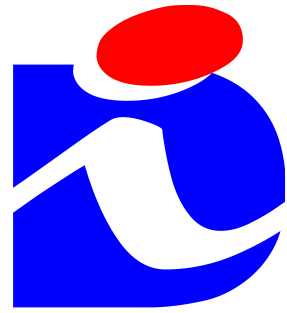


Czech Republic



The Rail Safety  
Inspection Office

# **NIB ANNUAL REPORT 2014**

according to Article 23(3) of Directive 2004/49/EC

The Rail Safety Inspection Office

Czech Republic

September 2015





## **PREFACE TO THE REPORT**

A National Investigation Body operates in the Czech Republic – The Rail Safety Inspection Office – conducting independent investigation of the causes and circumstances of railway accidents and incidents according to Directive 2004/49/EC, the principles and requirements of which have been implemented into the national legislation. The objective of the investigation of the causes and circumstances of railway accidents and incidents is to increase the safety of railways.

This Annual Report is an annual report issued by the National Investigation Body of the Czech Republic, The Rail Safety Inspection Office, for 2014, pursuant to Art. 23(3) of Directive 2004/49/EC. It comprises information regarding:

- the National Investigation Body
- the system of investigation of railway accidents and incidents
- the investigations of accidents and incidents completed in 2014
- the safety recommendations issued



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## **1 INTRODUCTION TO THE INVESTIGATION BODY**

### **1.1 Legal framework**

The process of the implementation of Directive 2004/49/EC into the national legislation of the Czech Republic was completed on 1<sup>st</sup> July 2006 by Act 266/1994 Coll., on Railways, as amended, and the subsequent issue of implementing Decree 376/2006 Coll., on the System of Safe Railway Operation and Railway Transport Operation and Procedures Following Railway Accidents and Incidents.

Directive 2009/149/EC amending Annex I of Directive 2004/49/EC was implemented into the national legislation on 30<sup>th</sup> August 2010.

Accidents and incidents are further divided into the following categories, reflecting their nature and consequences:

- serious accidents
- accidents
- incidents

The national legislation of the Czech Republic orders infrastructure managers and railway undertakings to investigate the causes and circumstances of railway accidents and incidents.

The accident and incident investigation performed by The Rail Safety Inspection Office is independent of any other party and independent of the investigation conducted by other bodies, especially police investigation and the investigation of the causes and circumstances of accidents and incidents conducted by infrastructure managers or railway undertakings.

### **1.2 Role and Mission**

The National Investigation Body was established in the Czech Republic on 1<sup>st</sup> January 2003. The mission is to guarantee independent investigation of the causes and circumstances of railway accidents and incidents. The national legislation of the Czech Republic also authorizes the National Investigation Body to investigate accidents and incidents within trams, trolleybuses and cable-ways, because all these kinds of transport are included in the same legislation regime as the railways.

The main goal of the Office's work is to prevent the occurrence of accidents and incidents. Therefore, the Rail Safety Inspection Office:

- investigates the causes and circumstances of rail accidents and incidents,
- supervises investigations performed by infrastructure managers and railway undertakings,



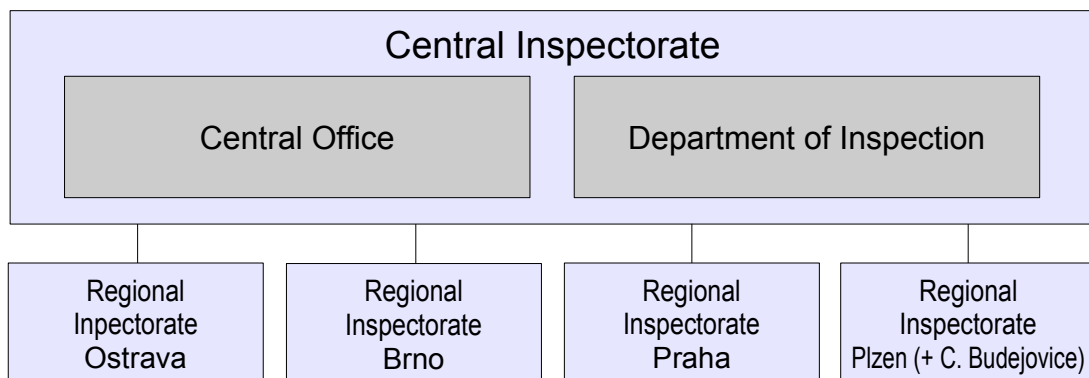
- detects deficiencies compromising the safety of rail infrastructure and rail transport,
- evaluates development trends in accidents and incidents within the rail system and takes measures to improve the situation,
- issues safety recommendations to railway undertakings, infrastructure managers, to the National Safety Authority or other authorities and parties.

### 1.3 Organisation

On 1<sup>st</sup> January 2003, the National Investigation Body – The Rail Safety Inspection Office – was established in the Czech Republic pursuant to the provisions of Act 77/2002 Coll. The Rail Safety Inspection Office is a national body investigating the causes of railway accidents and incidents independently of any other party and performing preventative inspections of railway safety. As an investigation body it is independent of any infrastructure manager, railway undertaking and regulatory body. The competences of The Rail Safety Inspection Office include:

- railways (main lines, regional lines, sidings, underground)
- tram lines
- trolleybus lines
- cable-ways

The Rail Safety Inspection Office has a total of 53 employees in five cities of the Czech Republic (Ostrava, Brno, Praha, Plzen, Ceske Budejovice). It comprises of the Central Inspectorate and four regional inspectorates covering the area of the entire country. The Central Inspectorate consists of The Central Office and The Department of Inspection.



**The Central Office** plays supportive role for the Inspector General and the whole structure of The Rail Safety Inspection Office. It provides human-resource management, economic, IT and legal services and public relations.

**The Department of Inspection** maintains accident investigation and preventative safety inspection systems, including the co-ordination of the regional inspectorates' activities.



The department also manages staff training and mediates communication with EU bodies.

**Regional Inspectorates** investigate the causes of rail accidents and incidents with the aim of enabling lessons to be learned for improving the safety of railways. They also perform safety inspection focusing on accident and incident prevention.

#### 1.4 Organisational flow

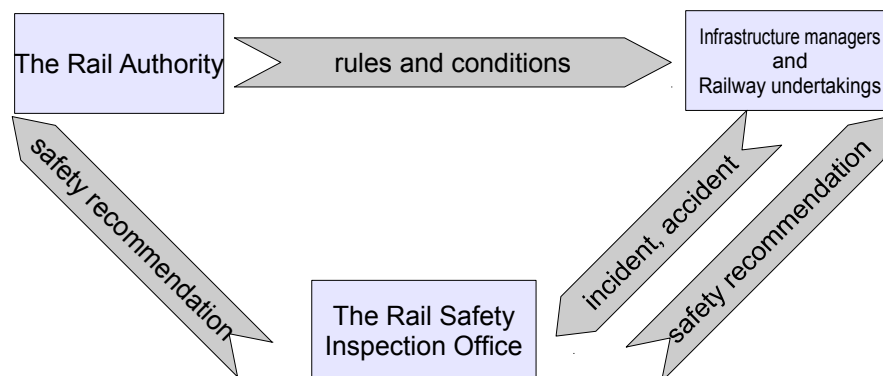
The structure of railway sector in the Czech Republic and relationships among the parties involved are defined in Act 266/1994 Coll., on Railways, as amended, and its implementing regulations. The legislation applies to the following transport systems:

- railways (main lines, regional lines, sidings, underground)
- tram lines
- trolleybus lines
- cable-ways

The most important bodies in the railway sector include the Czech Ministry for Transportation, The Railway Office and The Rail Safety Inspection Office. The Czech Ministry for Transportation is in charge of the national railway legislation, including implementation of the EU railway legislation. The Railway Office is the National Safety Authority carrying out certification and regulation of railway and railway transport operation, according to the national legislation. The Rail Safety Inspection Office is the National Investigation Body independent of any party in the railway sector.

All these authorities are involved in the system of maintaining and improving safety of railways and railway transport:

- **The Czech Ministry for Transportation** sets the framework by developing railway legislation.
- **The Rail Safety Inspection Office (NIB)** investigates railway accidents and incidents and issues safety recommendations to The Railway Office.
- **The Rail Authority (NSA)** sets and adjusts safety rules for infrastructure managers and railway undertakings.





## **2 INVESTIGATION PROCESSES**

### **2.1 Cases to be investigated**

The national legislation of the Czech Republic orders the National Investigation Body, The Rail Safety Inspection Office, in accordance with European principles, to investigate the causes and circumstances of serious accidents on main and regional lines, border railways and sidings. In addition, The Rail Safety Inspection Office may investigate, in cases defined by the respective law, other occurrences in the following cases:

- serious accidents regarding underground, trams, trolleybuses and cable-ways
- accidents and incidents on all types of guided transport

When making decision whether to investigate or not, The Rail Safety Inspection Office takes into account the above mentioned legal requirements, as well as possibility to learn safety relevant lessons from the accident or incident.

### **2.2 Institutions involved in investigations**

Following the occurrence of railway accident or incident, various parties may launch several independent investigations, depending on the occurrence's nature and consequences:

- **Infrastructure manager or railway undertaking** identifies the causes and circumstances of accident or incident, focusing on the drafting of preventative measures and the proposal of responsibility for the occurrence.
- **The Rail Safety Inspection Office** investigates the causes and circumstances of accident or incident with a focus on the determination of the causes and issue of preventative safety recommendation.
- **Czech Police** investigate accident or incident with the aim of defining responsibility for the committing of offenses or criminal acts.

### **2.3 Investigation process or approach of the IB**

The objective of the investigation of the causes of railway accidents and incidents is to gain knowledge for the prevention of accidents and incidents, minimize the consequences and increase the safety of railways.

Investigation performed by the National Investigation Body of the Czech Republic, The Rail Safety Inspection Office, focuses on the following aspects of each occurrence:

- independent investigation of the causes and circumstances of accident or incident (serious accidents and selected accidents and incidents only)
- meeting legal requirements for procedures following railway accident or incident by infrastructure manager and railway undertaking
- verification of the correctness and completeness of the procedures followed by infrastructure manager or railway undertaking when identifying the causes and





circumstances of an accident or incident, in accordance with the national legislation.

When notified about the occurrence of accident or incident by an infrastructure manager or railway undertaking, The Rail Safety Inspection Office will decide whether it will immediately go to the accident-site or not. At the accident-site The Rail Safety Inspection Office will launch an independent investigation or just verifies the steps performed by infrastructure managers and railway undertakings involved.

If The Rail Safety Inspection Office launches an investigation, it will notify The European Railway Agency within seven days. The investigation of accident or incident may be launched immediately after the occurrence and/or later, in reaction to specific circumstances.

The Rail Safety Inspection Office will publish the conclusions of its investigation in Investigation Report, the structure of which is based on the requirements of Directive 2004/49/EC. If the accident or incident occurred without any violation of legislation or internal regulations of infrastructure manager and/or railway undertaking, The Rail Safety Inspection Office issues safety recommendation with the aim of preventing reoccurrence of the accident or incident. Safety recommendation is issued also if there are other findings relevant for the safety.



### 3 INVESTIGATIONS

#### 3.1 Overview of investigations completed in 2014, identifying key trends

Trends of completed investigations (last column of the table) are calculated as difference to previous year (2013).

