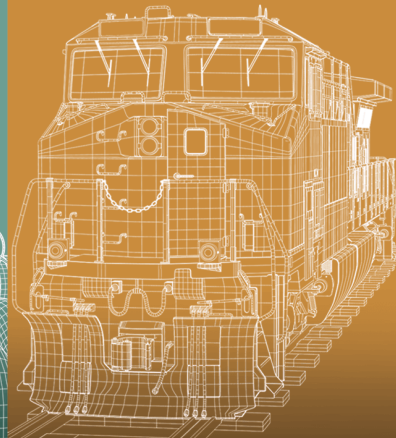
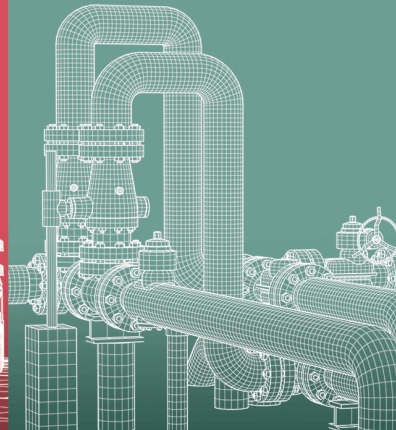




Transportation
Safety Board
of Canada

Bureau de la sécurité
des transports
du Canada



STATISTICAL SUMMARY

Rail transportation occurrences in 2023

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Statistical summary: rail transportation occurrences in 2023

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Le présent rapport est également disponible en français.

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Executive summary

The TSB received 1235 reports of rail transportation occurrences in 2023 (914 accidents and 321 incidents), including 67 fatalities.

The 914 accidents represent a 9% decrease from 2022 and a 12% decrease from the 10-year average of 1039.

The 67 rail transportation-related fatalities reported in 2023 are up compared to 65 in 2022 but below the 10-year average of 68. Among the fatalities, 53 involved trespassers, compared to 51 in 2022 and the 10-year average of 41.

The number of crossing accident fatalities decreased in 2023 (13) compared to 2022 (14) and is lower than the 10-year average of 20.

Among all rail transportation accidents, 87 involved dangerous goods. This is down from 110 accidents in 2022 and is lower than the 10-year average of 120. Six accidents in 2023 resulted in dangerous goods being released.

There were 321 rail transportation incidents reported to the TSB in 2023, a 14% decrease from 2022 (374). Incidents involving movements that exceeded limits of authority accounted for 50% (161) of all rail transportation incidents in 2023 – 27 more than in 2022 and above the 10-year average of 129.

According to Transport Canada data, 2023 main-track (non-yard) rail activity increased by 4% from 2022. The main-track accident rate in 2023 was 2.5 accidents per million main-track train-miles, down from 3.0 in 2022 and below the 10-year average of 2.6.

Statistical summary

Rail transportation occurrences in 2023

The TSB gathers and uses transportation occurrence data during the course of its investigations to analyze safety deficiencies and identify risks in the Canadian rail transportation system.

This statistical summary covers federally regulated railways only. Non-federally regulated data reported to the TSB are not included in this report.

This summary serves to describe the accident, incident, and injury counts¹ that are presented in the included tables. It provides limited discussion and some context but is not intended to be an in-depth analysis of the data.

It should be noted that certain characteristics of the data constrain statistical analysis and identification of emerging trends. These include the small totals of accidents and incidents, the large variability in the data from year to year, and changes to regulations and definitions. The reader is cautioned to keep these limitations in mind when viewing this summary to avoid drawing conclusions that cannot be supported by statistical analysis.

The 2023 data were collected according to the reporting requirements described in the *Transportation Safety Board Regulations* in force during that calendar year.

The statistics presented here reflect the TSB Railway Occurrence Database System (RODS) data as of 15 February 2024. Since the occurrence data are constantly being updated in the live database, the statistics may change slightly over time.

Also, as many occurrences are limited to data gathering, information recorded on some occurrences may not have been verified.

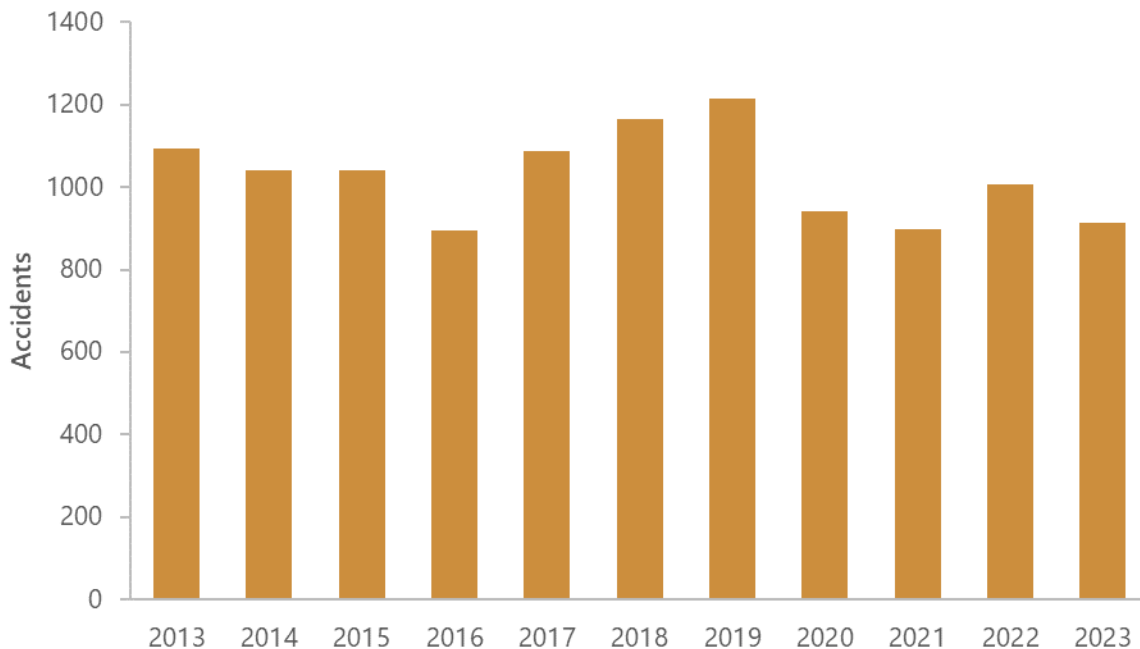
¹ See the Definitions section.

Accidents

Overview of accidents and casualties

In 2023, 914 rail accidents² were reported to the TSB (Figure 1 and Table 1), down from the 2022 total of 1008, and 12% below the previous 10-year (2013 to 2022) average of 1039.

Figure 1. Rail accidents, 2013 to 2023



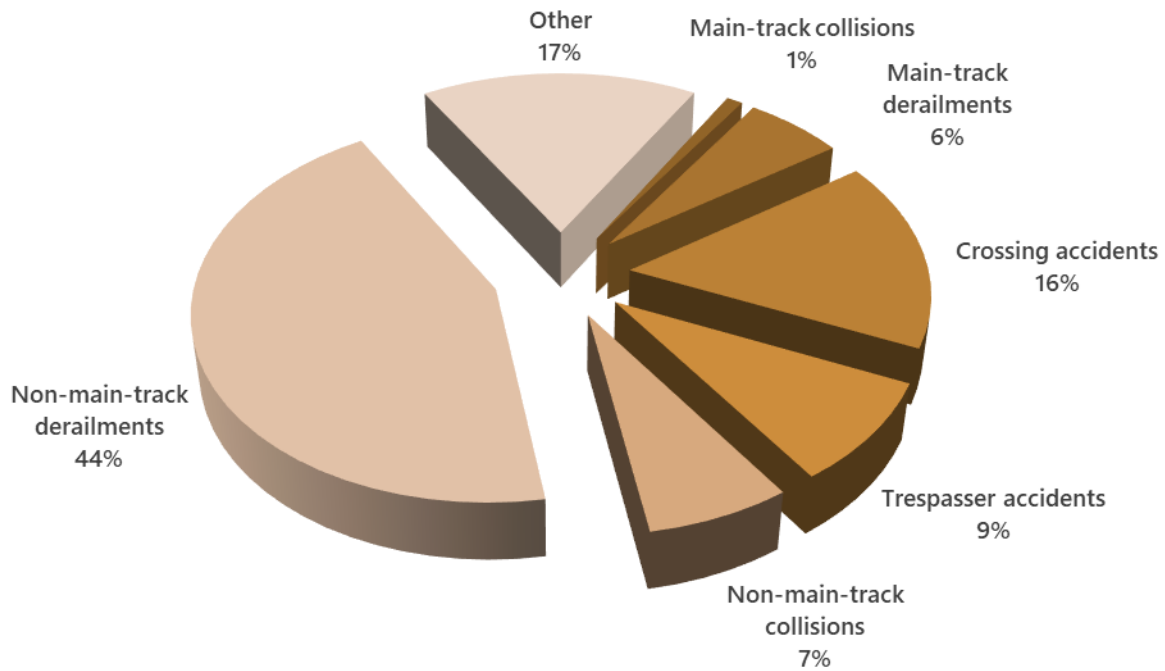
Freight trains accounted for 35% of all rolling stock involved in rail accidents in 2023. Four percent (36 in total) were passenger trains, with the remaining 61% comprising mainly single cars/cuts of cars, locomotives, and track units (Table 3).

The largest proportion of reported rail accidents comprised non-main-track derailments³ (44%) (Figure 2 and Table 1). Typically, most non-main-track derailment accidents are minor, occurring during switching operations at speeds of less than 10 mph.

² See the Definitions section.

³ "Derailment" means any instance where one or more wheels of rolling stock have come off the normal running surface of the rail.

Figure 2. Percentage of rail accidents by type, 2023*



* Due to rounding of percentages within categories, additions across accident types should be calculated from Table 1 data rather than by adding percentages shown in Figure 2.

The proportion of accidents that were main-track derailments in 2023 (6%) was approximately the same as both the previous year and the 10-year average.

In 2023, 16% of rail accidents involved vehicles or pedestrians at rail crossings, comparable to the 15% average of the previous 10 years.

