	19.310	0.088	8.373	9.985	18.661	0.460	32.000	88.877
	Jul-Dec	19.790	0.092	8.905	9.489	19.243	0.460	31.132	89.111
2003	Jan-Jun	18.800	0.090	8.120	9.707	18.711	0.480	30.191	86.099
	Jul-Dec	19.820	0.094	8.002	10.635	19.078	0.500	30.702	88.831
2004	Jan-Jun	19.090	0.656	8.396	10.881	18.813	0.550	31.373	89.759
	Jul-Dec	20.250	0.532	8.740	11.917	18.977	0.550	31.193	92.159
2005	Jan-Jun	19.300	0.557	8.786	11.650	19.087	0.584	30.778	90.742
	Jul-Dec	20.480	0.560	8.714	12.570	19.087	0.575	29.694	91.680
2006	Jan-Jun	18.360	0.573	8.889	11.798	19.087	0.570	29.181	88.458
	Jul-Dec	20.260	0.689	8.630	12.830	19.087	0.460	29.951	91.907
2007	Jan-Jun	19.092	0.692	8.304	12.427	19.087	0.450	28.866	88.918
	Jul-Dec	20.834	0.811	8.750	13.250	18.424	0.470	30.489	93.028
2008	Jan-Jun	19.564	0.787	8.582	16.385	17.828	0.438	30.679	94.263
	Jul-Dec	22.118	0.882	8.939	16.555	17.851	0.413	29.574	96.331
Total		316.458	7.261	136.552	186.577	299.849	7.880	490.693	1,445.269

Passenger train km

Table 26: Number of million passenger train km, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

Year		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	6.650	0.026	4.441	3.308	15.259	0.010	22.650	52.344
	Jul-Dec	7.160	0.027	4.892	4.002	15.337	0.010	22.920	54.348
2002	Jan-Jun	6.920	0.026	5.074	3.876	15.728	0.010	22.670	54.304
	Jul-Dec	7.130	0.027	5.363	3.153	16.409	0.010	23.080	55.172
2003	Jan-Jun	7.020	0.027	5.153	3.657	16.160	0.030	22.830	54.877
	Jul-Dec	7.170	0.025	5.017	3.884	16.426	0.040	22.920	55.482
2004	Jan-Jun	7.000	0.089	4.970	3.785	16.160	0.050	22.880	54.934
	Jul-Dec	6.990	0.101	4.867	4.311	16.426	0.050	21.640	54.385
2005	Jan-Jun	6.700	0.130	4.767	4.260	16.321	0.051	20.940	53.169
	Jul-Dec	6.950	0.116	4.865	4.620	16.321	0.047	20.490	53.409
2006	Jan-Jun	6.710	0.142	4.645	4.704	16.321	0.050	19.640	52.212
	Jul-Dec	6.930	0.168	4.730	4.970	16.321	0.030	20.440	53.589
2007	Jan-Jun	6.779	0.134	4.338	4.866	16.321	0.030	20.400	52.868
	Jul-Dec	6.974	0.172	4.748	5.104	16.025	0.020	21.510	54.553
2008	Jan-Jun	6.936	0.168	4.634	7.869	15.510	0.041	21.731	56.889
	Jul-Dec	7.273	0.161	4.803	8.135	16.182	0.020	20.378	56.950
Total		111.292	1.539	77.306	74.504	257.227	0.499	347.119	869.485

Freight train km

Table 27: Number of million freight train km travelled, biannual count by jurisdiction and year, 1 January 2001 to 31 December 2008

		Qld	NT	SA	WA	VIC	TAS	NSW	Total
2001	Jan-Jun	12.550	0.051	3.408	4.493	3.250	0.450	9.770	33.972
	Jul-Dec	13.030	0.054	3.680	4.696	2.985	0.450	9.550	34.445
2002	Jan-Jun	12.390	0.062	3.299	6.109	2.933	0.450	9.330	34.573
	Jul-Dec	12.660	0.065	3.542	6.336	2.834	0.450	8.052	33.939
2003	Jan-Jun	11.780	0.063	2.967	6.050	2.550	0.450	7.361	31.221
	Jul-Dec	12.650	0.069	2.985	6.751	2.652	0.460	7.782	33.349
2004	Jan-Jun	12.090	0.567	3.426	7.096	2.652	0.500	8.493	34.824
	Jul-Dec	13.260	0.431	3.873	7.606	2.550	0.500	9.553	37.773
2005	Jan-Jun	12.600	0.427	4.019	7.390	2.766	0.533	9.838	37.573
	Jul-Dec	13.530	0.444	3.849	7.950	2.766	0.528	9.204	38.271
2006	Jan-Jun	11.650	0.431	4.245	7.094	2.766	0.520	9.541	36.246
	Jul-Dec	13.330	0.521	3.900	7.860	2.766	0.430	9.511	38.318
2007	Jan-Jun	12.313	0.558	3.966	7.561	2.766	0.420	8.466	36.050
	Jul-Dec	13.860	0.639	4.002	8.146	2.399	0.450	8.979	38.474
2008	Jan-Jun	12.628	0.619	3.948	8.516	2.318	0.397	8.948	37.374
	Jul-Dec	14.845	0.721	4.136	8.420	1.669	0.393	9.196	39.381
Total		205.166	5.722	59.245	112.074	42.622	7.381	143.574	575.783