Type of accidents investigated	Number of accidents	Number of victims		Damages in € (approx.)	Trends in relation to previous year
		Deaths	Ser.injury		
Collisions	2	0	0	50.357,-	-66 %
Derailments	6	1	0	608.506,-	-33 %
LC-accident	6	3	0	252.446,-	+20 %
Fire in RS	0	0	0	0,-	+0 %
Acc. to person	2	0	2	0,-	+100 %
Other	11	0	0	511.877,-	+37 %

#### 3.2 Investigations completed and commenced in 2014

##### Investigations completed in 2014

Date of occurrence	Title of the investigation (Occurrence type, location)	Legal basis	Completed (date)
10.09.2012	Train derailment: among Blansko – Adamov – Brno Malomerice stations	i	24.01.2014
24.10.2012	Other: Derailment during shunting operation in the siding “Vlečka Kolin – ZZN Polabí”	ii	30.04.2014
18.11.2012	Train derailment: in Praha Vrsovice station	i	30.04.2014
30.01.2013	Other: SPAD in Strančice station	i	03.06.2014
10.02.2013	Other: Collision of shunting operation with empty freight wagons in Praha Bechovice station	i	18.03.2014
24.02.2013	Other: Broken wheel between Jeseník and Lipova Lázně stations	i	16.01.2014
12.03.2013	Train derailment: in Prelouč station	i	05.03.2014
27.03.2013	Other: SPAD in Roztoky u Prahy station	i	14.03.2014
20.06.2013	Train derailment: The city of Brno – tram stop Celni	ii	09.01.2014
13.07.2013	Level-crossing accident: km 110,525 between Opava západ and Skrochovice stations	i	13.01.2014
21.07.2013	Train derailment: in Pardubice hlavní nádraží station	i	15.01.2014



<b>Date of occurrence</b>	<b>Title of the investigation</b> (Occurrence type, location)	<b>Legal basis</b>	<b>Completed</b> (date)
30.07.2013	Trains collision with an obstacle: in Uvaly station	i	05.08.2014
02.08.2013	Train derailment: in Vodnany station	i	29.01.2014
07.08.2013	Level-crossing accident: km 7,527 between Varnsdorf and Rybniste stations	i	25.06.2014
31.08.2013	Other: SPAD in Postrelmov station	i	21.02.2014
12.09.2013	Level-crossing accident: km 148,648 between Jaromerice nad Rokytinou and Kojetice na Morave stations	i	3. 2. 2014
02.10.2013	Other: Derailment during shunting operation in Prerov station	i	06.05.2014
03.11.2013	Other: Derailment during shunting operation in Brno Malomerice station	i	25.08.2014
20.12.2013	Accident to person caused by RS in motion: in Vsetin station	i	05.08.2014
10.01.2014	Accident to person caused by RS in motion: The city of Praha – tram stop Palmovka	ii	06.10.2014
04.02.2014	Trains collision with an obstacle: between Jindrichov ve Slezsku statni hranice – Jindrichov ve Slezsku stations	i	01.09.2014
04.02.2014	Other: SPAD in Lipa station	i	08.08.2014
07.03.2014	Train derailment: in Brno hlavni nadrazi station	i	02.09.2014
10.03.2014	Other: Tram trains collision during shunting operation in The City of Ostrava – tram stop Nova hut jizni braha	ii	20.08.2014
15.03.2014	Level-crossing accident: km 61,599 between Cervenka - Moravicany stations	i	31.10.2014
24.03.2014	Level-crossing accident: km 16,388 between Rozsochatec - Chotebor stations	i	18.11.2014
30.04.2014	Level-crossing accident: km 64,247 between Kyjov - Vlkos stations	i	30.12.2014

**Basis for investigation:** i = According to the Safety Directive, ii = On national legal basis (covering possible areas excluded in Article 2, §2 of the Safety Directive), iii = Voluntary – other criteria (National rules/regulations not referred to the Safety Directive).

#### **Investigations commenced in 2014**

<b>Date of occurrence</b>	<b>Title of the investigation</b> (Occurrence type, location)	<b>Legal basis</b>
03.11.2013	Other: Derailment during shunting operation in Brno Malomerice station	i
20.12.2013	Accident to person caused by RS in motion: in Vsetin station	i



10.01.2014	Accident to person caused by RS in motion: The city of Praha – tram stop Palmovka	ii
04.02.2014	Trains collision with an obstacle: between Jindrichov ve Slezsku statni hranice – Jindrichov ve Slezsku stations	i
04.02.2014	Other: SPAD in Lipa station	i
07.03.2014	Train derailment: in Brno hlavni nadrazi station	i
10.03.2014	Other: Tram trains collision during shunting operation in The City of Ostrava – tram stop Nova hut jizni braha	ii
13.03.2014	Trains collision: between Decin Prostedni Zleb – Decin hlavni nadrazi stations	i
15.03.2014	Level-crossing accident: km 61,599 between Cervenka - Moravicany stations	i
24.03.2014	Level-crossing accident: km 16,388 between Rozsochatec - Chotebor stations	i
28.03.2014	Other: SPAD in Praha hlavni nadrazi station	i
12.04.2014	Other: Collision of rolling stocks during shunting operation in Praha Liben station	i
23.04.2014	Level-crossing accident: km 361,191 in Vsetaty station	i
30.04.2014	Level-crossing accident: km 64,247 between Kyjov - Vlkos stations	i
19.06.2014	Other: Unauthorised train movement other than SPAD in Dolni Berkovice station	i
08.07.2014	Trains collision: in Ceska Trebova station	i
11.07.2014	Level-crossing accident: km 6,006 between Brno Chrlice – Brno hlavni nadrazi stations	i
26.07.2014	Level-crossing accident: km 80,206 between Jince - Bratkovice stations	i
27.07.2014	Other: SPAD in Kolin station	i
30.08.2014	Level-crossing accident: km 77,275 between Slatinany – Chrudim stations	i
09.09.2014	Accident to person caused by RS in motion: The city of Ostrava – tram stop Horni	ii
14.09.2014	Train derailment: between Chotovice – Prevysov stations	i
11.11.2014	Trains collision: between Petrovice u Karvine – Odbocka Zavada stations	i
13.11.2014	Train derailment: in Pribyslav station	i
21.11.2014	Train derailment: in Ostrava hlavni nadrazi station	i
28.11.2014	Train derailment: in Bohumin station	i
01.12.2014	Train derailment: between Pacejov – Horazdovice predmesti stations	i
15.12.2014	Trains collision with an obstacle: in Prosenice station	i

**Basis for investigation:** i = According to the Safety Directive, ii = On national legal basis (covering possible areas excluded in Article 2, §2 of the Safety Directive), iii = Voluntary – other criteria (National rules/regulations not referred to the Safety Directive).



### 3.3 Research studies (or Safety Studies) commissioned and completed in 2014

#### Safety Studies completed in 2014

Date of commission	Title of the Study (Occurrence type, location)	Legal basis	Completed (date)
	none		

**Basis for investigation:** i = According to the Safety Directive, ii = On national legal basis (covering possible areas excluded in Article 2, §2 of the Safety Directive), iii = Voluntary – other criteria (National rules/regulations not referred to the Safety Directive).

#### Safety Studies commenced in 2014

Date of commission	Title of the Study (Occurrence type, location)	Legal basis
	none	

**Basis for investigation:** i = According to the Safety Directive, ii = On national legal basis (covering possible areas excluded in Article 2, §2 of the Safety Directive), iii = Voluntary – other criteria (National rules/regulations not referred to the Safety Directive).

### 3.4 Summaries of investigations completed in 2014

See annex of this report.

### 3.5 Comment and introduction or background to the investigations

Date of occurrence	Title of the investigation (Occurrence type, location)	Legal basis
	none	

**Basis for investigation:** i = According to the Safety Directive, ii = On national legal basis (covering possible areas excluded in Article 2, §2 of the Safety Directive), iii = Voluntary – other criteria (National rules/regulations not referred to the Safety Directive).

#### Investigations commenced in 2014 and not followed

Date of occurrence	Title of the investigation (Occurrence type, location)	Legal basis	Reason of non following or suspension of investigations	Who, why, when (decision)
	none			

**Basis for investigation:** i = According to the Safety Directive, ii = On national legal basis (covering possible areas excluded in Article 2, §2 of the Safety Directive), iii = Voluntary – other criteria (National rules/regulations not referred to the Safety Directive).



3.6 Accidents and incidents investigated during last five years (in 2010–2014)

**3.7 Rail investigations completed in 2010–2014**

The table groups investigations by year of their completion.

<b>Accidents investigated</b>		<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>TOT</b>
Serious accidents (Art 19, 1 + 2)	Train collision	1	1	0	0	0	<b>2</b>
	Train collision with an obstacle	1	0	0	0	0	<b>1</b>
	Train derailment	2	1	0	2	0	<b>5</b>
	Level-crossing accident	-	-	-	-	-	-
	Accident to person caused by RS in motion	-	-	-	-	-	-
	Fire in rolling stock	-	-	-	-	-	-
	Involving dangerous goods	0	0	0	0	0	<b>0</b>
Other accidents (Art 21.6)	Train collision	6	1	3	2	0	<b>12</b>
	Train collision with an obstacle	0	2	4	3	2	<b>11</b>
	Train derailment	7	5	6	7	6	<b>31</b>
	Level-crossing accident	7	1	5	4	6	<b>23</b>
	Accident to person caused by RS in motion	3	2	2	1	1	<b>9</b>
	Fire in rolling stock	0	0	0	0	0	<b>0</b>
	Involving dangerous goods	0	0	0	0	0	<b>0</b>
Incidents	1	2	1	6	2	<b>12</b>	
<b>TOTAL</b>	<b>28</b>	<b>15</b>	<b>21</b>	<b>25</b>	<b>17</b>	<b>106</b>	



## 4 RECOMMENDATIONS

### 4.1 Short review and presentation of recommendations

A safety recommendation can be issued only on a basis of an independent investigation performed by The Rail Safety Inspection Office (NIB). Safety recommendation is usually issued when an accident occurred without any violation of legislation or internal regulations of infrastructure manager and/or railway undertaking, or if there are other findings relevant for the safety.

According to national legislation, safety recommendations are not legally binding. When a recommendation is issued, railway undertakings and infrastructure managers are obliged to adopt their own preventative safety measures based on the safety recommendation issued.

#### Implementation of recommendations during 2010 – 2014

Recommendations issued		Recommendation implementation status					
		Implemented		In progress		Not to be implemented	
Year	[No.]	[No.]	[%]	[No.]	[%]	[No.]	[%]
2010	11	8	72,7	3	27,3	0	0
2011	14	7	50	4	28,6	3	21,4
2012	19	5	26,3	9	47,4	5	26,3
2013	25	14	56	10	40	1	4
2014	20	5	25	10	50	5	25
<b>TOTAL</b>	<b>89</b>	<b>39</b>	<b>43,8</b>	<b>36</b>	<b>40,5</b>	<b>14</b>	<b>15,7</b>

#### Accidents with safety recommendations issued in 2010 – 2014

Date of occurrence	Title of the investigation (Occurrence type, location)	Status of implem.	Completed (date)
24.04.2009	Train derailment: Cercany station	partially implemented	14.01.2010
23.06.2009	Trains collision: collision during shunting operation in Brno hl. n. station	implemented	16.03.2010
16.02.2009	Trains collision: between Paskov and Vratimov stations	partially implemented	17.03.2010
01.09.2009	Trains collision: between Horni Lipova and Lipova Lazne stations	implemented	13.04.2010
01.04.2009	Train derailment: derailment during shunting operation in Brno hl. n. station	implemented	19.04.2010
08.08.2008	Train collision with an obstacle: Studenka station	implemented	31.05.2010



<b>Date of occurrence</b>	<b>Title of the investigation</b> (Occurrence type, location)	<b>Status of implem.</b>	<b>Completed</b> (date)
17.08.2009	Accident to person – Injury to passenger: Brno, between Porici and Nemocnice Milosrdnych Bratri tram stops	implemented	04.06.2010
16.05.2009	Trains collision: collision of run-away wagons in Ceska Trebova station	implemented	05.10.2010
16.10.2009	Trains collision: Prerov station	In progress	18.10.2010
07.03.2010	Accident to person – Injury to passenger: in Ostrava hl. n. station	implemented	10.11.2010
16.04.2010	Train collision with an obstacle: in Golcuv Jenikov station with consequent derailment	implemented	28.12.2010
29.05.2010	Level-crossing accident: km 3.835 between Cervena Voda and Kraliky stations	partially implemented	18.02.2011
11.03.2010	Other: intrusion on train by brake-shoe between Brodek u Prerova and Dluhonice stations	implemented	01.03.2011
22.06.2009	Train derailment: in Olomouc station	not implemented	03.03.2011
01.07.2009	Train derailment: between Senohraby and Strancice stations	implemented	11.04.2011
07.12.2010	Train derailment: between Jesenik and Lipova Lazne stations	not implemented	06.06.2011
28.06.2010	Train derailment: in Usti nad Labem-jih station	partially implemented	15.06.2011
20.12.2010	Trains collision: in Kamenne Zehrovice station	partially implemented	02.08.2011
04.04.2010	Accident to person – Injury to passenger: in Sazavka stop	not implemented	04.08.2011
02.02.2011	Trains collision: between Vodnany and Cicenice stations	implemented	16.08.2011
22.01.2011	Train derailment: in Brno Malomerice station	in progress	12.09.2011
06.01.2011	Trains collision: between Holetin and Vojtechov stops	implemented	11.11.2011
31.03.2011	Accident to person – Injury to passenger, in Cimelice station	implemented	14.11.2011
21.04.2011	Accident to person – Injury to passenger, The City of Ostrava – tram stop Tylova	implemented	14.11.2011
14.03.2011	Other: Broken tyre of wheel of locomotive, in Uhersko station	implemented	14.12.2011
11.07.2011	Trains collision with an obstacle: in Olomouc hl. n. station	partially implemented	19.01.2012
20.10.2010	Accident to person caused by RS in motion: open line between Prackovice nad Labem and Lovosice stations	partially implemented	29.03.2012
05.06.2011	Train derailment: between Vyskov na Morave and Ivancice na Hane stations	implemented	29.03.2012