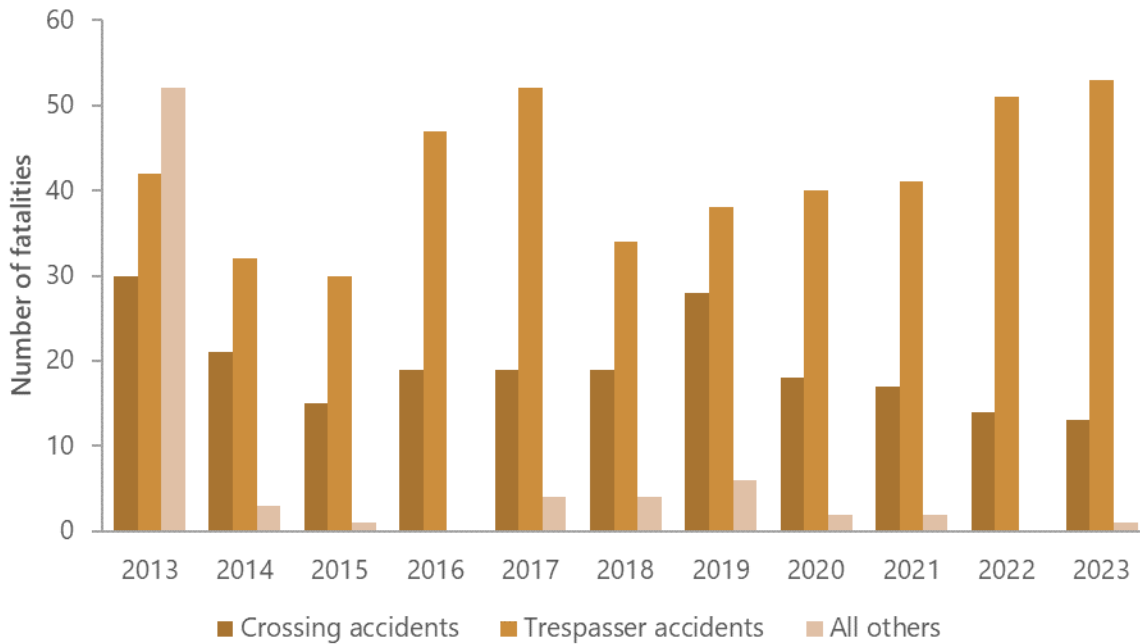
In 2023, 87 accidents involved dangerous goods (Table 1),⁴ down from 110 in 2022 and below the 10-year average of 120. Six accidents resulted in a dangerous goods release in 2023, up from 2 in the previous year, and above the 10-year average of 4.

Rail fatalities (Figure 3 and Table 1) totalled 67 in 2023, up from 65 last year but below the 10-year average of 68. Crossing fatalities totalled 13 in 2023, down from 14 in 2022 and below the 10-year average of 20. Trespasser⁵ fatalities totalled 53 in 2023, up from 51 in the previous year and above the 10-year average of 41. In 2023, 1 railway employee was fatally injured, below the 10-year average of 2 employee fatalities per year (Table 2).

⁴ Accidents involving dangerous goods carried on rolling stock, as well as dangerous goods carried on road vehicles.

⁵ Trespasser accidents involve persons, primarily pedestrians, who are struck by rolling stock while they are on railway rights-of-way (other than railway crossings) that they are not authorized to occupy, resulting in death, serious injury or property damage.

Figure 3. Rail fatalities, by type of occurrence, 2013 to 2023

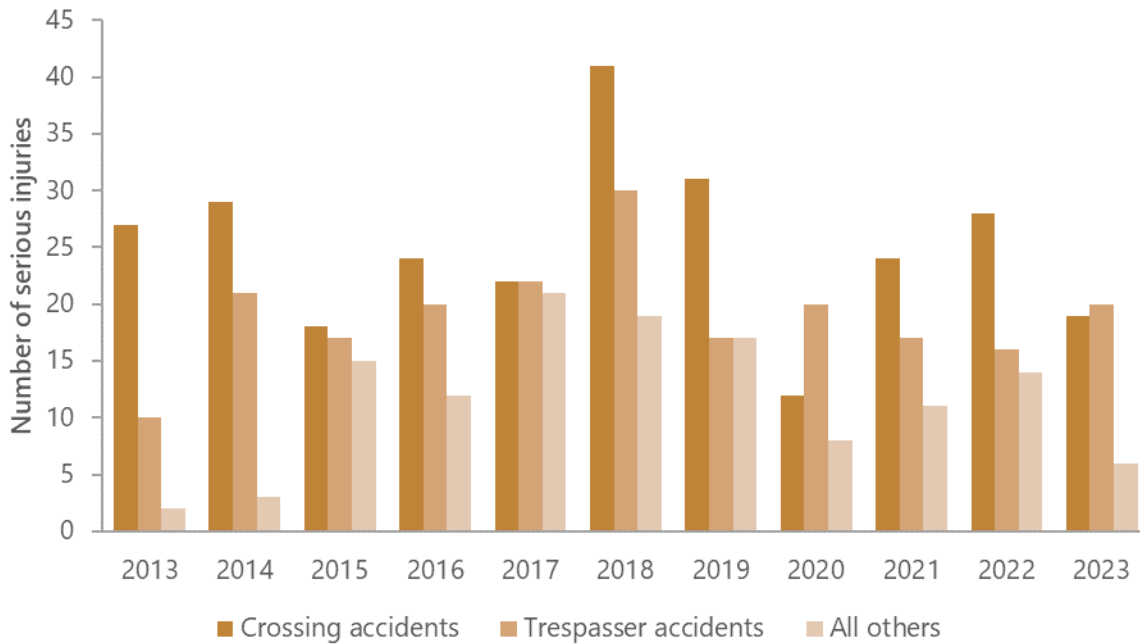


A total of 45 serious injuries⁶ resulted from rail occurrences in 2023 (Figure 4 and Table 1), down from 58 in 2022 and below the 10-year average of 57. Crossing accidents⁷ resulted in 19 serious injuries, down from 28 in 2022 and below the 10-year average of 26. Serious injuries to trespassers totalled 20 in 2023, up from 16 last year and above the 10-year average of 19. Three railway employees were seriously injured in 2023, down from 10 in 2022 and below the 10-year average of 11 (Table 2).

⁶ See the Definitions section.

⁷ A crossing accident occurs when railway rolling stock is involved in a grade-crossing collision with a motor vehicle or with a pedestrian, resulting in death, serious injury or property damage.

Figure 4. Rail serious injuries, by type of occurrence, 2013 to 2023

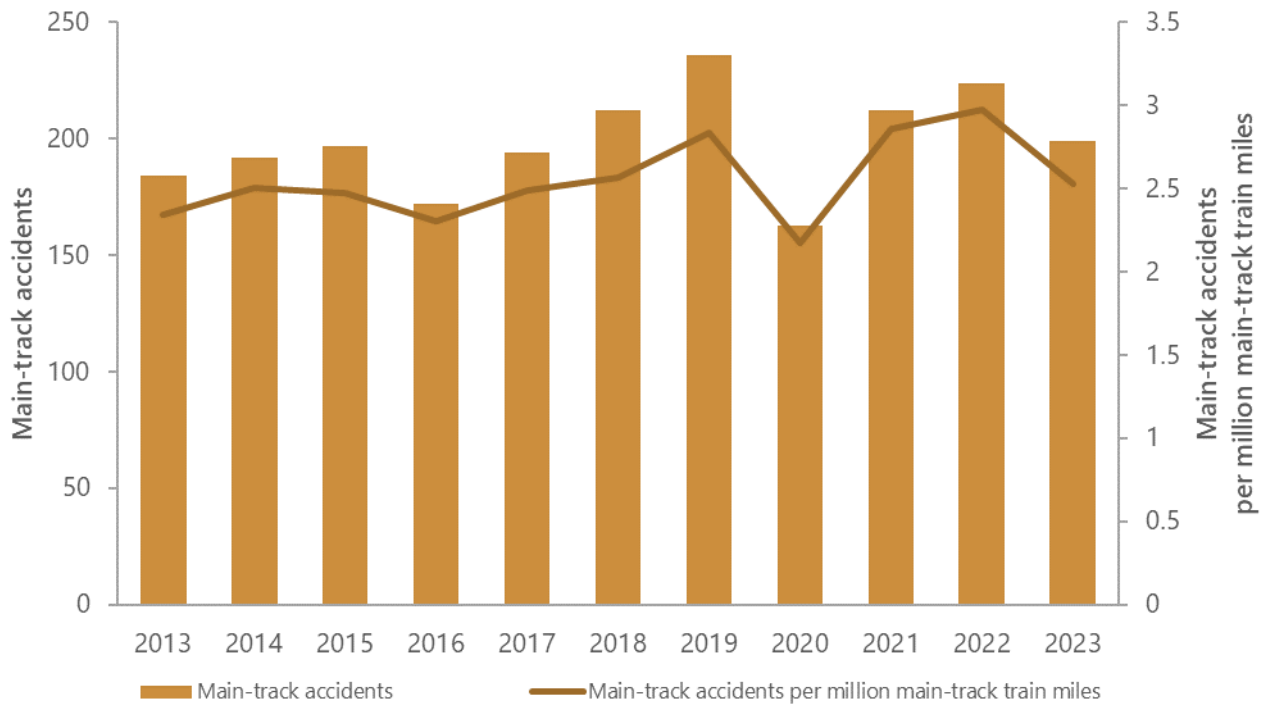


The number of main-track accidents⁸ totalled 199 in 2023 (Figure 5 and Table 1), down from 224 in 2022 but the same as the 10-year average of 199. Rail activity⁹ on main track (i.e., non-yard activity) increased by 4% from the previous year. The main-track accident rate in 2023 was 2.5 accidents per million main-track train miles, down from 3.0 in 2022 and below the 10-year average of 2.6.

⁸ Accidents that occur on the main track or spurs (not including crossing accidents, trespasser accidents, and non-main-track collisions and derailments) are combined in order to match the figures used in the activity data, which is the total of main-track and spur (i.e., non-yard) million train miles.