EXPLANATORY NOTES

National

Supported by a contribution from the Australian Transport Safety Bureau (ATSB), the Rail Safety Regulators' Panel (RSRP) completed a national data quality review in December 2006. This aimed to identify any differences in the process used to categorise rail safety occurrence data. The draft findings from the data audit show marked differences in the methods of safety occurrence reporting and data capture between regulators and accredited rail operators (ARO). Differences in particular safety occurrence categories between some jurisdictions may be the result of different reporting practices, even where the data is normalised. This data excludes tram and monorail data.

Serious personal injury

Regulators and industry are experiencing difficulties in collecting supporting information necessary to grade injury severity according to the definition in *ON-S1: Occurrence Notification Standard* (2004) and *OC-G1: Occurrence Classification Guideline 1* (2008). They are working to resolve this issue; in the interim, most jurisdictions are attempting to adhere to the definition of serious injury as in ON-S1 and OC-G1.

States and territories

New South Wales

- Occurrences prior to 2005 were originally reported under a different notification/classification scheme to ON–S1 / OC–G1 and will be incomplete for some rail incident types.
- Serious Injury: Data are collected under a broader definition of serious injury than ON–S1 (2004) / OC–G1 (2008) and are not comparable with other jurisdictions.
- Signal Passed at Danger (SPAD): increase in SPADS from 2004 is due to change in major operator's detection and reporting processes.
- Total Track Kilometres based on 2007 estimate (may not include all sidings and loops).

Northern Territory

- Numbers include occurrences for the construction period of the Alice Springs-Darwin railway at the time when it was not a part of the Defined Interstate Rail Network (DIRN) (became part of DIRN on 01/01/2004).

Queensland

- Data for Loading Irregularities between 2001 and 2004 excludes the sub-category Loose Load Fastening.
- Maintenance issues detected and corrected as part of normal maintenance program has not been included in Track/Civil Infrastructure Irregularity data as per the current OC-G1 definition.
- Prior to July 2008, Queensland interpreted Buckled Track as applying to horizontal misalignment only. From 1 July 2008 other cases of misalignment which had been previously classified under 'Track and Civil Infrastructure Irregularities'– Other are included in Misaligned Track Irregularities.

South Australia

- Loading irregularities include 'Loose Load Fastening' figures.
- Track and Civil Infrastructure figures exclude track obstructions, civil infrastructure irregularities and other, but South Australia has not distinguished between running line broken rails and broken rails in yards. In future, this data will be segregated.
- South Australia does not collect data relating to maintenance-detected broken rails on running lines or in yards.
- Please note that Running Line Collision with a Road Vehicle figures have been amended.

Victoria

- With the introduction of the new *Rail Safety Regulations (RSR) 2006*, Victoria had a broader definition of serious injury for the period 1 August 2006 to 29 February 2008. With effect 1 March 2008, the RSR was changed to be in line with ON-S1.
- From 28 January 2003, AROs were requested to report all incidents. Subsequently, the number of incidents has increased from 1 February 2003 to date.
- Normalising data between 1 January 2005 and 30 June 2007 is based on 2004 figures. From 1 July 2007, total passenger train kilometres (millions) are based on scheduled services.
- Of Victoria's total 15 fatalities for 1 January to 30 June 2007, 11 resulted from the Kerang incident.
- Victoria's increase in the number of collisions with infrastructure over the 1 January to 31 December 2008 period can be attributed to an increase in minor platform scrapes with a particular type of rolling stock.
- From July 2008, occurrences reported are classified in accordance with OC-G1. Therefore Loading Irregularities includes Loose Load Fastening which was previously excluded. For Track and Civil Irregularities, Broken Rails includes both train operations and maintenance detected on the running line only, Misaligned and Spread Track is running line only whereas previously both running line and yard were reported.

REFERENCES

Rail Safety Regulators' Panel (2004). *ON-S1: Occurrence Notification - Standard 1, 2004*.

Rail Safety Regulators' panel (2008). *OC-G1: Occurrence Classification Guideline 1, 2008*