<b>Date of occurrence</b>	<b>Title of the investigation</b> (Occurrence type, location)	<b>Status of implem.</b>	<b>Completed</b> (date)
29.07.2011	Train derailment: between Okrisky and Jihlava stations	In progress	18.04.2012
17.10.2011	Trains collision with an obstacle: between Ostrava Trebovice and Dehylov stations	implemented	20.04.2012
22.10.2011	Train derailment: Branch Odra, between Ostrava Kuncice and Ostrava Svinov stations	In progress	29.05.2012
05.12.2011	Other: SPAD in Baska station	partially implemented	25.06.2012
23.08.2011	Trains collision: in Praha Liben station	partially implemented	24.08.2012
22.11.2011	Trains collision with an obstacle: in Hradcany stop	implemented	06.09.2012
08.12.2011	Other: railway vehicle movement events in the siding "Vlecka CEZ" Chvaletice	implemented	06.09.2012
24.01.2012	Trains collision with an obstacle: in the siding "Vlecka Drevosklad" Adamov	implemented	10.09.2012
27.02.2012	Level-crossing accident: km 247,813 between Protivin stop and Protivin station	not implemented	11.09.2012
17.11.2011	Train derailment: between Pardubice Rosice nad Labem and Steblova stations	partially implemented	24.09.2012
05.03.2012	Level-crossing accident: km 4,740 between Kobyli na Morave and Velke Pavlovice stations	not implemented	12.10.2012
20.01.2012	Level-crossing accident: km 54,854 in Breznice station	not implemented	16.11.2012
29.07.2011	Accident to person caused by RS in motion: in Vladislav station	partially implemented	23.11.2012
07.09.2011	Train derailment: in Prerov station	not implemented	04.12.2012
29.02.2012	Level-crossing accident: km 186,463 in Kastice station	not implemented	07.12.2012
21.07.2011	Trains collision with an obstacle: between Hodkovice nad Mohelkou and Rychnov u Jablonce nad Nisou stations	partially implemented	27.12.2012
12.09.2011	Train derailment: in Slatinany station	implemented	03.01.2013
07.05.2012	Level-crossing accident: km 286,369 in Uhersko station	not implemented	03.01.2013
23.07.2012	Trains collision with an obstacle: between Strellice and Hrusovany nad Jevisovkou stations	implemented	11.02.2013
26.08.2012	Trains collision with an obstacle: between Vlastejovice and Ledec nad Sazavou stations	implemented	25.02.2013
29.03.2012	Other: SPAD in Praha hlavni nadrazi station	partially implemented	26.03.2013
01.11.2012	Other: Broken axle - The city of Ostrava – tram yard	implemented	12.04.2013



<b>Date of occurrence</b>	<b>Title of the investigation</b> (Occurrence type, location)	<b>Status of implem.</b>	<b>Completed</b> (date)
28.07.2012	Level-crossing accident: km 2,431 in the siding "Vlečka Elektrarna" Opatovice	implemented	26.04.2013
31.03.2012	Trains collision: between Peruc and Klobuky v Cechach stations	implemented	10.05.2013
19.09.2011	Trains collision: The City of Praha – tram stop Kotlarka	partially implemented	15.05.2013
16.02.2012	Other: SPAD between Korenov and Dolny Polubny stations	partially implemented	30.05.2013
05.02.2013	Trains collision: in Mirosov station	implemented	14.06.2013
14.01.2013	Accident to person caused by RS in motion – Injury to passenger: in Bystricka stop	implemented	15.07.2013
13.01.2013	Train derailment: in Vysoke Myto station	implemented	5. 8. 2013
14.12.2012	Level-crossing accident: km 320,829 between Prelouc and Recany nad Labem stations	partially implemented	16.08.2013
04.02.2013	Other: Unauthorised train movement other than SPAD in Adamov station	implemented	27.08.2013
22.01.2013	Other: SPAD in Kolin station	partially implemented	16.09.2013
01.04.2013	Level-crossing accident: km 61,796 between Lenora station and Lenora stop	implemented	16.09.2013
31.03.2013	Train derailment: in Odry station	partially implemented	27.09.2013
20.05.2013	Train derailment: in Nepomuk station	implemented	04.10.2013
25.04.2013	Other: Broken axle between Klenci pod Cerchovem and Pobezovice stations	implemented	04.11.2013
25.06.2012	Other: SPAD in Horovice station	partially implemented	10.11.2013
24.03.2013	Train derailment: between Tabor and Chotoviny stations	implemented	20.11.2013
02.05.2013	Other: SPAD in Kunovice Loucka station	partially implemented	28.11.2013
23.05.2013	Train derailment: in Kladno station	partially implemented	20.12.2013
20.05.2012	Train derailment: between Steti and Libechov stations	partially implemented	30.12.2013
10.09.2012	Train derailment: among Blansko – Adamov – Brno Malomerice stations	not implemented	24.01.2014
18.11.2012	Train derailment: in Praha Vrsovice station	implemented	30.04.2014
30.01.2013	Other: SPAD in Strancice station	partially implemented	03.06.2014
24.02.2013	Other: Broken wheel between Jesenik and Lipova Lazne stations	implemented	16.01.2014
12.03.2013	Train derailment: in Prelouc station	not implemented	05.03.2014



<b>Date of occurrence</b>	<b>Title of the investigation</b> (Occurrence type, location)	<b>Status of implem.</b>	<b>Completed</b> (date)
27.03.2013	Other: SPAD in Roztoky u Prahy station	partially implemented	14.03.2014
20.06.2013	Train derailment: The city of Brno – tram stop Celní	implemented	09.01.2014
13.07.2013	Level-crossing accident: km 110,525 between Opava zapad and Skrochovice stations	not implemented	13.01.2014
21.07.2013	Train derailment: in Pardubice hlavní nadrazi station	partially implemented	15.01.2014
07.08.2013	Level-crossing accident: km 7,527 between Varnsdorf and Rybníste stations	not implemented	25.06.2014
31.08.2013	Other: SPAD in Postrelmov station	partially implemented	21.02.2014
12.09.2013	Level-crossing accident: km 148,648 between Jaromerice nad Rokytnou and Kojetice na Morave stations	partially implemented	3. 2. 2014
02.10.2013	Other: Derailment during shunting operation in Prerov station	partially implemented	06.05.2014
03.11.2013	Other: Derailment during shunting operation in Brno Malomerice station	partially implemented	25.08.2014
10.01.2014	Accident to person caused by RS in motion: The city of Praha – tram stop Palmovka	partially implemented	06.10.2014
04.02.2014	Trains collision with an obstacle: between Jindřichov ve Slezsku statni hranice – Jindřichov ve Slezsku stations	In progress	01.09.2014
07.03.2014	Train derailment: in Brno hlavní nadrazi station	implemented	02.09.2014
10.03.2014	Other: Tram trains collision during shunting operation in The City of Ostrava – tram stop Nova hut jižni braha	implemented	20.08.2014
15.03.2014	Level-crossing accident: km 61,599 between Cervenka - Moravický stations	partially implemented	31.10.2014
24.03.2014	Level-crossing accident: km 16,388 between Rozsochatec - Chotěbor stations	not implemented	18.11.2014

#### 4.2 Recommendations issued in 2014

<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
10.09.2012	Train derailment: among Blansko – Adamov – Brno Malomerice stations
<b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:	