⁹ Transport Canada, Rail Safety Directorate (email dated 18 March 2024).

Figure 5. Main-track accidents and accident rates, 2013 to 2023



Accidents by type

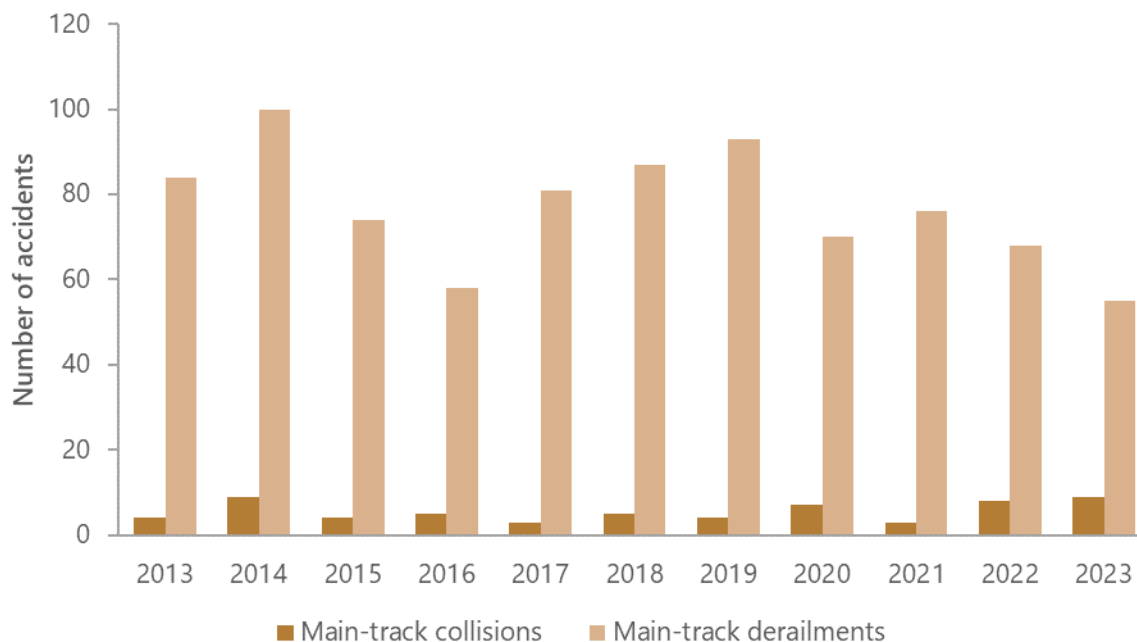
Main-track collisions and derailments are the most serious categories of rail accidents in terms of potential risk to the public and the environment (e.g., when passenger trains are involved or dangerous goods are released from trains that derail in populated areas).

There were 9 main-track collisions (Table 1 and Figure 6) in 2023, up from the 2022 total of 8 and also above the 10-year average of 5. No fatalities or serious injuries resulted from main-track collisions in 2023. There was no release of dangerous goods as a result of main-track collisions in 2023.

A total of 55 main-track derailments (Table 4) were reported in 2023, a decrease from the 2022 total of 68, and 30% below the 10-year average of 79 (Figure 6). Thirty-one percent of the 55 main-track derailments occurred in British Columbia, 16% occurred in each of Ontario and Saskatchewan, and 15% occurred in Alberta.

The number of main-track derailments per million main-track (i.e., non-yard) train miles (Table 4) decreased to 0.70 in 2023 from 0.90 the previous year and was below the 10-year average of 1.02.

Figure 6. Main-track collision and derailment accidents, 2013 to 2023



No fatalities or serious injuries resulted from main-track derailments in 2023 (Table 2). Ten main-track derailments involved dangerous goods, down from the 2022 total of 11 and below the 10-year average of 14 (Table 1). Two of these derailments resulted in the release of dangerous goods (gasoline, asphalt) (data not presented).

In 2023, 24% of assigned factors¹⁰ for main-track derailments (Table 5) were equipment-related, down from the 10-year average of 28%. Actions-related factors¹¹ accounted for 24% of assigned factors in 2023, unchanged from the 10-year average. Track-related factors were reported in 43% of main-track derailments in 2023, above the 10-year average of 36%.

Non-main-track collisions (Table 6 and Figure 7) totalled 63 in 2023, down from the 2022 total of 66, and below the 10-year average of 87. Derailments occurred in 29 non-main-track collisions (46%), and 15 of those collisions involved the derailment of a single car.

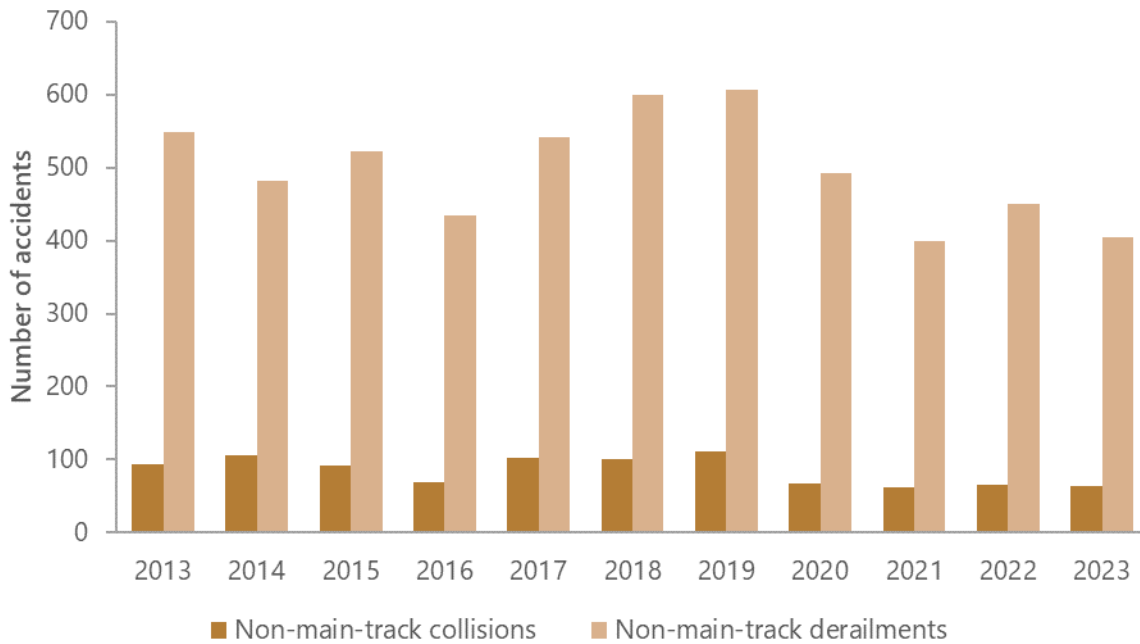
Non-main-track collisions resulted in no fatalities and 1 serious injury in 2023 (Table 2). Dangerous goods were involved in 33% of non-main-track collisions, 1 of which resulted in a release of product (ammonium nitrate) (data not presented).

Factors assigned to non-main-track collisions were mostly actions-related (85%), comparable to the 10-year average of 86% (Table 7). Failure to protect, such as improper positioning of movements and handling of switches, was assigned most often (59%) as a factor.

¹⁰ Occurrences are normally reported to TSB with one assigned factor. Since multiple factors can contribute to an occurrence, the TSB may assign additional factors to an occurrence. Note that, when multiple factors are assigned to an accident, they are considered to have acted in combination to contribute to the occurrence.

¹¹ Actions-related factors include, but are not limited to, departure from prescribed procedures, such as failure to protect or failure to secure.

Figure 7. Non-main-track collision and derailment accidents, 2013 to 2023



There were 404 non-main-track derailments¹² in 2023 (Table 8 and Figure 7), down from 450 last year and 20% below the 10-year average of 508. In 79% of these accidents in 2023, 1 or 2 cars derailed. No fatalities or serious injuries resulted from non-main-track derailments in 2023 (Table 2).

Dangerous goods cars were involved in 12% of non-main-track derailments, with 1 resulting in a release of product (diesel fuel) (data not presented).

In 2023, actions-related factors represented 54% of all assigned factors for non-main-track derailments, above the 10-year average of 48% (Table 9). Track-related factors represented 25% of all assigned factors, below the 10-year average of 31%. Environmental-related factors represented 11% of all assigned factors in 2023, below the 10-year average of 12%.

Crossing accidents (Tables 10 and 11) represented one of the more serious types of rail accidents in 2023, with 19% of these resulting in serious or fatal injuries (data not presented).

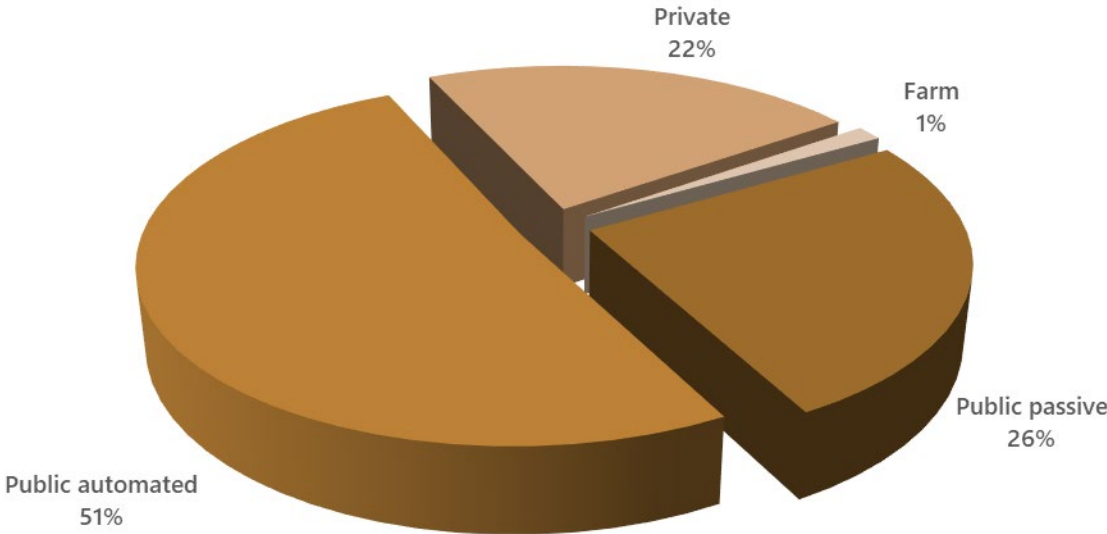
There were 149 crossing accidents in 2023, a 7% decrease from the 2022 total of 161 and below the 10-year average of 158. The number of accidents at public automated crossings (76) was down from the 2022 total of 78, and below the 10-year average of 77. The number of accidents at public passive crossings (38) was down 31% from the 2022 total of 55 and below the 10-year average of 53. Accidents at private and farm crossings (35) increased from the 2022 total of 28 and were above to the 10-year average of 28 (Table 10).