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<ul style="list-style-type: none"><li>• as soon as possible on all lines with heavy traffic to expand the network of diagnostic devices that are able during train movement to diagnose bearing temperatures of rolling stock and temperatures of wheels, brakes and wheel irregularities so that it would be possible to alert about potential failures well in advance, till that time to reassess setting of limit temperatures;</li><li>• to incorporate the provisions into technology procedures, that the train at a positive diagnostic findings is stopped at the next station;</li><li>• to instal equipment which enables to give instruction for automatic stopping of rolling stock movement always at direct threats of railway infrastructure operation and railway transport operation;</li><li>• to perform systematic inspections focusing on railway undertakings to comply of technological procedure "Pokynu provozovatele dráhy č. 8/2010, ve znění změny č. 1, č. j.: S-10259/2012-OAE".</li></ul> <p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o., and railway undertaking Advanced World Transport, a. s.:</p> <ul style="list-style-type: none"><li>• to incorporate into technology procedures testing of function of connection between a train and train dispatcher, to analyse and solve systematically all unsuccessful attempts for connection;</li><li>• during regular education to aim at practical training of solution of critical situations.</li></ul> <p><b>Addressed</b> to Czech Ministry of Transport:</p> <ul style="list-style-type: none"><li>• within of its international activity to support and promote implementation of the function of remote stopping of the train to the system GSM-R or to submit a proposal to change relevant European directives and technical specifications to define the function of automatic stopping of rolling stock movement in the system GSM-R in such a way to assign the highest priority for the command of automatic stopping of rolling stock movement in the system GSM-R.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendation for other infrastructure managers (IM) and railway undertakings (RU) in the Czech Republic.</li></ul>
18.11.2012	Train derailment: in Praha Vrsovice station
	<p><b>Addressed</b> infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>• immediately to issue technological procedures setting the implementation of a detailed controls of welds TP-NAJ-01/00 by ultrasound including records;</li><li>• to find out and evaluate whether there exist defectoscopic methods, which can detect hidden defects of switch rail and after this evaluation to use consequently the most effective method within inspection;</li><li>• in all the switches rail that are in operation for more than 15 years, to carry out a defectoscopic control for detecting hidden defects always with the help of</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p>angle probe or other effective device;</p> <ul style="list-style-type: none"><li>• after accident or incident during of taking of measures always to assess all failings (risks) not only at the local level but within whole railway network.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers in the Czech republic.</li></ul>
30.01.2013	Other: SPAD in Strancice station
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>• it is recommended to hurry with introduction of ETCS to both main and regional lines, in accordance with the wording of previous documents „Vydání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No. 739/2010/DI on 15th December 2010, No. 571/2012/DI on 31st July 2012, No. 741/2012/DI on 25th September 2012 and No. 957/2013/DI on 21st October 2013;</li><li>• on the lines where the ETCS is not going to be introduced into operation to install the technical equipment for emergency stopping of trains. This equipment will be automatically activated when the rolling stock illegally passes signal at danger (eg system VNPN safety system which alerts of unauthorized passing signals);</li><li>• at stations where the trains are dispatched by the signal (on the main signal) and which are not equipped with technical equipment for train emergency stop to ensure at the trains which transport passengers compliance with procedure according to article No. 2979 of internal regulation SŽDC D1 in cases where departure signal prohibits movement and train driver is not informed about this.</li></ul> <p><b>Addressed</b> to railway undertaking České dráhy, a. s.:</p> <ul style="list-style-type: none"><li>• it is recommended to hurry with installation of mobile components of ETCS into railway vehicles in order to allow use of full functionality of ETCS as soon as the infrastructure is ready.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) and railway undertaking (RU) in the Czech Republic.</li></ul>
24.02.2013	Other: Broken wheel between Jeseník and Lipova Lázně stations
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>• to equip infrastructure works rolling stocks with rail snow cutter with wheels which will have such parameters and design, so that their construction and technical conditions ensure the safety requirements of the railway transport.</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other railway undertaking (RU) in the Czech Republic and to take measure which eliminate approval of changes to rolling stocks which are not in accordance with the safety requirements of the railway transport.</li></ul>
12.03.2013	Train derailment: in Prelouc station
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>to expand diagnostics of moving rolling stocks on function of the measurement of wheel pressures and outputs of measurement to provide to relevant RU. All outcomes to implement to relevant regulation;</li><li>after the introduction of technical diagnostics solutions – measuring of wheel pressures of moving rolling stocks – to introduce an obligation for all RU to use these outputs and to take effective measures in case of discovered defects on rolling stocks. All outcomes to implement to relevant regulation.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic and within of its international activity to support and promote these implementations.</li></ul>
27.03.2013	Other: SPAD in Rostoky u Prahy station
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>it is recommended to hurry with introduction of ETCS to both main and regional lines, in accordance with the wording of previous documents „Vydání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No. 6-3305/2009/DI-1 on 9th November 2010, No 571/2012/DI-1 on 31st July 2012, No. 741/2012/DI on 25th September, 2012;</li><li>on the lines where the ETCS is not going to be introduced into operation to install the technical equipment for emergency stopping of trains. This equipment will be automatically activated when the rolling stock illegally passes signal at danger (eg system VNPN safety system which alerts of unauthorized passing signals);</li><li>at stations where the trains are dispatched by the signal (on the main signal) and which are not equipped with technical equipment for train emergency stop to ensure at the trains which transport passengers compliance with procedure according to article No. 2979 of internal regulation SŽDC D1 in cases where departure signal prohibits movement and train driver is not informed about this.</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p><b>Addressed</b> to railway undertaking České dráhy, a. s.:</p> <ul style="list-style-type: none"><li>• it is recommended to hurry with installation of mobile components of ETCS into railway vehicles in order to allow use of full functionality of ETCS as soon as the infrastructure is ready.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) and railway undertaking (RU) in the Czech Republic.</li></ul>
20.06.2013	Train derailment: The city of Brno – tram stop Celní
	<p><b>Addressed</b> to infrastructure manager Dopravní podnik města Brna, a. s.:</p> <ul style="list-style-type: none"><li>• to determine a procedure of inspections of sleepers and fasteners in the rails which are located on a separate tram track body, in the sections where the fasteners and sleepers are covered;</li><li>• clearly and specifically to determine the conditions for the operation, maintenance and repairs of jointless track.</li></ul> <p><b>Addressed</b> to Czech Ministry of Transport:</p> <ul style="list-style-type: none"><li>• in decree to Act No. 266/1994 to determine fundamental conditions of technical parameters for jointless track on the tram track for their inspections, operation, maintenance and repairs.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers of tram tracks in the Czech Republic.</li></ul>
13.07.2013	Level-crossing accident: km 110,525 between Opava zapad and Skrochovice stations
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>• it is recommended to increase safety at the level crossings which are equipped with warning lights in accordance with previous safety recommendations No. 877/2012/DI of 14 November 2012, so that at reconstruction and modernization of railway tracks and the level crossings (not only at railway tracks which are included to European railway system) there was designed and installed only level crossing safety equipment with warning lights and barriers.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p><b>Addressed</b> to Czech Ministry of Transport:</p> <ul style="list-style-type: none"><li>In connection with the provision of Article 19, paragraph 1 of Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 The Rail Safety Inspection Office (CZ NIB) recommends to Czech Ministry of Transport to take immediately necessary measures to ensure that previous safety recommendations No. 877/2012/DI, of 14 November 2012 and the above safety recommendations were by Czech National Safety Authority properly taken into account and implemented, i. e. that the Czech National Safety Authority in management of change in the scope and level of security of level crossings at reconstruction and modernization of railway tracks and level crossings effectively promoted the level safety crossing equipment with warning lights and barriers and was excluded dual interpretation of Article 25, paragraph 2 of Directive 2004/49/EC of the European Parliament and of the Council in national legislation.</li></ul>
21.07.2013	Train derailment: in Pardubice hlavní nadrazi station
	<p><b>Addressed</b> to infrastructure manager, Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>to the end of April 2014 to perform extraordinary inspection of all switch point blades, focusing on frittering and flaking of material of switch point blade (in places where is contact of wheel and switch point blade);</li><li>to determine measures, to immediately ensure safety in the case of detection the above mentioned defects;</li><li>continuously to monitor and within inspection to give increased attention to technical conditions of switch point blade (in places where is contact of wheel and switch point blade);</li><li>to find out and evaluate whether there exist defectoscopic methods, which can detect hidden defects in the field of heel of switch point blade and after this evaluation to use consequently the most effective method within inspection.</li></ul> <p><b>Addressed</b> to Czech national Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers in the Czech republic.</li></ul>
07.08.2013	Level-crossing accident: km 7,527 between Varnsdorf and Rybníste stations
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>it is recommended to verify visibility conditions at all level crossings which are equipped only with warning crosses and make them compliant with standard No. ČSN 73 6380. In the case of non-compliance immediately adjust visibility conditions, to ensure safe operation of the railway transport and safe operation on the road;</li><li>it is recommended to take their own measures to ensure improvement of checking</li></ul>





<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p>system so that inspections of level crossings were made properly, visibility conditions were checked and detected failures were removed.</p> <p><b>Addressed</b> to railway undertaking Vogtlandbahn-GmbH:</p> <ul style="list-style-type: none"><li>it is recommended to equip all locomotives with the device, which also records use of horn, as absence of this type of evidence can confuse investigation of accidents.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for all other IM and RU in the Czech Republic.</li></ul>
31.08.2013	Other: SPAD in Postrelmov station
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <p>In accordance with the wording of previous documents „Vydání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No 571/2012/DI-1 on 31th July 2012 and No. 741/2012/DI on 25th September, 2012, č. j.: 446/2013/DI, on 13th May 2013 and č. j.: 40/2014/DI, on 16th January 2014:</p> <ul style="list-style-type: none"><li>on the main lines which are involved to Trans-European conventional rail system it is recommended to hurry on introduction of ETCS to operation. For other main and regional lines to create plan of gradual introduction of ETCS to operation;</li><li>on the lines where the ETCS is not going to be introduced into operation to install the technical equipment for emergency stopping of trains. This equipment will be automatically activated when the rolling stock illegally passes signal at danger;</li><li>at the stations that are permanently occupied and controlled by the train dispatchers not to allow departure of the train with the passengers (regular or extraordinary) from a place for entry and exit of passengers only by using of signal;</li><li>until full substitution of security policy - the person who is controlling the railway transport (train dispatcher) not to expand further the number of stations where the dispatch of train with transport of passengers which regularly or extraordinary stops in a place for entry and exit of passengers is carried out only by using of the main signal allowing the movement of the train.</li></ul> <p><b>Addressed</b> to railway undertaking České dráhy, a. s.:</p> <p>In accordance with the wording of previous documents „Vydání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No 571/2012/DI-1 on 31th July 2012 and No. 741/2012/DI on 25th September, 2012, č. j.: 446/2013/DI, on 13th May 2013 and č. j.: 40/2014/DI, on 16th January 2014:</p> <ul style="list-style-type: none"><li>it is recommended to hurry on installation of mobile components of ETCS into rail-</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p>way vehicles in order to allow use of full functionality of ETCS as soon as the infrastructure is ready;</p> <ul style="list-style-type: none"><li>to modify technological procedures in order to the train driver of the leading rolling stock of the train with passengers in a place for entry and exit of passengers at the station where the departure of the rolling stock is allowed only by using of signal always initiated before putting of the train in motion warning signal which will be given verbally, by signaling tool or technical equipment with incorporation to share obligation of verification of position of the main signal to signal allowing movement of the train by leader board staff.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) and railway undertaking (RU) in the Czech Republic.</li></ul>
12.09.2013	Level-crossing accident: km 148,648 between Jaromerice nad Rokytinou and Kojetice na Morave stations
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>in the shortest possible time to perform inspection of level crossings which are secured with warning lights without barriers, which will be focused on the visibility of indicators on the corresponding distance Dz, from all types of roads that are routed to the level crossing;</li><li>immediately to take measures for ensuring of the safety at the controlled level crossings in the case of finding of deficiencies at the inspection which is described above.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers in the Czech republic.</li></ul>
02.10.2013	Other: Derailment during shunting operation in Prerov station
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>o create and introduce system for archiving results of verification of compliance of material properties of rails, switch rails and points of crossings of switches collected from external contractors with the requirements of technical or operational standards and other binding conditions during the service life and during their operation;</li><li>within the framework of regular inspections of switches to pay increased attention to switch rails of first generation produced into 2005, especially in a place of refor-</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p>ging of switch rail profile to rail profile;</p> <ul style="list-style-type: none"> <li>during taking of measures after accident or incident always to assess weaknesses and risks complexly within the whole railway network and in this range to take also corresponding measures and not only on local level.</li> </ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"> <li>it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.</li> </ul>
03.11.2013	Other: Derailment during shunting operation in Brno Malomerice station
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"> <li>by standards of approval proces to implement types of railway stop blocks, which will be mandatory for using in their operated railways;</li> <li>to create conditions for the certification of manufacturers of railway stop blocks in case of established types;</li> <li>to use of competency of infrastructure manager to give to railway undertakings clear instructions for using of an approved type of railway stop blocks;</li> <li>to process methodology and technology of control of the width of the head of the rails for a defined part of stations, where rolling stocks are regularly stopped during shunting operation by using of double flange railway stop blocks;</li> <li>to unify the terminology which is used in the technological documentation and in the internal technological procedure for defined part of stations, where rolling stocks are regularly stopped during shunting operation by using of double flange railway stop blocks and to define this clearly in the technological documentation for the need of railway undertakings and for the need of control of infrastructure manager.</li> </ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA)</p> <ul style="list-style-type: none"> <li>it is recommended to take own measure forcing implementation of the above recommendations for other all IM in the Czech republic.</li> </ul>
10.01.2014	Accident to person caused by RS in motion: The city of Praha – tram stop Palmovka
	<p><b>Addressed</b> to railway undertaking Dopravní podnik hlavního města Prahy, a. s.:</p> <ul style="list-style-type: none"> <li>It is recommended to provide all tram types with technical device ensuring that doors will not start closing earlier than after 3 seconds duration of acoustic and visual warning.</li> </ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<ul style="list-style-type: none"><li>It is recommended to take own measure forcing implementation of the recommendation by all relevant railway (tramway) undertakings in the Czech Republic.</li></ul>
04.02.2014	Trains collision with an obstacle: between Jindrichov ve Slezsku statni hranice – Jindrichov ve Slezsku stations
	<p><b>Addressed</b> to Czech Ministry of Transport in cooperation with Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>to initiate a change of provision of § 8 paragraph 2 of Act No. 114/1992 Sb. as amended, on protection of the nature and landscape, so that the infrastructure manager could have a possibility to remove the trees (whose height is heightened by 2,5 m is equal or higher than the distance from the nearest track axis) in the protection zone of railway without permission, but only with written notification to the nature conservation authority at least 15 days in advance, similarly to the protection zone of electricity and gas network.</li></ul>
07.03.2014	Train derailment: in Brno hlavni nadrazi station
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>immediately accept (apply in practice) effective measures for new and operating jaw locks to avoid jump of hook from cut of slide locking bar and at the same time its running from under flange of the stock rail or such measures, when this situation appears and point blades do not reach during adjustment final positions, do not allow running of slide locking bar under jammed blade or do not allow to create train/shunting route;</li><li>to incorporate into technological procedures a ban of clamping of the clamping parts of the working mechanisms to the rails in places where there is a risk of damage of railway components.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other IMs, who operate the switches with jaw locks.</li></ul>
10.03.2014	Other: Tram trains collision during shunting operation in The City of Ostrava – tram stop Nova hut jizni braha
	<p><b>Addressed</b> to railway undertaking Dopravní podnik Ostrava, a. s.:</p> <ul style="list-style-type: none"><li>to incorporate into unified technological procedures tram driver's obligation after taking of the tram, change in the composition of rolling stocks or change driver's stands as soon as possible to test the effect of electrodynamic brake when the tram is put into movement;</li><li>into the periodic trainings of drivers of trams to incorporate content focused on crisis management, mainly during unusual behavior of rolling stocks including solu-</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p>tions of the situation when due to a technical fault is not activated electrodynamic brake.</p> <p><b>Addressed</b> to Czech National Safety Authority (NSA)</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other railway undertaking which operated tram transport in the Czech Republic.</li></ul>
15.03.2014	Level-crossing accident: km 61,599 between Cervenka - Moravicany stations
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>determine for the integrated rescue system priority of phone contacts, to which the operator of the integrated rescue system, in imminent danger, contact the rail operator and pass the requirement to ensure the safe operation of the railway and railway transport.</li></ul> <p><b>Addressed</b> to Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.</li></ul> <p><b>Addressed</b> to Správa silnic Olomouckého kraje (road maintenance manager):</p> <ul style="list-style-type: none"><li>place on the road III / 4496, from both directions before the right direction arches, after which follows the railway crossing P6520, vertical warning traffic signs warning on the right arc or on two consecutive directional arcs or to take other appropriate measures to improve safety in the area of level crossing P6520.</li></ul> <p><b>Addressed</b> to Czech Ministry of Transport in cooperation with Czech National Safety Authority (NSA):</p> <ul style="list-style-type: none"><li>extend by legislation governing the rules of road traffic to the requirement of participants of traffic for these roads on knowledge of the location of the uniform identification numbers of level crossings and its use in the detection of threats to safety of railway transport on the level crossings;</li><li>extend public awareness of the location of the uniform identification numbers of level crossings at level crossings, its purpose and method of use.</li></ul>
24.03.2014	Level-crossing accident: km 16,388 between Rozsochatec - Chotebor stations
	<p><b>Addressed</b> to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>it is recommended to increase safety at the level crossings which are equipped with warning lights in accordance with previous safety recommendations No. 877/2012/DI of 14. November 2012, No. 937/2012/DI of 2. January 2013, No. 940/2012/DI of 3. January 2013 and No. 134/2014/DI, of 18. February 2014, in such a way that at reconstruction and modernization of railway tracks and the level</li></ul>



<b>Date of occurrence</b>	<b>Title of the investigation, Safety recommendation</b>
	<p>crossings (not only at railway tracks included to European railway system) were designed and installed only level crossing safety equipment with warning lights and barriers.</p> <p><b>Addressed</b> to Czech National Safety Authority (NSA)</p> <ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.</li></ul>

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## ACCIDENT SUMMARY

- Grade: serious accident.
- Date and time: 10<sup>th</sup> September 2012, 05:17 ( 04:17 GMT).
- Occurrence type: train derailment.
- Description: repeated derailment and spontaneous rerailing of one freight wagon during movement of freight train No. 47763 among Blansko, Adamov and Brno-Maloměřice stations.
- Type of train: freight train No. 47763.
- Location: line among Blansko, Adamov and Brno-Maloměřice stations, track No. 1, km 173,624.
- Parties: SŽDC, s. o (IM);  
Advanced World Transport a. s. (RU of the freight train No. 47763).
- Consequences: 0 fatality, 0 injury;  
total damage CZK 8 485 810,-
- Direct cause: stuck bearing and consequent pivot twisting of freight wagon (cistern) of series Zas, No. 33 54 7854 152-7 on the left side of the second axle in the train movement direction.
- Contributory factor:
- infrastructure manager did not ensure that train dispatcher of Adamov station could automatically stop freight train No. 47763 or establish a connection in a quick and simple way with the freight train;
  - failure to give the instruction by train dispatchers of Adamov and Brno-Maloměřice stations for an immediate stop of freight train Nex 47763 and for the inspection of the train;
  - not stopping and inspecting a train by engine driver in spite of information that its following movement could endanger the safety of railway infrastructure operation and railway transport operation.
- Underlying cause: coarse grained microstructure of the material which the rivets on the site of flange of the bearing cage were made from caused decrease of mechanical values of used material.
- Root cause: none.
- Recommendations:
- 1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:
- as soon as possible on all lines with heavy traffic to expand the network of diagnostic devices that are able during train movement to diagnose bearing temperatures of rolling stock and temperatures of wheels, brakes and wheel irregularities so that it would be possible to alert about potential failures well in advance, till that time to reassess setting of limit temperatures;

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- to incorporate the provisions into technology procedures, that the train at a positive diagnostic findings is stopped at the next station;
  - to instal equipment which enables to give instruction for automatic stopping of rolling stock movement always at direct threats of railway infrastructure operation and railway transport operation;
  - to perform systematic inspections focusing on railway undertakings to comply of technological prpocedure “Pokynu provozovatele dráhy č. 8/2010, ve znění změny č. 1, č. j.: S-10259/2012-OAE”.

2) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o., and railway undertaking Advanced World Transport, a. s.:

- to incorporate into technology procedures testing of function of connection between a train and train dispatcher, to analyse and solve systematically all unsuccessful attempts for connection;
- during regular education to aim at practical training of solution of critical situations.

3) Addressed to Czech Ministry of Transport:

- within of its international activity to support and promote implementation of the function of remote stopping of the train to the system GSM-R or to submit a proposal to change relevant European directives and technical specifications to define the function of automatic stopping of rolling stock movement in the system GSM-R in such a way to assign the highest priority for the command of automatic stopping of rolling stock movement in the system GSM-R.

4) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendation for other infrastructure managers (IM) and railway undertakings (RU) in the Czech Republic.





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## ACCIDENT SUMMARY

Grade: accident.

Date and time: 24<sup>th</sup> October 2012, 7:00 – 20:00 (5:00 – 18:00 GMT).

Occurrence type: derailment.

Description: Derailment of freight wagon after collision with buffer at ZZN Polabí a. s., siding Kolín.

Type of train: shunting operation.

Location: ZZN Polabí, a. s., siding Kolín, line No. 3, km 0,499.

Parties: Lovochemie, a. s. (IM and RU);  
ČD Cargo, a. s. (RU).

Consequences: 0 fatality, 0 injury;  
total damage CZK 49 759,-

Direct cause: movement of shunting operation to rolling stocks that were insufficiently protected against ride.

Contributory factor: none.

Underlying cause: failure to comply with technological procedures of infrastructure manager for the operation of shunting movements and ensuring of rolling stocks against a movement.

Root cause: none.

Recommendations: not issued.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	18 <sup>th</sup> November 2012, 14:58 (13:58 GMT).
Occurrence type:	train derailment.
Description:	Derailment of train set No. 29709 on the switch No. 23 at Praha-Vršovice station.
Type of train:	train set No. 29709.
Location:	Praha-Vršovice. Switch No. 23, km 182,907.
Parties:	SŽDC, s. o. (IM); ČD, a. s. (RU of the train set No. 29709).
Consequences:	0 fatality, 0 injury; total damage CZK 615 800,-
Direct cause:	break of switch rail of switch No. 23.
Contributory factor:	<ul style="list-style-type: none"><li>• weld of left switch rail of switch No. 23 executed other than the recommended electrode;</li><li>• long-term burdening of left switch rail, produced and put into operation in 1986 as part of the switch 23;</li><li>• development of crack in the side surfaces of the left switch rail of switch No. 23.</li></ul>
Underlying cause:	failure to comply with technological procedures of infrastructure manager for welding of left switch rail of switch No. 23.
Root cause:	not issuing of the technological procedure for non-destructive testing of welds which is required to technological procedures for repair defects of switch rails of switches using the welding electrodes, TP-NAJ-01/00.
Recommendations:	
1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:	<ul style="list-style-type: none"><li>• immediately to issue technological procedures setting the implementation of a detailed controls of welds TP-NAJ-01/00 by ultrasound including records;</li><li>• to find out and evaluate whether there exist defectoscopic methods, which can detect hidden defects of switch rail and after this evaluation to use consequently the most effective method within inspection;</li><li>• in all the switches rail that are in operation for more than 15 years, to carry out a defectoscopic control for detecting hidden defects always with the help of angle probe or other effective device;</li><li>• after accident or incident during of taking of measures always to assess all failings (risks) not only at the local level but within whole railway network.</li></ul>
2) Addressed to Czech national Safety Authority (NSA):	<ul style="list-style-type: none"><li>• it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers in the Czech republic.</li></ul>



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## ACCIDENT SUMMARY

- Grade: incident.
- Date and time: 30<sup>th</sup> January 2013, 6:20 (5:20 GMT).
- Occurrence type: regional passenger train No. 9104 passed a signal at danger (departure signal with the signal "stop").
- Description: regional passenger train No. 9104 passed a signal at danger (departure signal L1 showing red aspect) at Strančice station and stopped in sufficient distance to avoid possibility of a collision with another approaching regional passenger train No. 2509.
- Type of train: regional passenger train No. 9104;  
regional passenger train No. 2509.
- Location: Strančice station, main (departure) signal No. L1, km 158,224.
- Parties: SŽDC, s. o (IM);  
ČD, a. s. (RU of the passenger trains).
- Consequences: 0 fatality, 0 injury;  
total damage 0 CZK ,-
- Direct cause:
- regional passenger train No. 9104 did not stop in front of the signal "Stop" of main signal L1 at Strančice station.
- Contributory factor:
- absence of technical equipment preventing train from passing signal at danger;
  - failure to notify of engine driver of regional passenger train No. 9104 about delay of regional passenger train No. 2509 because of transportation reasons at Strančice station in accordance with provisions of the technological procedure of infrastructure manager (IM).
- Underlying cause:
- failure to comply with technological procedures of IM for train departure from the station by train driver of regional passenger train No. 9104 (speed not adapted so that the locomotive could stop safely in front of the signal "Stop" on main signal);
  - failure to comply with technological procedures of railway undertaking (RU) - failure to monitor railway tracks during train movement and to respect given instructions.
- Root cause:
- not taking of adequate and effective own measures of infrastructure manager and railway undertaking to prevent similar incidents based on issued safety recommendations after previous incidents of similar character on 16th February 2009 at Paskov station, 16th October 2009 at Přerov station, 5th December 2011 at Baška station, and 23rd August 2011 at Praha-Libeň station.

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Recommendations:

1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:

- it is recommended to hurry with introduction of ETCS to both main and regional lines, in accordance with the wording of previous documents „Vy-dání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No. 739/2010/DI on 15th December 2010, No. 571/2012/DI on 31st July 2012, No. 741/2012/DI on 25th September 2012 and No. 957/2013/DI on 21st October 2013;
- on the lines where the ETCS is not going to be introduced into operation to install the technical equipment for emergency stopping of trains. This equipment will be automatically activated when the rolling stock illegally passes signal at danger (eg system VNPN safety system which alerts of unauthorized passing signals);
- at stations where the trains are dispatched by the signal (on the main signal) and which are not equipped with technical equipment for train emergency stop to ensure at the trains which transport passengers compliance with procedure according to article No. 2979 of internal regulation SŽDC D1 in cases where departure signal prohibits movement and train driver is not informed about this.

2) Addressed to railway undertaking České dráhy, a. s.:

- it is recommended to hurry with installation of mobile components of ETCS into railway vehicles in order to allow use of full functionality of ETCS as soon as the infrastructure is ready.

3) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) and railway undertaking (RU) in the Czech Republic.



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## ACCIDENT SUMMARY

- Grade: serious accident.
- Date and time: 10<sup>th</sup> February 2013, 4:43 (3:43 GMT).
- Occurrence type: Collision of shunting operation with empty freight wagons with consequent derailment.
- Description: the giving of bad instructions to shunting operation by an shunter (movement to an non-occupied track). But there were some empty freight wagons and the shunting operation suddenly collided with them on an actually occupied track.
- Type of train: shunting operation involving two locomotives.
- Location: Praha-Běchovice station; station line No. 104, km 1,872.
- Parties: SŽDC, s. o (IM);  
ČD Cargo, a. s.(RU of the shunting operation).
- Consequences: light injuries (3 employees of RU ČD Cargo, a. s.);  
total damage CZK 10 435 022,04,-
- Direct cause: failure to comply with condition for movement according to the view of the engine driver.
- Contributory factor: none.
- Underlying cause: failure to comply with technological procedures for shunting operation which are set with internal regulations of infrastructure manager and railway undertaking.
- Root cause: none.
- Recommendations: not issued.



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## ACCIDENT SUMMARY

Grade: accident.

Date and time: 24<sup>th</sup> February 2013, 15:55 (14:55 GMT).

Occurrence type: Broken wheel.

Description: circular break wheel of infrastructure works rolling stock during movement of infrastructure works train No. 76280.

Type of train: infrastructure works train No. 76280.

Location: open line between Jeseník and Lipová Lázně stations, km 31,780.

Parties: SŽDC, s. o (IM) and (RU of the infrastructure works train No. 76280).

Consequences: 0 fatality, 0 injury;  
total damage CZK 54 780,-

Direct cause: excessive load on both wheels of first axle during operation of infrastructure works rolling stock with rail snow cutter that caused the gradual emergence and spreading of cracks in the plate of right wheel of first axle.

Underlying cause: approval of change to rolling stock after reconstruction, which intervened in vehicle structure and meant deviation from the approved type and permission to railway undertaking to operate infrastructure works rolling stock with rail snow cutter on rail tracks, whose construction did not match the safety requirements of the railway transport.