In 2023, 51% of crossing accidents occurred at public automated crossings, and 26% at public passive crossings (Table 10 and Figure 8). Although there are nearly one and a half times as many public passive

¹² The amended TSB Regulations came into effect on 01 July 2014, requiring that all derailments be reported, including minor derailments where there were no injuries and no damage to track or equipment.

crossings as public automated crossings, the higher number of accidents occurring at automated crossings is due, in part, to higher vehicle and train traffic volumes at the automated crossings.

Figure 8. Percentage of crossing accidents by type of crossing, 2023



There were 13 fatal crossing accidents in 2023, down from 14 reported in 2022 and below the 10-year average of 18. Crossing-related fatalities totalled 13 in 2023, down from 14 reported in 2022 and below the 10-year average of 20 (Table 10).

Crossing accidents involving pedestrians accounted for 9% (13) of all crossing accidents in 2023, but accounted for 38% (5) of fatal crossing accidents and 38% of crossing-related fatalities (data not presented).

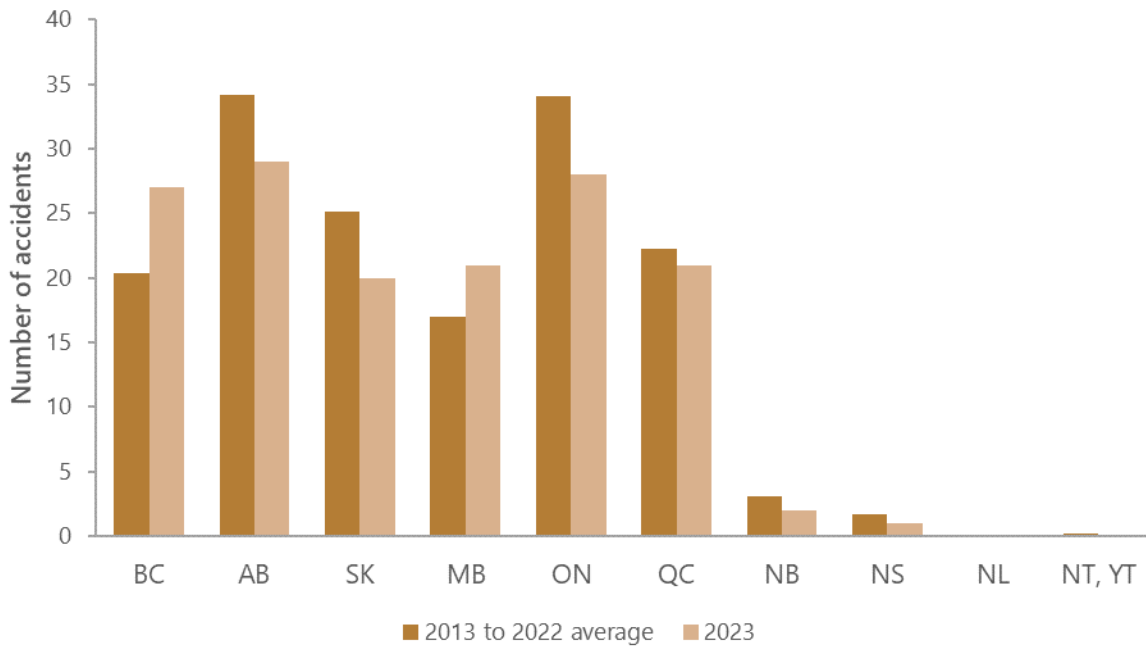
Crossing-related serious injuries totalled 19 in 2023, down from the 2022 total of 28 and below the 10-year average of 26 (Table 11).

In 2023, 6 crossing accidents resulted in a train derailment, up from 4 in 2022 and above the 10-year average (5) (Table 11).

Two crossing accidents resulted in the release of dangerous goods (diesel fuel) in 2023 (data not presented).

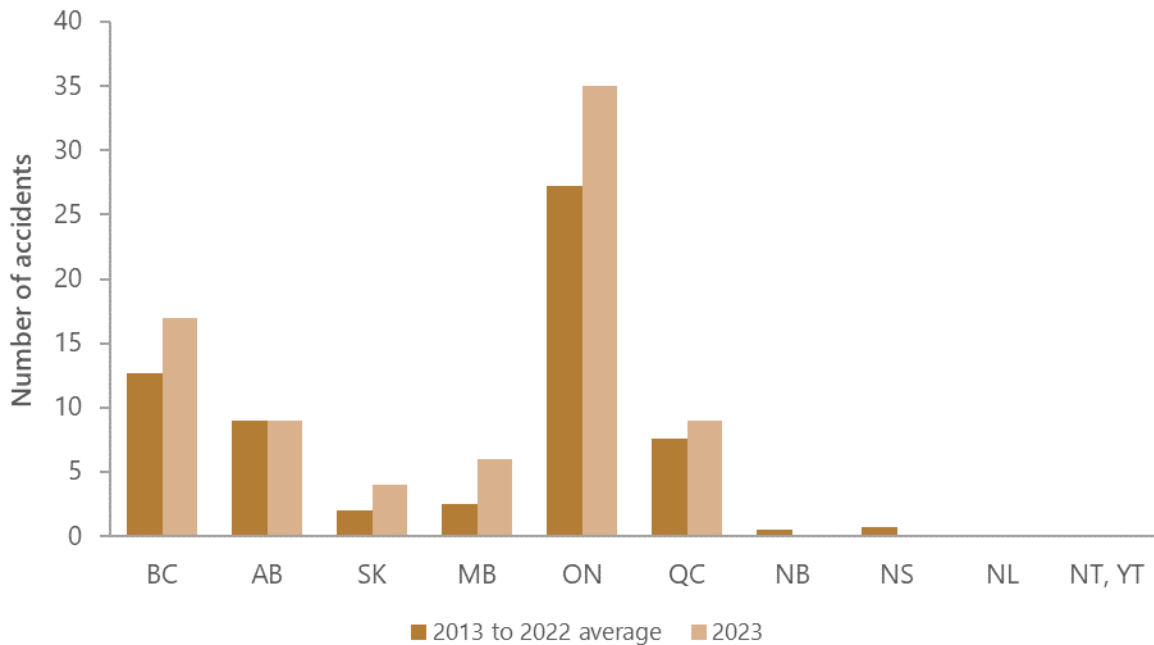
Ontario and Alberta had the highest proportions (19% each) of all crossing accidents in 2023. British Columbia had the third highest total with 18% of crossing accidents, followed by Manitoba and Quebec with 14%, and Saskatchewan with 13% (Table 11 and Figure 9).

Figure 9. Crossing accidents by province/territory, 2023



Trespasser accidents (Table 12 and Figure 10) totalled 80 in 2023, up from 72 in 2022 and above the 10-year average of 62. Ontario accounted for 44% of trespasser accidents, followed by British Columbia with 21%, Quebec and Alberta with 11% each, and Manitoba with 8%.

Figure 10. Trespasser accidents by province/territory, 2023



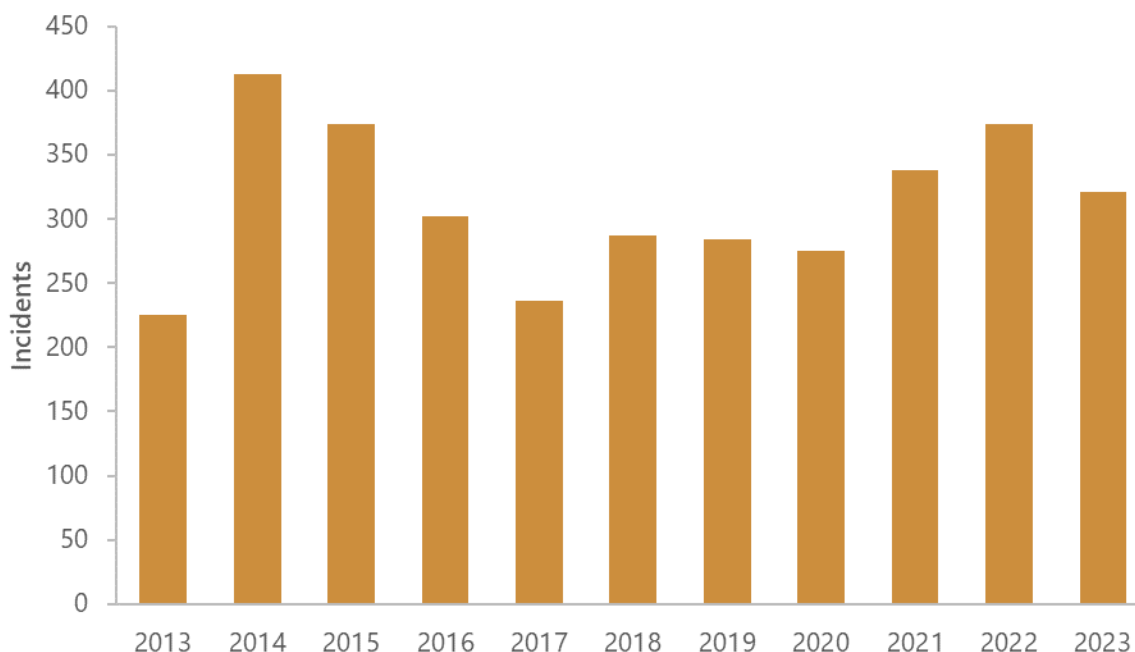
In 2023, the proportion of trespasser accidents that were fatal (66%) was similar to the 10-year average of 65%. The proportion of trespasser accidents resulting in serious injuries (25%) was below the 10-year average of 30%.

Incidents

Overview of incidents

In 2023, there were 321 reported rail incidents¹³ (Figure 11 and Table 1), down from 374 in 2022.

Figure 11. Rail incidents,* 2013 to 2023



* The amended TSB Regulations came into effect on 01 July 2014.

The movement exceeds limits of authority¹⁴ incident type accounted for 50% of reportable incidents in 2023 (Table 13), followed by non-main-track train derailments involving 1 or 2 cars (with no damage) at 21%, and fires on railway right-of-way (17%).

In 2023, there were 9 uncontrolled movement of rolling stock incidents, as well as 1 derailment incident that involved an uncontrolled movement of rolling stock. In addition, 27 accidents involved an uncontrolled movement of rolling stock (Table 1), for a total of 37 occurrences (3 of which involved vandalism). This is down from the total of these occurrences in 2022 (51, two of which involved vandalism).

There were 161 movement exceeds limits of authority incidents in 2023, an increase from 134 reported in 2022 and 25% above the 10-year average of 129 (Table 1).

¹³ See the Definitions section.

¹⁴ A movement exceeds limits of authority incident occurs when rolling stock occupies a main track or subdivision track, or track work takes place, in contravention of the rules or any regulations made under the *Railway Safety Act*.

Data tables

Table 1. Rail transportation occurrences, by accident/incident type and casualties,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Accidents	1094	1042	1042	896	1086	1166	1214	942	897	1008	914
Main-track collisions	4	9	4	5	3	5	4	7	3	8	9
Main-track derailments, 1 or 2 cars ²	52	44	39	33	48	39	54	40	39	32	28
Main-track derailments, 3 to 5 cars	13	15	8	8	5	11	6	3	3	8	9
Main-track derailments, 6 or more cars	19	41	27	17	28	37	33	27	34	28	18
Crossing accidents	184	185	165	133	143	166	178	130	136	161	149
Non-main-track collisions	93	106	92	69	103	101	112	67	62	66	63
Non-main-track derailments, 1 or 2 cars ²	436	357	410	346	424	476	492	406	327	371	320
Non-main-track derailments, 3 to 5 cars	88	90	87	62	82	100	87	65	58	56	62
Non-main-track derailments, 6 or more cars	25	34	26	27	35	23	27	21	15	23	22
Collisions/derailments involving track units	41	27	43	23	45	48	50	39	50	65	50
Employee/passenger accidents	8	13	15	16	17	13	15	9	11	10	4
Trespasser accidents	56	54	50	68	76	68	56	60	63	72	80
Fires/explosions on board rolling stock	10	30	30	34	32	33	58	33	45	46	42
Other accident types	65	37	46	55	45	46	42	35	51	62	58
Reportable incidents	225	413	374	302	236	287	284	275	338	374	321
Main-track derailments, 1 or 2 cars ² (no damage)	n/a	2	3	5	3	4	3	1	2	1	0
Non-main-track collisions (no derailment, no damage)	n/a	8	4	4	2	2	0	1	2	4	3
Non-main-track derailments, 1 or 2 cars ² (no damage)	n/a	166	125	97	67	96	58	32	39	111	66
Fires on railway right-of-way	1	6	2	1	1	1	42	46	145	88	56
Main-track switch in abnormal position	7	6	12	7	12	7	15	3	13	8	8
Movement exceeds limits of authority	98	129	142	133	122	138	136	149	109	134	161
Uncontrolled movement of rolling stock	14	11	14	10	14	15	15	19	13	9	9
Other reportable incidents	105	85	72	45	15	24	15	24	15	19	18
Main-track accidents³	184	192	197	172	194	212	236	163	212	224	199
Million main-track train miles⁴	78.5	76.5	79.6	74.7	78.0	82.6	83.3	74.9	74.1	75.4	78.7
Main-track accidents per million main-track train miles	2.3	2.5	2.5	2.3	2.5	2.6	2.8	2.2	2.9	3.0	2.5
Accidents involving dangerous goods	143	143	127	101	116	125	171	82	86	110	87
Main-track derailments	11	25	12	10	10	17	19	7	16	11	10
Crossing accidents	5	5	4	4	6	7	7	3	2	5	4
Non-main-track collisions	26	36	32	19	39	33	44	13	19	30	21
Non-main-track derailments	96	68	75	60	55	62	95	56	45	60	47
Other accident types	5	9	4	8	6	6	6	3	4	4	5
Accidents with a dangerous goods release	7	4	6	1	5	4	8	3	2	2	6
Accidents involving an uncontrolled movement of rolling stock	57	43	41	33	48	47	61	28	33	37	27
Persons fatally injured in reportable occurrences	124	56	46	66	75	57	72	60	60	65	67
Crossing accidents	30	21	15	19	19	19	28	18	17	14	13
Trespasser accidents	42	32	30	47	52	34	38	40	41	51	53
Other occurrence types ⁵	52	3	1	0	4	4	6	2	2	0	1
Persons seriously injured in reportable occurrences	39	53	50	56	65	90	65	40	52	58	45
Crossing accidents	27	29	18	24	22	41	31	12	24	28	19
Trespasser accidents	10	21	17	20	22	30	17	20	17	16	20
Other occurrence types ⁵	2	3	15	12	21	19	17	8	11	14	6

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² Under the TSB Regulations that came into effect in 2014, all derailments are reportable. Derailments and collisions with minimal consequences are reportable incidents; these include derailments involving 1 or 2 cars with no equipment or track damage, no injuries, no fires, and no release of dangerous goods; they also include non-main-track collisions with no equipment or track damage, no injuries, no fires, no release of dangerous goods, and that did not foul the main track.

³ Main-track accidents are accidents that occurred on the main track or spurs, excluding crossing and trespasser accidents, and excluding non-main-track collisions and derailments.

⁴ Main-track (i.e., non-yard) train miles are estimated (Source: Transport Canada email communication 18 March 2024).

⁵ See Table 2 for details on occurrences by type.

Table 2. Casualties, by accident/incident type and category of person,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Persons fatally injured in reportable occurrences	124	56	46	66	75	57	72	60	60	65	67
Main-track collisions	0	0	0	0	0	0	0	0	0	0	0
Main-track derailments	47	0	0	0	0	1	3	0	0	0	0
Crossing accidents	30	21	15	19	19	19	28	18	17	14	13
Non-main-track collisions	1	0	0	0	0	2	0	0	0	0	0
Non-main-track derailments	0	0	0	0	0	0	0	0	0	0	0
Collisions/derailments involving track units	0	0	0	0	0	0	0	0	0	0	0
Employee/passenger accidents	4	2	1	0	3	1	2	2	2	0	1
Trespasser accidents	42	32	30	47	52	34	38	40	41	51	53
Other accident types	0	1	0	0	0	0	1	0	0	0	0
Reportable incidents	0	0	0	0	1	0	0	0	0	0	0
Persons seriously injured in reportable occurrences	39	53	50	56	65	90	65	40	52	58	45
Main-track collisions	0	0	0	0	0	0	0	0	0	0	0
Main-track derailments	0	0	0	0	0	3	1	0	0	0	0
Crossing accidents	27	29	18	24	22	41	31	12	24	28	19
Non-main-track collisions	0	0	0	0	2	0	2	0	0	1	1
Non-main-track derailments	0	0	0	0	0	0	0	0	0	0	0
Collisions/derailments involving track units	0	0	0	3	0	0	2	1	1	1	0
Employee/passenger accidents	1	2	11	8	16	12	11	6	8	10	3
Trespasser accidents	10	21	17	20	22	30	17	20	17	16	20
Other accident types	0	0	2	1	3	0	1	0	2	2	2
Reportable incidents	1	1	2	0	0	4	0	1	0	0	0
Persons fatally injured	124	56	46	66	75	57	72	60	60	65	67
Employees	5	2	1	0	3	4	5	2	1	0	1
Passengers	0	1	0	0	1	0	0	0	1	0	0
Pedestrians	13	8	3	7	8	9	13	7	5	5	5
Vehicle occupants	17	12	11	12	11	10	16	14	10	9	8
Trespassers	42	32	31	47	52	34	38	36	43	51	53
Other categories of persons	47	1	0	0	0	0	0	1	0	0	0
Persons seriously injured	39	53	50	56	65	90	65	40	52	58	45
Employees	2	7	8	15	19	17	16	8	7	10	3
Passengers	1	1	8	2	3	3	1	0	2	2	1
Pedestrians	3	1	2	0	2	8	6	3	8	6	6
Vehicle occupants	23	21	16	18	18	32	25	9	20	24	14
Trespassers	10	23	16	21	23	30	17	20	15	16	21
Other categories of persons	0	0	0	0	0	0	0	0	0	0	0