Root cause: none.

### Recommendations:

1) Addressed to railway undertaking Správa železniční dopravní cesty, s. o.:

- to equip infrastructure works rolling stocks with rail snow cutter with wheels which will have such parameters and design, so that their construction and technical conditions ensure the safety requirements of the railway transport

2) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other railway undertaking (RU) in the Czech Republic and to take measure which eliminate approval of changes to rolling socks which are not in accordance with the safety requirements of the railway transport.





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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	12 <sup>th</sup> March 2013, 16:23 (15:23 GMT).
Occurrence type:	train derailment.
Description:	derailment of one freight wagon of freight train on switch No. 109, during departure from Přelouč station.
Type of train:	freight train No. 66301.
Location:	Přelouč station, switch No. 109, km 317,449.
Parties:	SŽDC, s. o (IM); ČD Cargo, a. s. (RU of the freight train).
Consequences:	0 fatality, 0 injury; total damage CZK 228 784,-
Direct cause:	<ul style="list-style-type: none"><li>• inadequate technical condition of derailed freight wagon - series of Zacs, No. 33 51 PL-KSG 78-67 170-7;</li><li>• inadequate technical condition of switch No. 109 at Přelouč station.</li></ul>
Contributory factor:	none.
Underlying cause:	<ul style="list-style-type: none"><li>• failure to comply with general agreement about use of freight wagons and legislative provisions for the maintenance and operation of freight towed rolling stocks by their holder;</li><li>• failure to comply with mandatory standards and technological procedures of infrastructure manager for maintenance of switches.</li></ul>
Root cause:	none.

### Recommendations:

#### 1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:

- to expand diagnostics of moving rolling stocks on function of the measurement of wheel pressures and outputs of measurement to provide to relevant RU. All outcomes to implement to relevant regulation;
- after the introduction of technical diagnostics solutions – measuring of wheel pressures of moving rolling stocks – to introduce an obligation for all RU to use these outputs and to take effective measures in case of discovered defects on rolling stocks. All outcomes to implement to relevant regulation.

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2) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic and within of its international activity to support and promote these implementations.



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## ACCIDENT SUMMARY

- Grade: incident.
- Date and time: 27<sup>th</sup> March 2013, 19:25 (17:25 GMT).
- Occurrence type: regional passenger train No. 12149 passed a signal at danger (departure signal with the signal "stop").
- Description: regional passenger train No. 12149 passed a signal at danger (departure signal S3a showing red aspect) and stopped at Roztoky u Prahy station in sufficient distance to avoid possibility of a collision with another approaching long distance passenger train No. 379.
- Type of train: regional passenger train No. 12149;  
long distance passenger train No. 379.
- Location: Roztoky u Prahy station, station line No. 3a, main departure signal No. S3a, km 421,311.
- Parties: SŽDC, s. o. (IM);  
ČD, a. s. (RU of the regional passenger train No. 12149 and long distance passenger train No. 379).
- Consequences: 0 fatality, 0 injury;  
total cost CZK 220 000,-
- Direct cause:
- regional passenger train No. 12149 did not stop in front of the signal "Stop" of main signal S3a at Roztoky u Prahy station;
  - train driver's operational error (he did not respect red signal of cab signal on automatic train protection of locomotive of regional passenger train No. 12149).
- Contributory factor:
- absence of technical equipment preventing train from passing signal at danger;
  - failure to notify of engine driver of regional passenger train No. 12149 about delay because of transportation reasons at Roztoky u Prahy station.
- Underlying cause:
- failure to comply with technological procedures of infrastructure manager (IM) for train departure from the station by train driver of regional passenger train No. 12149 (speed not adapted so that the locomotive could stop safely in front of the signal "Stop" on main signal);
  - failure to comply with technological procedures of railway undertaking (RU) - failure to monitor railway track during train movement and to respect given instructions.
- Root cause:
- not taking of adequate and effective own measures of infrastructure manager and railway undertaking to prevent similar incidents based

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on issued safety recommendations after previous incidents of similar character on 16th February 2009 at Paskov station, 16th October 2009 at Přerov station, 5th December 2011 at Baška station, and 23rd August 2011 at Praha-Libeň station.

Recommendations:

1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:

- it is recommended to hurry with introduction of ETCS to both main and regional lines, in accordance with the wording of previous documents „Vydání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No. 6-3305/2009/DI-1 on 9th November 2010, No 571/2012/DI-1 on 31st July 2012, No. 741/2012/DI on 25th September, 2012;
- on the lines where the ETCS is not going to be introduced into operation to install the technical equipment for emergency stopping of trains. This equipment will be automatically activated when the rolling stock illegally passes signal at danger (eg system VNPN safety system which alerts of unauthorized passing signals);
- at stations where the trains are dispatched by the signal (on the main signal) and which are not equipped with technical equipment for train emergency stop to ensure at the trains which transport passengers compliance with procedure according to article No. 2979 of internal regulation SŽDC D1 in cases where departure signal prohibits movement and train driver is not informed about this.

2) Addressed to railway undertaking České dráhy, a. s.:

- it is recommended to hurry with installation of mobile components of ETCS into railway vehicles in order to allow use of full functionality of ETCS as soon as the infrastructure is ready.

3) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) and railway undertaking (RU) in the Czech Republic.



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## ACCIDENT SUMMARY

Grade: accident.

Date and time: 20<sup>th</sup> June 2013, 14:36 (13:36 GMT).

Occurrence type: tram train derailment.

Description: derailment of tram train No. 2 due to a defect of the infrastructure.

Type of train: tram train No. 2.

Location: tram track, course Modřice, traffic loop - Stará Osada.

Parties: DPMB, a. s. (IM) and (RU).

Consequences: 0 fatality, 0 injury;  
total damage CZK 80 000,-

Direct cause: movement of the tram train No. 2 on the track with horizontal and vertical defect.

Contributory factor: nonfunctional fixing of rails to wooden sleepers, corroded fasteners with a lack of fixing.

Underlying cause: insufficient inspections of rails which are located on separate tram track body in places with covering of tram track in connection to detect condition of fasteners and track fastenings.

Root cause: none.

### Recommendations:

#### 1) Addressed to infrastructure manager Dopravní podnik města Brna, a. s.:

- to determine a procedure of inspections of sleepers and fasteners in the rails which are located on a separate tram track body, in the sections where the fasteners and sleepers are covered;
- clearly and specifically to determine the conditions for the operation, maintenance and repairs of jointless track.

#### 2) Addressed to Czech Ministry of Transport:

- in decree to Act No. 266/1994 to determine fundamental conditions of technical parameters for jointless track on the tram track for their inspections, operation, maintenance and repairs.

#### 3) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers of tram tracks in the Czech Republic.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	13 <sup>th</sup> July 2013 05:56 (03:56 GMT).
Occurrence type:	level crossing accident.
Description:	collision of regional passenger train No. 3561 with an obstacle – a lorry at the active level crossing.
Type of train:	regional passenger train No. 3561.
Location:	railway track Ostrava Svinov – Krnov, open line between Opava západ and Skrochovice stations, active level crossing No. P 7770, km 110,525.
Parties:	SŽDC, s. o (IM); ČD, a. s. (RU of the regional passenger train No. 3561).
Consequences:	0 fatality, 6 injury; total damage CZK 3 623 683,-
Direct cause:	third party – level crossing user (lorry driver's violation).
Contributory factor:	none.
Underlying cause:	failure to respect rules for operation on the road by the driver of the lorry.
Root cause:	none.

### Recommendations:

#### 1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:

- it is recommended to increase safety at the level crossings which are equipped with warning lights in accordance with previous safety recommendations No. 877/2012/DI of 14 November 2012, so that at reconstruction and modernization of railway tracks and the level crossings (not only at railway tracks which are included to European railway system) there was designed and installed only level crossing safety equipment with warning lights and barriers.

#### 2) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.

#### 3) Addressed to Czech Ministry of Transport:

- In connection with the provision of Article 19, paragraph 1 of Directive 2004/49/EC of the European Parliament and of the Council of 29 April 2004 The Rail Safety Inspection Office (CZ NIB) recommends to Czech Ministry of Transport to take immediately necessary measures to ensure that previous safety recommendations No. 877/2012/DI, of 14 November 2012 and the above safety recommendations were by Czech National Safety Authority properly taken into account and implemented, i. e. that the Czech National Safety Authority in management of change in the scope and level of security of level crossings at recon-

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struction and modernization of railway tracks and level crossings effectively promoted the level safety crossing equipment with warning lights and barriers and was excluded dual interpretation of Article 25, paragraph 2 of Directive 2004/49/EC of the European Parliament and of the Council in national legislation.





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## ACCIDENT SUMMARY

- Grade: serious accident.
- Date and time: 21<sup>st</sup> July 2013, 2:32 (0:32 GMT).
- Occurrence type: train derailment.
- Description: Derailment two engines and one freight wagon during movement of freight train No. 166283 through damaged switch No. 75 and consequent collision with infrastructure component.
- Type of train: freight train No. 166283.
- Location: Pardubice hl. n. station, switch No. 75, station line No. 15. km 306,065.
- Parties: SŽDC, s. o (IM);  
Viamont DSP, a. s. (RU of the freight train No. 166283).
- Consequences: 0 fatality, 0 injury;  
total damage CZK 6 763 850,-
- Direct cause: gradual development of defects of switch point blade, leading up to its breaking.
- Contributory factor:
- development of cracks in the field of heel of switch point blade;
  - frittering and flaking of material from the surface of switch point blade;
  - long-term strain of switch point blade - year of production 1986.
- Underlying cause:
- not detecting of cracks with inspections carried out according to the procedures of infrastructure manager;
  - not detecting of surface defects in the field of switch point blade (in places where is contact of wheel and switch point blade).
- Root cause: none.
- Recommendations:
- 1) Adressed to infrastructure manager Spáva železniční dopravní cesty, s. o.:
- to the end of April 2014 to perform extraordinary inspection of all switch point blades, focusing on frittering and flaking of material of switch point blade (in places where is contact of wheel and switch point blade);
  - to determine measures, to immediately ensure safety in the case of detection the above mentioned defects;
  - continuously to monitor and within inspection to give increased attention to technical conditions of switch point blade (in places where is contact of wheel and switch point blade);
  - to find out and evaluate whether there exist defectoscopic methods, which can detect hidden defects in the field of heel of switch point blade and after this evaluation to use consequently the most effective method within inspection.

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2) Adressed to Czech national Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers in the Czech re-public.



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## ACCIDENT SUMMARY

Grade: accident.

Date and time: 30<sup>th</sup> July 2013, 15:17 (13:17 GMT).

Occurrence type: other (broken window of long distance passenger train No. 1358 by part of locomotive of long distance passenger train No. 685).

Description: Collision of long distance passenger train No. 1358 with broken off part of locomotive of long distance passenger train No. 685.

Type of train: long distance passenger train No. 685;  
long distance passenger train No. 1358.

Location: Úvaly station, station line No. 1, km 387,458, level crossing No. P 4933, direction from Praha to Český Brod.

Parties: SŽDC, s. o. (IM);  
ČD, a. s. (RU of the long distance passenger train No. 685);  
LEO Express, a. s. (RU of the long distance passenger train No. 1358).

Consequences: 0 fatality, 0 injury;  
total damage CZK 139 409,77,-

Direct cause: release of damper of secondary cushioning of first bogie of locomotive of long distance passenger train No. 685 and consequent impact to the side of the road and its ejection into oncoming long distance passenger train No. 1358.

Contributory factor: none.

Underlying cause: material defect of damper of secondary cushioning of first bogie of locomotive of long distance passenger train No. 685.

Root cause: none.