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

Table 3. Trains and other rolling stock involved in accidents, by accident type,^{1,2,3} 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Freight trains	833	542	412	338	402	389	418	328	328	340	349
Main-track collisions	7	8	6	6	6	5	4	8	6	13	12
Main-track derailments	79	90	66	48	75	75	78	64	66	57	46
Non-main-track collisions	85	42	27	11	28	20	26	15	12	7	8
Non-main-track derailments	423	187	108	88	95	96	78	56	36	31	52
Crossing accidents	144	139	117	86	94	106	117	94	90	117	105
Trespasser accidents	38	39	36	48	51	40	42	49	51	51	61
Other accident types	57	37	52	51	53	47	73	42	67	64	65
Passenger trains	46	50	46	56	54	67	47	40	42	53	36
Main-track collisions	0	1	0	0	0	1	1	1	0	0	1
Main-track derailments	3	3	2	4	2	2	2	1	3	0	0
Non-main-track collisions	0	1	0	0	0	0	0	5	0	1	0
Non-main-track derailments	4	1	2	1	4	6	3	13	3	2	1
Crossing accidents	17	18	16	11	13	18	15	7	12	9	10
Trespasser accidents	16	12	10	13	22	24	12	4	10	17	16
Other accident types	6	14	16	27	13	16	14	9	14	24	8
Track units	76	48	77	41	71	81	81	63	91	100	85
Main-track collisions	0	0	0	0	0	0	0	0	0	0	0
Main-track derailments	0	0	0	0	0	0	0	0	0	0	0
Non-main-track collisions	0	0	0	0	0	0	0	0	0	0	0
Non-main-track derailments	0	0	0	0	0	0	0	0	0	0	0
Crossing accidents	7	2	5	4	5	6	4	3	7	9	7
Trespasser accidents	0	0	0	0	0	0	0	0	0	0	0
Other accident types	69	46	72	37	66	75	77	60	84	91	78
Single car/cut of cars	126	378	476	416	526	594	616	467	413	482	409
Main-track collisions	0	6	0	1	0	2	2	3	1	1	3
Main-track derailments	2	8	2	4	2	7	5	4	3	5	4
Non-main-track collisions	59	114	103	93	119	133	141	82	83	89	80
Non-main-track derailments	51	222	333	278	362	402	415	339	294	349	284
Crossing accidents	1	9	17	17	21	26	25	13	15	10	17
Trespasser accidents	0	1	4	6	1	3	2	2	1	0	1
Other accident types	13	18	17	17	21	21	26	24	16	28	20
Other types of train/rolling stock	111	137	131	126	117	151	165	125	104	122	105
Main-track collisions	0	0	0	2	0	0	1	1	0	1	1
Main-track derailments	1	1	4	2	2	3	8	1	4	7	5
Non-main-track collisions	13	26	15	21	14	18	18	9	8	15	12
Non-main-track derailments	73	78	92	72	82	103	113	88	69	68	68
Crossing accidents	15	17	10	15	10	12	17	13	13	16	10
Trespasser accidents	2	2	0	1	2	1	0	5	1	4	2
Other accident types	7	13	10	13	7	14	8	8	9	11	7

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² As some accidents may involve more than one train or other rolling stock, the number of trains/rolling stock involved may differ from the total number of accidents.

³ Under the 2014 TSB Regulations, all derailments are reportable.

Table 4. Main-track derailment accidents, by province and territory and number of derailed cars,^{1,2} 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Main-track derailments	84	100	74	58	81	87	93	70	76	68	55
Newfoundland and Labrador	1	0	0	0	2	0	0	1	2	2	1
Nova Scotia	1	0	0	1	0	0	0	0	0	1	0
New Brunswick	1	3	2	1	0	0	1	0	3	1	1
Quebec	8	11	9	6	6	9	10	9	3	10	4
Ontario	19	20	21	15	11	14	17	14	13	9	9
Manitoba	3	10	4	4	6	8	14	8	5	5	6
Saskatchewan	13	10	8	6	14	18	12	6	9	12	9
Alberta	19	30	16	13	21	20	17	11	17	10	8
British Columbia	19	16	14	12	21	18	22	21	24	18	17
Northwest Territories and Yukon	0	0	0	0	0	0	0	0	0	0	0
Main-track derailments per million main-track train miles³	1.07	1.31	0.93	0.78	1.04	1.05	1.12	0.93	1.03	0.90	0.70
Main-track derailments per billion gross ton miles⁴	0.17	0.18	0.14	0.11	0.14	0.15	0.16	0.12	0.13	0.12	n/a
Main-track derailments by number of derailed cars	84	100	74	58	81	87	93	70	76	68	55
1 car	47	29	29	26	39	29	43	32	33	26	21
2 cars	5	15	10	7	9	10	11	8	6	6	7
3 cars	5	4	4	2	2	4	2	2	1	1	3
4 cars	6	6	2	2	2	4	3	1	1	4	2
5 to 10 cars	7	22	16	10	13	21	11	10	10	17	8
11 cars or more	14	24	13	11	16	19	23	17	25	14	14

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² Under the 2014 TSB Regulations, all derailments are reportable.

³ Source of estimated million main-track train miles: Transport Canada email communication 18 March 2024.

⁴ Source of billion gross ton miles: *Rail Trends 2023*, Railway Association of Canada.

Table 5. Main-track derailment accidents, by assigned factors,^{1,2} 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Assigned factors^{3,4}	96	109	80	63	84	89	91	72	75	72	51
Environmental	5	10	2	3	4	7	8	10	9	7	3
Equipment	33	27	23	20	30	24	26	18	20	12	12
Axle	8	4	6	6	10	2	6	3	6	1	3
Brakes	3	4	4	4	4	4	7	4	1	2	2
Draft system	2	5	5	1	4	7	2	1	5	0	0
Superstructure	7	3	1	2	1	4	3	2	0	3	2
Truck	5	6	2	1	5	0	1	0	4	3	1
Wheel	8	5	5	6	6	7	7	8	4	3	4
Track	30	49	33	18	32	24	37	25	32	16	22
Geometry	10	11	8	8	14	11	10	10	9	4	9
Object on track	2	1	0	0	1	0	1	0	0	0	2
Other track material	0	7	2	1	3	2	3	2	2	0	1
Rail	12	17	12	4	9	4	13	4	13	7	7
Roadbed	4	5	7	2	4	4	6	6	6	1	1
Switch	0	6	1	3	0	1	1	1	1	2	0
Turnout	1	0	0	0	1	1	0	0	1	0	2
Actions	26	18	14	18	17	27	18	17	13	34	12
Failure to protect	5	4	2	4	5	10	9	6	4	14	1
Failure to secure	1	0	0	0	0	0	1	0	0	1	1
Failure to use equipment properly	10	6	5	9	8	13	6	8	5	14	8
Improper loading/lifting	2	3	2	0	2	1	0	0	2	1	1
Improper placement/position for task	6	3	1	4	2	2	1	3	1	2	0
Inadequate/inappropriate maintenance of equipment	0	0	1	0	0	0	0	0	0	0	0
Operating at improper speed	2	2	3	0	0	1	0	0	1	1	1
Vandalism	0	0	0	1	0	0	0	0	0	0	0
Other actions	0	0	0	0	0	0	1	0	0	1	0
Other assigned factors	2	5	8	4	1	7	2	2	1	3	2
Main-track derailments	84	100	74	58	81	87	93	70	76	68	55
One factor assigned	74	94	70	53	76	81	87	67	73	64	51
More than one factor assigned	10	6	4	4	4	3	2	2	1	4	0
No factors assigned	0	0	0	1	1	3	4	1	2	0	4

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² Under the 2014 TSB Regulations, all derailments are reportable.

³ Since the TSB does not investigate all occurrences, assigned factors may not be TSB findings. Occurrences are normally reported to the TSB with one assigned factor. The TSB may assign additional factors.

⁴ Some factors are assigned by parent category (e.g., Equipment is the parent of Axle); therefore, the breakdowns may not sum to the category total.

Table 6. Non-main-track collision accidents, by province or territory and by cars derailed,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Non-main-track collisions	93	106	92	69	103	101	112	67	62	66	63
Newfoundland and Labrador	0	0	0	0	0	1	0	0	0	0	0
Nova Scotia	0	0	0	0	1	0	0	1	0	1	2
New Brunswick	1	4	0	1	1	2	0	2	1	0	1
Quebec	10	4	10	7	9	5	9	4	3	5	6
Ontario	16	23	20	19	25	19	26	15	9	24	19
Manitoba	14	18	15	10	14	8	15	11	8	10	9
Saskatchewan	11	21	8	5	7	13	11	5	4	2	1
Alberta	28	19	17	19	23	26	29	13	16	12	11
British Columbia	13	17	21	8	23	27	22	16	21	12	14
Northwest Territories and Yukon	0	0	1	0	0	0	0	0	0	0	0
Non-main-track collisions	93	106	92	69	103	101	112	67	62	66	63
No cars derailed	63	63	63	38	64	54	63	34	35	35	34
1 car	18	19	21	14	16	27	27	16	11	13	15
2 cars	7	13	1	7	11	6	11	4	6	9	9
3 cars	2	4	3	4	5	4	6	6	3	2	1
4 cars	0	3	2	2	3	2	0	2	2	1	1
5 to 10 cars	3	3	2	3	4	7	3	5	4	6	3
11 cars or more	0	1	0	1	0	1	2	0	1	0	0

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

Table 7. Non-main-track collision accidents, by assigned factors,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Assigned factors^{2,3}	113	118	103	81	113	106	115	68	63	72	68
Environmental	1	2	2	2	1	2	3	2	4	1	1
Equipment	5	4	3	3	1	3	3	1	3	2	2
Track	6	8	7	1	3	3	3	3	3	7	4
Actions	95	102	88	70	102	94	102	58	50	59	58
Failure to protect	54	61	59	43	66	59	66	39	29	37	40
Failure to secure	13	11	4	5	7	9	7	7	8	6	3
Failure to use equipment properly	14	16	14	11	19	18	21	7	7	7	11
Improper placement/position for task	2	0	1	0	0	0	0	0	1	0	0
Inadequate/inappropriate communications	3	2	3	3	1	1	2	2	3	0	1
Inadequate/inappropriate maintenance of equipment	0	0	0	0	0	0	0	0	0	0	0
Operating at improper speed	8	12	7	8	9	7	4	3	1	8	3
Vandalism	0	0	0	0	0	0	0	0	0	1	0
Other actions	1	0	0	0	0	0	2	0	1	0	0
Other assigned factors	6	2	3	5	6	4	4	4	3	3	3
Non-main-track collisions	93	106	92	69	103	101	112	67	62	66	63
One assigned factor	73	97	83	60	96	97	109	66	59	61	57
More than one assigned factor	20	9	9	9	7	4	3	1	2	5	4
No assigned factor	0	0	0	0	0	0	0	0	1	0	2

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² Since the TSB does not investigate all occurrences, assigned factors may not be TSB findings. Occurrences are normally reported to the TSB with one assigned factor. The TSB may assign additional factors.

³ Some factors are assigned by parent category (e.g., Actions is the parent of Failure to protect); therefore, the breakdowns may not sum to the category total.

Table 8. Non-main-track derailment accidents, by province or territory and by cars derailed,^{1,2} 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Non-main-track derailments	549	481	523	435	541	599	606	492	400	450	404
Newfoundland and Labrador	1	0	6	12	11	9	7	7	10	6	10
Nova Scotia	2	4	3	2	5	6	3	8	6	7	6
New Brunswick	4	12	13	9	9	5	12	7	6	11	6
Quebec	55	48	81	67	85	60	111	70	60	82	59
Ontario	93	93	109	85	115	119	136	93	89	84	108
Manitoba	70	68	71	58	70	65	68	59	44	57	37
Saskatchewan	87	50	49	55	49	83	55	47	42	60	37
Alberta	145	125	91	68	93	131	115	101	71	76	70
British Columbia	91	80	100	79	103	121	99	100	72	66	71
Northwest Territories and Yukon	1	1	0	0	1	0	0	0	0	1	0
Non-main-track derailments by cars derailed	549	481	523	435	541	599	606	492	400	450	404
1 car	334	260	319	265	333	383	403	323	250	274	237
2 cars	102	97	91	81	91	93	89	83	77	97	83
3 cars	48	49	53	31	46	54	39	36	30	34	28
4 cars	25	23	26	22	25	28	32	19	18	15	17
5 to 10 cars	37	46	29	31	43	35	32	29	24	27	36
11 cars or more	3	6	5	5	3	6	11	2	1	3	3

Data extracted 15 February 2024.

¹Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

²Under the 2014 TSB Regulations, all derailments are reportable.

Table 9. Non-main-track derailment accidents, by assigned factors,^{1,2} 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Assigned factors^{3,4}	622	517	560	465	572	610	610	496	400	459	403
Environmental	82	30	36	40	59	77	131	63	54	79	45
Equipment	39	41	31	31	34	31	23	29	25	27	31
Axle	0	0	0	0	0	0	1	0	0	0	0
Brakes	7	9	7	4	6	11	1	6	5	3	7
Draft system	5	8	3	5	5	5	5	5	7	4	5
Superstructure	7	7	5	4	8	10	6	6	2	3	7
Truck	14	11	8	11	12	5	6	8	7	12	6
Wheel	6	6	8	7	3	0	4	4	4	5	6
Track	205	202	194	164	162	190	165	143	115	118	100
Appurtenances	1	2	1	1	3	3	2	0	1	1	0
Geometry	73	77	61	72	67	78	76	63	56	64	42
Object on track	2	0	2	1	1	3	3	2	1	0	0
Other track material	5	3	5	6	6	7	2	1	4	4	3
Rail	38	30	30	19	38	24	24	18	14	16	24
Roadbed	10	8	9	4	6	6	6	4	4	3	1
Signal	1	0	1	0	0	0	0	0	0	0	0
Switch	58	59	64	50	30	52	40	41	30	24	23
Turnout	12	19	16	4	8	12	11	11	3	3	5
Actions	269	226	276	216	301	307	280	255	197	230	218
Failure to protect	140	130	158	109	163	209	176	148	111	132	136
Failure to secure	6	5	2	1	9	10	14	5	7	9	6
Failure to use equipment properly	84	67	72	81	98	66	72	68	60	76	60
Improper loading/lifting	7	3	8	1	7	2	6	7	2	2	3
Improper placement/position for task	8	7	7	6	11	4	6	10	7	3	3
Inadequate/inappropriate communications	3	1	4	1	2	4	0	3	2	2	0
Inadequate/inappropriate maintenance of equipment	1	0	3	0	0	0	0	0	0	0	0
Operating at improper speed	10	13	16	8	8	6	3	9	7	4	4
Vandalism	5	0	5	6	3	5	0	4	1	2	6
Other actions	5	0	1	3	0	1	3	1	0	0	0
Other assigned factors	27	18	23	14	16	5	11	6	9	5	9
Non-main-track derailments	549	481	523	435	541	599	606	492	400	450	404
One assigned factor	479	450	498	414	517	584	602	486	394	438	394
More than one assigned factor	70	31	25	21	24	12	4	5	3	10	4
No assigned factor	0	0	0	0	0	3	0	1	3	2	6

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² Under the 2014 TSB Regulations, all derailments are reportable.

³ Since the TSB does not investigate all occurrences, assigned factors may not be TSB findings. Occurrences are normally reported to the TSB with one assigned factor. The TSB may assign additional factors.

⁴ Some factors are assigned by parent category (e.g., Equipment is the parent of Axle); therefore, the breakdowns may not sum to the category total.

Table 10. Crossing accidents, by type of crossing, crossing protection, and casualties,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Crossing accidents	184	185	165	133	143	166	178	130	136	161	149
Public crossings	172	154	131	105	117	135	135	110	114	133	114
Passive warnings	65	68	52	36	47	50	49	56	56	55	38
Automated warnings	107	86	79	69	70	85	86	54	58	78	76
Flashing lights and bells	56	47	37	39	30	44	43	17	24	27	35
Gates	44	38	42	29	38	40	42	36	34	51	37
Other automated warnings	7	1	0	1	2	1	1	1	0	0	4
Private crossings	10	27	28	24	21	30	40	18	22	25	33
Farm crossings	2	4	6	4	5	1	3	2	0	3	2
Fatal accidents	22	20	15	16	19	18	26	16	16	14	13
Persons fatally injured	30	21	15	19	19	19	28	18	17	14	13
Public crossings	30	20	13	19	19	18	25	18	17	14	10
Passive warnings	3	2	2	7	4	3	6	12	5	2	2
Automated warnings	27	18	11	12	15	15	19	6	12	12	8
Flashing lights and bells	7	3	2	5	3	4	5	1	5	2	2
Gates	20	15	9	7	12	11	14	5	7	10	6
Other automated warnings	0	0	0	0	0	0	0	0	0	0	0
Private crossings	0	1	1	0	0	0	3	0	0	0	3
Farm crossings	0	0	1	0	0	1	0	0	0	0	0
Persons seriously injured	27	29	18	24	22	41	31	12	24	28	19
Public crossings	26	22	18	21	18	36	25	11	23	27	18
Passive warnings	7	11	4	5	9	16	6	3	11	6	1
Automated warnings	19	11	14	16	9	20	19	8	12	21	17
Flashing lights and bells	4	6	4	8	3	6	9	2	6	6	8
Gates	13	5	10	8	6	14	10	6	6	15	7
Other automated warnings	2	0	0	0	0	0	0	0	0	0	2
Private crossings	0	7	0	3	3	5	6	1	1	1	1
Farm crossings	1	0	0	0	1	0	0	0	0	0	0
Number of public crossings²	16 113	15 950	15 724	15 656	16 524	16 447	16 497	16 366	15 434	14 124	14 126
Passive warnings	10 548	10 397	10 173	10 109	10 833	10 671	10 608	10 506	9 561	8 210	8 182
Automated warnings	5 565	5 553	5 551	5 547	5 691	5 776	5 889	5 860	5 873	5 914	5 944
Flashing lights and bells	3 235	3 189	3 156	3 118	3 268	3 267	3 277	3 208	3 163	3 136	3 124
Gates	2 275	2 317	2 351	2 386	2 399	2 484	2 585	2 627	2 685	2 760	2 803
Other automated warnings	55	47	44	43	24	25	27	25	25	18	17

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² Source: Transport Canada, Rail Safety Integrated Gateway (RSIG) database. The data for 2023 are from 18 March 2024. Figures for previous years are snapshots provided historically by Transport Canada.

Table 11. Crossing accidents and casualties, by province or territory,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Crossing accidents	184	185	165	133	143	166	178	130	136	161	149
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	2	1	3	3	2	4	0	2	1
New Brunswick	2	6	7	4	1	3	2	1	2	3	2
Quebec	16	23	28	29	26	24	25	20	14	18	21
Ontario	40	44	29	26	26	42	50	20	27	37	28
Manitoba	19	17	19	14	15	15	20	22	16	13	21
Saskatchewan	37	34	23	19	26	22	24	13	24	29	20
Alberta	50	40	38	21	28	35	35	31	31	33	29
British Columbia	19	21	19	19	18	22	20	19	21	26	27
Northwest Territories and Yukon	1	0	0	0	0	0	0	0	1	0	0
Crossing accidents on main track²	178	173	159	122	137	155	166	124	127	151	141
Crossing accidents per million main-track train miles³	2.3	2.3	2.0	1.6	1.8	1.9	2.0	1.7	1.7	2.0	1.8
Crossing accidents with derailment	6	9	6	6	5	7	1	3	2	4	6
Persons fatally injured	30	21	15	19	19	19	28	18	17	14	13
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0
New Brunswick	1	0	0	2	0	0	0	0	0	0	0
Quebec	2	9	4	3	7	3	2	3	3	0	3
Ontario	13	5	5	3	7	6	11	2	7	4	3
Manitoba	0	1	1	2	2	1	5	5	1	0	3
Saskatchewan	3	2	0	4	0	1	4	1	0	5	1
Alberta	7	2	3	3	2	3	2	5	6	0	1
British Columbia	4	2	2	2	1	5	4	2	0	5	2
Northwest Territories and Yukon	0	0	0	0	0	0	0	0	0	0	0
Persons seriously injured	27	29	18	24	22	41	31	12	24	28	19
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0	2	1	0	0	0
New Brunswick	0	0	0	0	0	0	0	0	0	0	0
Quebec	1	3	2	8	3	10	1	2	1	2	1
Ontario	15	3	0	4	2	8	7	1	7	4	8
Manitoba	0	7	2	3	3	7	0	2	3	4	3
Saskatchewan	5	7	2	2	2	9	7	1	1	6	3
Alberta	5	5	6	6	5	2	9	3	8	9	2
British Columbia	1	4	6	1	7	5	5	2	4	3	2
Northwest Territories and Yukon	0	0	0	0	0	0	0	0	0	0	0
Number of public crossings⁴	16 113	15 950	15 724	15 656	16 524	16 447	16 497	16 366	15 434	14 124	14 126
Newfoundland and Labrador	5	5	5	5	4	5	5	5	6	6	6
Nova Scotia	182	182	182	182	181	181	183	168	103	103	106
New Brunswick	342	343	344	344	471	472	432	432	274	274	275
Quebec	1 967	1 921	1 902	1 902	1 694	1 693	1 786	1 788	1 664	1 417	1 410
Ontario	3 792	3 782	3 743	3 728	4 126	4 131	4 158	4 074	3 797	3 048	3 034
Manitoba	1 929	1 914	1 862	1 858	2 046	2 006	1 987	1 983	1 970	1 925	1 931
Saskatchewan	3 652	3 597	3 509	3 504	3 607	3 573	3 546	3 526	3 518	3 473	3 470
Alberta	2 767	2 731	2 724	2 707	2 881	2 894	2 883	2 895	2 852	2 644	2 654
British Columbia	1 451	1 449	1 432	1 404	1 498	1 476	1 502	1 480	1 220	1 204	1 210
Northwest Territories and Yukon	26	26	21	22	16	16	15	15	30	30	30

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

² Includes crossing accidents on main track or on spurs.

³ Source of estimated million main-track train miles: Transport Canada email communication 18 March 2024.

⁴ Source: Transport Canada, RSIG database. The data for 2023 are from 18 March 2024. Figures for previous years are snapshots provided historically by Transport Canada.

Table 12. Trespasser accidents and casualties, by province or territory,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Trespasser accidents	56	54	50	68	76	68	56	60	63	72	80
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	1	0
Nova Scotia	0	0	0	1	1	0	0	2	1	2	0
New Brunswick	0	0	1	1	0	0	1	1	1	0	0
Quebec	7	6	5	3	12	12	6	8	6	11	9
Ontario	30	21	23	25	33	30	21	21	35	33	35
Manitoba	2	2	1	4	4	3	2	3	1	3	6
Saskatchewan	2	2	4	3	1	1	4	1	2	0	4
Alberta	7	10	4	10	8	10	14	12	6	9	9
British Columbia	8	13	12	21	17	12	8	12	11	13	17
Northwest Territories and Yukon	0	0	0	0	0	0	0	0	0	0	0
Fatal accidents	42	31	30	46	51	34	38	40	41	51	53
Persons fatally injured	42	32	30	47	52	34	38	40	41	51	53
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0
Nova Scotia	0	0	0	2	1	0	0	0	0	0	0
New Brunswick	0	0	1	0	0	0	0	0	0	0	0
Quebec	4	2	5	2	9	7	4	8	4	8	6
Ontario	26	15	13	19	25	14	16	14	28	29	26
Manitoba	2	1	1	2	1	2	2	1	1	2	1
Saskatchewan	2	1	1	2	1	0	4	1	1	0	2
Alberta	4	5	3	5	5	4	9	10	2	8	6
British Columbia	4	8	6	15	10	7	3	6	5	4	12
Northwest Territories and Yukon	0	0	0	0	0	0	0	0	0	0	0
Persons seriously injured	10	21	17	20	22	30	17	20	17	16	20
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	1	0
Nova Scotia	0	0	0	0	0	0	0	2	0	1	0
New Brunswick	0	0	0	1	0	0	1	1	1	0	0
Quebec	3	4	0	1	3	5	2	0	1	2	3
Ontario	3	6	8	6	8	13	5	7	6	3	7
Manitoba	0	1	0	2	2	1	0	2	0	1	4
Saskatchewan	0	0	4	1	0	1	0	0	0	0	1
Alberta	1	4	1	4	2	6	4	2	2	1	1
British Columbia	3	6	4	5	7	4	5	6	7	7	4
Northwest Territories and Yukon	0	0	0	0	0	0	0	0	0	0	0

Data extracted 15 February 2024.

¹ Data are for federally regulated railways and include only those occurrences that are reportable under the TSB Regulations.

Table 13. Reportable incidents, by type and assigned factors,¹ 2013 to 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Reportable incidents	225	413	374	302	236	287	284	275	338	374	321
Main-track derailments, 1 or 2 cars ² (no damage)	n/a	2	3	5	3	4	3	1	2	1	0
Non-main-track collisions ² (no derailment, no damage)	n/a	8	4	4	2	2	0	1	2	4	3
Non-main-track derailments, 1 or 2 cars ² (no damage)	n/a	166	125	97	67	96	58	32	39	111	66
Dangerous goods leaker ³	94	63	33	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Main-track switch in abnormal position	7	6	12	7	12	7	15	3	13	8	8
Movement exceeds limits of authority	98	129	142	133	122	138	136	149	109	134	161
Uncontrolled movement of rolling stock	14	11	14	10	14	15	15	19	13	9	9
Signal less restrictive than required	1	2	5	1	1	2	0	1	0	6	0
Unprotected overlap of authorities	4	5	6	4	2	11	6	5	4	2	0
Crew member incapacitated	6	1	2	1	4	5	0	1	0	0	0
Derailment involving track unit (no damage)	n/a	7	10	13	5	5	7	9	4	4	12
Rolling stock collision with abandoned vehicle (no derailment, no damage)	n/a	1	5	5	0	1	0	1	1	0	0
Rolling stock collision with object (no derailment, no damage)	n/a	6	10	14	3	0	1	2	6	6	6
Fires on railway right-of-way	1	6	2	1	1	1	42	46	145	88	56
Assigned factors^{4,5}	230	430	394	325	246	292	289	278	338	388	330
Dangerous goods leaker location/component	92	61	32	9	0	0	0	0	0	0	0
Equipment	5	17	10	11	10	8	48	49	114	37	35
Individual/personal	4	1	3	0	3	4	0	0	0	2	1
Track	2	25	36	29	7	13	7	13	16	26	22
Actions	116	250	264	241	191	209	184	176	154	207	217
Failure to protect	33	95	94	88	73	90	66	46	65	94	79
Failure to secure	7	5	11	4	9	2	6	8	5	6	4
Failure to use equipment properly	9	29	25	34	20	20	9	15	11	17	23
Inadequate/inappropriate communication	8	18	13	14	8	14	12	15	4	4	11
Lap of authority	54	83	98	82	74	72	87	88	61	75	94
Vandalism	1	5	6	6	1	3	2	1	3	2	0
Other actions	4	15	17	13	6	8	2	3	5	9	6
Other assigned factors	11	76	49	35	35	58	50	40	54	116	55
Reportable incidents	225	413	374	302	236	287	284	275	338	374	321
One factor assigned	221	397	360	280	226	281	279	271	338	362	309
More than one factor assigned	4	16	14	21	9	5	5	3	0	11	8
No factor assigned	0	0	0	1	1	1	0	1	0	1	4

Data extracted 15 February 2024.

¹ Data are for federally regulated railways, and include only those occurrences that are reportable under the TSB Regulations.

² Under the 2014 TSB Regulations, all derailments are reportable.

³ TSB Regulations have been harmonized with section 8.4 of the *Transportation of Dangerous Goods Regulations*, under which an accidental release of a dangerous good is only reportable (as an accident) if it results in death or serious injury, evacuation, or the closure of a dangerous goods loading facility, a road, a main railway line, or a main waterway.

⁴ Since the TSB does not investigate all occurrences, assigned factors may not be TSB findings. Occurrences are normally reported to the TSB with one assigned factor. The TSB may assign additional factors.

⁵ Some factors are assigned by parent category (e.g., Actions is the parent of Failure to protect); therefore, the breakdowns may not sum to the category total.

Definitions

The following definitions are based on the *Canadian Transportation Accident Investigation and Safety Board Act* and the associated regulations, as well as the TSB Policy on Occurrence Classification, and apply to the rail transportation occurrences reported pursuant to them.

Occurrence

- Any accident or incident associated with the operation of rolling stock on a railway
- Any situation or condition that the Board has reasonable grounds to believe could, if left unattended, induce an accident or incident described below

Reportable accident

- A person is killed or sustains a serious injury as a result of
 - getting on or off or being on board the rolling stock, or
 - coming into direct contact with any part of the rolling stock or its contents
- The rolling stock or its contents
 - are involved in a collision and/or a derailment resulting in damages to rolling stock and/or track infrastructure,
 - sustain damage that affects the safe operation of the rolling stock,
 - sustain a fire or explosion, or
 - cause damage to the railway that poses a threat to the safe passage of rolling stock or to the safety of any person, property or the environment
- There is an accidental release on board or from rolling stock that results in any of the events listed in subsection 8.4(2) of the *Transportation of Dangerous Goods Regulations*

Reportable incident

- A risk of collision occurs between rolling stock
- An unprotected main-track switch or subdivision track switch is left in an abnormal position
- A railway signal displays a less restrictive indication than that required for the intended movement of rolling stock
- Rolling stock occupies a main track or subdivision track, or track work takes place, in contravention of the rules or any regulations made under the *Railway Safety Act*
- Rolling stock passes a signal indicating stop in contravention of the rules or any regulations made under the *Railway Safety Act*
- There is an unplanned and uncontrolled movement of rolling stock
- A crew member whose duties are directly related to the safe operation of the rolling stock is unable to perform their duties as a result of a physical incapacitation which poses a threat to the safety of persons, property or the environment
- The rolling stock is involved in a minor collision and/or minor derailment (1 or 2 cars) resulting in no damages
- Rolling stock or its contents cause a fire along, or adjacent to, a railway right-of-way

Serious injury

- A fracture of any bone, except simple fractures of fingers, toes or the nose
- Lacerations that cause severe hemorrhage or nerve, muscle or tendon damage
- An injury to an internal organ
- Second- or third-degree burns, or any burns affecting more than 5% of the body surface
- A verified exposure to infectious substances or injurious radiation
- An injury that is likely to require hospitalization

Dangerous goods involvement

"Dangerous goods" has the same meaning as in section 2 of the *Transportation of Dangerous Goods Act*. An accident is considered to have dangerous goods involvement if any car in the consist carrying (or having last contained) a dangerous good derails, strikes or is struck by any other rolling stock or object. It does not mean that there was any release of any product. Also included are crossing accidents in which the motor vehicle involved (e.g., tanker truck) is carrying a dangerous good.

Derailment

Any instance where one or more wheels of rolling stock have come off the normal running surface of the rail.