Recommendations: not issued.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	2 <sup>nd</sup> August 2013, 13:56 (11:56 GMT).
Occurrence type:	train derailment.
Description:	Derailment of regional passenger train No. 18008 on self-returning switch No. 2Sv.
Type of train:	regional passenger train No. 18008.
Location:	railway track Čičenice – Volary No. 708 A, Vodňany station, self-returning switch No. 2Sv, km 4,274.
Parties:	SŽDC, s. o. (IM); ČD, a. s. (RU of the regional passenger train No. 18008).
Consequences:	0 fatality, 0 injury; total damage CZK 246 950,-
Direct cause:	the train driver did not respect the instruction of signal Sv2 before entering on self-returning switch No. 2Sv.
Contributory factor:	none.
Underlying cause:	failing to stop of regional passenger train No. 18008 in front of self-returning switch No. 2Sv and failure to control of its correct position at Vodňany station.
Root cause:	none.
Recommendations:	not issued.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	7 <sup>th</sup> August 2013, 12:14 (10:14 GMT).
Occurrence type:	level crossing accident.
Description:	Collision of regional passenger train No. 20912 with an obstacle – a car at the passive level crossing No. 3467 .
Type of train:	regional passenger train No. 20912.
Location:	railway track Varnsdorf – Rybníště, open line between Jiřetín pod Jedlovou stop and Dolní Podluží station, passive level crossing No. 3467 (protected by warning crosses), km 7,527.
Parties:	SŽDC, s. o. (IM); Vogtlandbahn-GmbH (RU of the passenger train No. 20912); Driver of the car (level crossing user).
Consequences:	0 fatality, 0 injury; total damage CZK 20 000,-
Direct cause:	<ul style="list-style-type: none"><li>• third party – level crossing user (car driver's violation);</li><li>• poor level crossing visibility conditions (insufficient field of view of car driver towards approaching train).</li></ul>
Contributory factor:	<ul style="list-style-type: none"><li>• insufficient control activity of infrastructure manager on the quality of the inspections at level crossing No. 3467.</li></ul>
Underlying cause:	<ul style="list-style-type: none"><li>• failure to respect rules for operation on the road by the driver of the car;</li><li>• failure to comply with technological procedures of infrastructure manager in ensuring of level crossing visibility conditions at level crossing No. 3467.</li></ul>
Root cause:	none.
Recommendations:	<p>1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:</p> <ul style="list-style-type: none"><li>• it is recommended to verify visibility conditions at all level crossings which are equipped only with warning crosses and make them compliant with standard No. ČSN 73 6380. In the case of non-compliance immediately adjust visibility conditions, to ensure safe operation of the railway transport and safe operation on the road;</li><li>• it is recommended to take their own measures to ensure improvement of checking system so that inspections of level crossings were made properly, visibility conditions were checked and detected failures were removed.</li></ul>

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The purpose of this safety recommendation is to ensure that visibility conditions at level crossings will allow safe drive of road vehicles over level crossing. Especially in cases of long and slow road vehicles so that the driver of this road vehicle with the maximum permissible length 22 m and a speed of  $5 \text{ km} \cdot \text{h}^{-1}$  could safely drive over the level crossing.

2) Addressed to railway undertaking Vogtlandbahn-GmbH:

- it is recommended to equip all locomotives with the device, which also records use of horn, as absence of this type of evidence can confuse investigation of accidents.

3) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for all other IM and RU in the Czech Republic.



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## ACCIDENT SUMMARY

Grade:	incident.
Date and time:	31 <sup>st</sup> August 2013, 14.18 (GMT 12.18).
Occurrence type:	long distance passenger train No. 1234 passed a signal at danger (departure signal with the signal "stop").
Description:	long distance passenger train No. 1234 passed a signal at danger (departure signal S1 showing signal "stop") at Postřelmov station with subsequent ride to the opposite direction train route for train No. 3714 and driving over the level crossing P 6655, which did not warn of road users that the train is approaching to the level crossing.
Type of train:	long distance passenger train No. 1234.
Location:	Postřelmov station, main (departure) signal S1, km 4,681.
Parties:	SŽDC, s. o. (IM); ČD, a. s. (RU long distance passenger train No. 1234 and regional passenger train No. 3714).
Consequences:	0 fatality, 0 injuries; total damage CZK 10 306,-
Direct cause:	train driver's operational error (he did not respect signal "stop" of main (departure) signal S1 at Postřelmov station).
Contributory factor:	absence of technical equipment preventing train from passing signal at danger.
Underlying cause:	unintentional error, mistake of the train driver, which resulted in: <ul style="list-style-type: none"><li>• unauthorized movement of long distance passenger train No. 1234 without check whether the main (departure) signal S1 allows the movement of long distance passenger train No. 1234;</li><li>• prioritizing of manipulation with radiostation and monitoring of data in the railway guide, before observing of railway track and signals in front of the train and proceeding consistent to the findings.</li></ul>
Root cause:	<ul style="list-style-type: none"><li>• not taking of adequate own measures by infrastructure manager and railway undertaking to prevent accidents and incidents based on the evaluation of the causes and circumstances of previously similar accidents and incidents and safety recommendations of Rail Safety Inspection Office No.: 6-538/2009/DI-1, on 18th March 2010, č. j.: 571/2012/DI, on 31th July 2012, č. j.: 741/2012/DI, on 25th September 2012, and č. j.: 446/2013/DI, on 13th May 2013;</li><li>• reduction of safety level of the railway transport at Postřelmov station from 15th March 2012 by infrastructure manager, with introduction of dispatch of train with transport of passengers, which regularly or extraordinary stops in a place for entry and exit of passengers only by using of the main (departure) signal allowing the movement of the train, without of security policy - the person who is controlling the railway transport (train dispatcher). This person is not appropriately substituted in spite of warning of Rail Safety Inspection Office about risks which are associated with results of investigation of previous accidents and incidents.</li></ul>

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Recommendations:

1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:

In accordance with the wording of previous documents „Vydání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No 571/2012/DI-1 on 31th July 2012 and No. 741/2012/DI on 25th September, 2012, č. j.: 446/2013/DI, on 13th May 2013 and č. j.: 40/2014/DI, on 16th January 2014:

- on the main lines which are involved to Trans-European conventional rail system it is recommended to hurry on introduction of ETCS to operation. For other main and regional lines to create plan of gradual introduction of ETCS to operation;
- on the lines where the ETCS is not going to be introduced into operation to install the technical equipment for emergency stopping of trains. This equipment will be automatically activated when the rolling stock illegally passes signal at danger;
- at the stations that are permanently occupied and controlled by the train dispatchers not to allow departure of the train with the passengers (regular or extraordinary) from a place for entry and exit of passengers only by using of signal;
- until full substitution of security policy - the person who is controlling the railway transport (train dispatcher) not to expand further the number of stations where the dispatch of train with transport of passengers which regularly or extraordinary stops in a place for entry and exit of passengers is carried out only by using of the main signal allowing the movement of the train.

2) Addressed to railway undertaking České dráhy, a. s.:

In accordance with the wording of previous documents „Vydání bezpečnostního doporučení“ (The issue of safety recommendations), No. 6-538/2009/DI-1 on 18th March 2010, No 571/2012/DI-1 on 31th July 2012 and No. 741/2012/DI on 25th September, 2012, č. j.: 446/2013/DI, on 13th May 2013 and č. j.: 40/2014/DI, on 16th January 2014:

- it is recommended to hurry on installation of mobile components of ETCS into railway vehicles in order to allow use of full functionality of ETCS as soon as the infrastructure is ready;
- to modify technological procedures in order to the train driver of the leading rolling stock of the train with passengers in a place for entry and exit of passengers at the station where the departure of the rolling stock is allowed only by using of signal always initiated before putting of the train in motion warning signal which will be given verbally, by signaling tool or technical equipment with incorporation to share obligation of verification of position of the main signal to signal allowing movement of the train by leader board staff.



3) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) and railway undertaking (RU) in the Czech Republic.



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## ACCIDENT SUMMARY

- Grade: accident.
- Date and time: 12<sup>th</sup> September 2013, 12:02 (10:02 GMT).
- Occurrence type: level crossing accident.
- Description: Collision of regional passenger train No. 24808 at the level crossing with a tractor with consequent derailment.
- Type of train: regional passenger train No. 24808.
- Location: active level crossing No. P3643 equipped with warning lights, km 148,648 between Jaroměřice nad Rokytnou and Kojetice na Moravě stations.
- Parties: Správa železniční dopravní cesty, státní organizace (IM);  
České dráhy, a. s. (RU of the regional passenger train No. 24808);  
Driver of the tractor (level crossing user).
- Consequences: 1 fatality, 1 injury;  
total damage CZK 721 000,-
- Direct cause: third party – level crossing user (tractor driver's violation).
- Contributory factor: none.
- Underlying cause:
- behavior of the driver of the tractor in front of the level crossing, from distance of visibility of warning cross for safe stop in which he was not careful and did not make sure whether he can safely pass the level crossing;
  - tractor driver's failure to respect of the light and sound warning and ride at the level crossing at the time when it was forbidden;
  - not giving of priority to railway transport at a crossing of the road with railway track.
- Root cause: none.
- Recommendations:
- 1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:
- in the shortest possible time to perform inspection of level crossings which are secured with warning lights without barriers, which will be focused on the visibility of indicators on the corresponding distance Dz, from all types of roads that are routed to the level crossing;
  - immediately to take measures for ensuring of the safety at the controlled level crossings in the case of finding of deficiencies at the inspection which is described above.
- 2) Addressed to Czech national Safety Authority (NSA):
- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure managers in the Czech republic.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	2 <sup>nd</sup> October 2013, 9.57 (7.57 GMT).
Occurrence type:	Derailment.
Description:	Derailment of locomotive and freight wagon of shunting movement during shunting operation on switch No. 208 at Přerov station.
Type of train:	shunting operation.
Location:	Přerov station, switch No. 208, km 182,629.
Parties:	SŽDC, s. o. (IM); ČD Cargo, a. s. (RU of the shunting operation).
Consequences:	0 fatality, 0 injury; total damage CZK 2 637 789,-
Direct cause:	breaking of right bent switch rail of switch No. 208 at Přerov station in a place of reforging of switch rail profile to rail profile.
Contributory factor:	none.
Underlying cause:	inadequate mechanical properties of right bent switch rail of switch No. 208 at Přerov station in a place of reforging of switch rail profile to rail profile, caused by incorrect technology of reforging of switch rail profile to rail profile or absence or imperfect execution of subsequent heat treatment in the manufacturing process.
Root cause:	none.
Recommendations:	

1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:

- to create and introduce system for archiving results of verification of compliance of material properties of rails, switch rails and points of crossings of switches collected from external contractors with the requirements of technical or operational standards and other binding conditions during the service life and during their operation;
- within the framework of regular inspections of switches to pay increased attention to switch rails of first generation produced into 2005, especially in a place of reforging of switch rail profile to rail profile;
- during taking of measures after accident or incident always to assess weaknesses and risks complexly within the whole railway network and in this range to take also corresponding measures and not only on local level.

2) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.



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## ACCIDENT SUMMARY

Grade: accident.

Date and time: 3<sup>th</sup> November 2013, 19:45 (18:45 GMT).

Occurrence type: train derailment.

Description: derailment of shunting operation (freight wagon) over jammed stop block at the point of wide head of rail during movement from hump to station line No. 405.

Type of train: shunting operation (freight wagon);

Location: Brno-Maloměřice station, station line No. 405, km 160,414.

Parties: SŽDC, s. o. (IM);  
ČD Cargo, a. s. (RU of the shunting operation).

Consequences: 0 fatality, 0 injury;  
total damage CZK 8 500,-

Direct cause: jam of double flanged railway stop block at the point of wide head of rail.

Contributory factor: none.

Underlying cause: none.

Root cause:

- giving instructions to railway undertaking during organizing of railway transport (shunting operation) with contradictions and deficiencies of established safety management system according to provisions of internal technological procedures: SŽDC D1 Dopravní a návěštní předpis and developed technological procedures according to provisions of Decree No. 173/1995 Sb., dopravní řád drah, as amended, which did not ensure a fluent and safe railway transport;
- operation of railway transport with contradictions and deficiencies of established safety management system according to internal technological procedures: SŽDC S3 Železniční svršek and SŽDC (ČD) S2/3 Organizace a provádění kontrol tratí Českých drah which made impossible to ensure a fluent and safe railway transport according to rules for the operation of the railway transport and the official authorization.

### Recommendations:

1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:

- by standards of approval proces to implement types of railway stop blocks, which will be mandatory for using in their operated railways;
- to create conditions for the certification of manufacturers of railway stop blocks in case of established types;
- to use of competency of infrastructure manager to give to railway undertakings clear instructions for using of an approved type of railway stop blocks;
- to process methodology and technology of control of the width of the head of the rails for a defined part of stations, where rolling stocks are

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regularly stopped during shunting operation by using of double flange railway stop blocks;

- to unify the terminology which is used in the technological documentation and in the internal technological procedure for defined part of stations, where rolling stocks are regularly stopped during shunting operation by using of double flange railway stop blocks and to define this clearly in the technological documentation for the need of railway undertakings and for the need of control of infrastructure manager.

2) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other all IM in the Czech republic.



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## ACCIDENT SUMMARY

Grade: accident.

Date and time: 20<sup>th</sup> December 2013, 18.33 (17.33 GMT).

Occurrence type: accident to person caused by rolling stock in motion.

Description: Tow and collision a shunter (he stood between engine and first wagon) with shunting operation.

Type of train: shunting operation.

Location: Vsetín station, station line No. 15a, km 37,427;  
siding DKV, Olomouc, PP Vsetín, siding line No. 17b, km 37,582.

Parties: SŽDC, s. o. (IM);  
ČD, a. s. (RU of the shunting operation and IM of the siding).

Consequences: 1 serious injury;  
total damage CZK 0,-

Direct cause: unauthorized entrance of head shunter between rolling stocks without the knowledge and instruction of the person who controlled a shunting operation.

Contributory factor: performance of work activities of head shunter under the influence of alcohol and exceeding of speed limit of shunting operation.

Underlying cause: putting of shunting operation into motion without instruction from head shunter to engine driver of shunting operation, that there was given agreement for a movement of shunting operation.

Root cause: none.

Recommendations: not issued.





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## ACCIDENT SUMMARY

- Grade: accident.
- Date and time: 10<sup>th</sup> January 2014, 17:54 (16:54 GMT).
- Occurrence type: accident to person caused by rolling stock in motion.
- Description: A passenger got trapped into the first door of second rolling stock of the tram train No. 25 run 3 and consequently towed at Palmovka (Na Žertvách) tram stop.
- Type of train: tram T3M type.
- Location: Prague, tram track, Palmovka (Na Žertvách) tram stop.
- Parties: Dopravní podnik hlavního města Prahy, a. s. (IM and RU of tram train No. 25 run 3).
- Consequences: 1 serious injury;  
total damage CZK 0,-
- Direct cause:
- trapping a passenger's hand into the door while entering and subsequent departure of the tram train from the tram stop;
  - entrance of passenger into rolling stock after acoustic and lighting signal "Stay in - Stay out", issued by the tram driver immediately before closing the doors of rolling stock and departure from the tram stop.
- Contributory factor:
- failure to stop the tram train by using all means on signal "Danger - Stop using all means";
  - failure to determine the situation along the tram train on the side of the passengers prior to departure from the tram stop.
- Underlying cause:
- failure of technological procedures of IM/RU for the activity of tram drivers before leaving tram trains from the tram stop and for management of railway vehicles during driving;
  - failure to observe instructions and commands of the operator and the railway undertaking when entering the rail vehicle.
- Root cause: none.
- Recommendations:
- 1) Addressed to railway undertaking Dopravní podnik hlavního města Prahy, a. s.:
- It is recommended to provide all tram types with technical device ensuring that doors will not start closing earlier than after 3 seconds duration of acoustic and visual warning.

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2) Addressed to Czech National Safety Authority (NSA):

- It is recommended to take own measure forcing implementation of the recommendation by all relevant railway (tramway) undertakings in the Czech Republic.



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## ACCIDENT SUMMARY

Grade: accident.

Date and time: 4<sup>th</sup> February 2014, 6:28 (5:28 GMT).

Occurrence type: collision of the train with an obstacle with the consequent derailment.

Description: regional passenger train No. 1661 collided with an obstacle – fallen trees and consequently derailed.

Type of train: regional passenger train No. 1661.

Location: the open line between Jindřichov ve Slezsku state border and Jindřichov ve Slezsku stations, km 25,155.

Parties: SŽDC, s. o. (IM);  
ČD, a. s. (RU of regional passenger train No. 1661).

Consequences: total damage CZK 1 220 232,-

Direct cause: interference of the protection zone of railway by fall of three trees (oaks) growing in the impact distance from the axis of track line.

Contributory factor: weather conditions – strong wind.

Underlying cause: failure to remove sources of danger (three trees) in the impact distance from the axis of track line.

Root cause: failure to assess conditions of trees growing in the impact distance from the axis of track line as a source of threat for the safe operation on railway.

### Recommendations:

1) Addressed to Czech Ministry of Transport in cooperation with Czech National Safety Authority (NSA):

- to initiate a change of provision of § 8 paragraph 2 of Act No. 114/1992 Sb. as amended, on protection of the nature and landscape, so that the infrastructure manager could have a possibility to remove the trees (whose height is heightened by 2,5 m is equal or higher than the distance from the nearest track axis) in the protection zone of railway without permission, but only with written notification to the nature conservation authority at least 15 days in advance, similarly to the protection zone of electricity and gas network.



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## ACCIDENT SUMMARY

Grade:	incident.
Date and time:	4 <sup>th</sup> February 2014, 14:40 (13:40 GMT).
Occurrence type:	unauthorised train movement other than SPAD.
Description:	departure of regional passenger train No. 15966 from Lípa station without track dispatcher permission to leave station and its movement to occupied track section by freight train No. 82552.
Type of train:	freight train No. 82552; regional passenger train No. 15966.
Location:	Lípa station, station track No. 1, km 7,551.
Parties:	SŽDC, s. o. (IM); ČD, a. s. (RU of the regional passenger train No. 15966 ); ČD Cargo, a. s. (RU of the freight train No. 82552).
Consequences:	0 fatality, 0 injury; total damage CZK 0,-
Direct cause:	departure of regional passenger train from Lípa station without track dispatcher permission to leave station into occupied track section by freight train No. 82552.
Contributory factor:	none.
Underlying cause:	failure to comply with technological procedure (reporting obligation) by engine driver of regional passenger train No. 15966 at Lípa station.
Root cause:	none.
Recommendations:	not issued.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	7 <sup>th</sup> March 2014, 4:55 (3:55 GMT).
Occurrence type:	train derailment.
Description:	derailment of rolling stock in the head of regional passenger train No. 4421 in Brno hl. n. station on the switch.
Type of train:	regional passenger train No. 4421.
Location:	Brno hl. n. station, switch No. 140, km 142,949.
Parties:	SŽDC, s. o. (IM); ČD, a. s. (RU of the regional passenger train No. 4421).
Consequences:	0 fatality, 0 injury; total damage CZK 88 460,-.
Direct cause:	permission of train movement across a switch, where neither switch rail was closely up to the stock rail.
Contributory factor:	station interlocking equipment enabled despite a fault in switch No. 140 to create train route with normal operation, including giving signals to status allowing the ride.
Underlying cause:	<ul style="list-style-type: none"><li>• pushing away of outlying switch rail of switch No. 140 by hydraulic holding device of working machine to distance from stock rail, when the locking hook of jaw lock got to the positions out of flange of the stock rail. Consequently it was lifted up above the cut of slide locking bar, leaned against inner edge of flange of the stock rail and prevented to point blade to close up to stock rail during its adjustment to station line No. 11k;</li><li>• wrongly selected technology of work between switches No. 139 and No. 140, when the working machine fixed with its hydraulic clamps in the place of point blade of switch No. 140;</li><li>• failure to put into operation switch no. 140 into fully working conditions after finishing work.</li></ul>
Root cause:	none.
Recommendations:	1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.: <ul style="list-style-type: none"><li>• immediately accept (apply in practice) effective measures for new and operating jaw locks to avoid jump of hook from cut of slide locking bar and at the same time its running from under flange of the stock rail or such measures, when this situation appears and point blades do not reach during adjustment final positions, do not allow running of slide locking bar under jammed blade or do not allow to create train/shunting route;</li><li>• to incorporate into technological procedures a ban of clamping of the clamping parts of the working mechanisms to the rails in places where there is a risk of damage of railway components.</li></ul>

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2) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other IMs, who operate the switches with jaw locks.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	10 <sup>th</sup> March 2014, 6.12 (5.12 GMT).
Occurrence type:	collision of tram train No. 14, run 11/112 with tram train No. 4, run 101.
Description:	collision of rolling stock of tram train No. 14, run 11/112 during shunting operation with standing rolling stock of tram train No. 4, run 101.
Type of train:	tramcar INEKON 2001 – TRIO type; tramcar T3SU – CS type.
Location:	Ostrava, tram track, Nová huť jižní brána tram stop.
Parties:	Dopravní podnik Ostrava, a. s. (IM and RU of tram train No. 11/112 and tram train No. 4/101).
Consequences:	0 fatality, 0 injury; total damage CZK 324 529,-
Direct cause:	incorrect function of auxiliary contacts of directional contactors "Z1" of rolling stock type T3SU - CS, No. 902 of tram train No. 14 run 11/112, which resulted in inactivity of electrodynamic break.
Contributory factor:	the tram driver did not test the effect of electrodynamic brake as soon as possible after he changed driver's stand and put the tram into movement.
Underlying cause:	non-issuance of obligations for the person driving rolling stock of tram, to test the effect of electrodynamic brake as soon as possible after he changed driver's stand and put the tram into movement.
Root cause:	none.

### Recommendations:

#### 1) Addressed to railway undertaking Dopravní podnik Ostrava, a. s.:

- to incorporate into unified technological procedures tram driver's obligation after taking of the tram, change in the composition of rolling stocks or change driver's stands as soon as possible to test the effect of electrodynamic brake when the tram is put into movement;
- into the periodic trainings of drivers of trams to incorporate content focused on crisis management, mainly during unusual behavior of rolling stocks including solutions of the situation when due to a technical fault is not activated electrodynamic brake.

#### 2) Addressed to Czech National Safety Authority (NSA):

- it is recommended to take own measure forcing implementation of the above recommendations for other railway undertaking which operated tram transport in the Czech Republic.





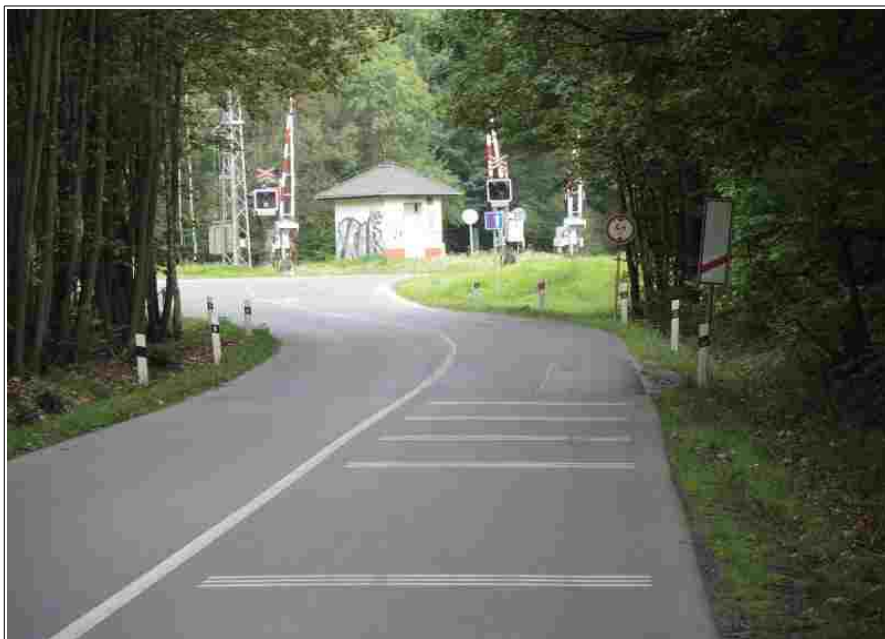
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## ACCIDENT SUMMARY

- Grade: accident.
- Date and time: 15<sup>th</sup> March 2014, 4:19 (3:19 GMT).
- Occurrence type: level crossing accident
- Description: collision of long distance passenger train No. 444 with an obstacle – a car at the active level crossing.
- Type of train: long distance passenger train No. 444
- Location: railway track Přerov – Česká Třebová, open line between Červenka and Moravičany stations, active level crossing No. P6520, km 61,599.
- Parties: SŽDC, s. o. (IM);  
ČD, a. s. (RU of the long distance passenger train No. 444)
- Consequences: 0 fatality, 0 injury;  
total damage CZK 1 513 132,-
- Direct cause:
- deadlock of the car in the scene of the level crossing No. P6520;
  - failure to stop railway transport between the stations Červenka and Moravičany, at a level crossing P6520, after receiving a request to stop.
- Contributory factor: none.
- Underlying cause:
- requiring stop of railway transport, for the employees of IM who did not have the means to take effective measures to stop railway transport at the level crossing P6520, and who was only the mediator.
- Root cause:
- failure to prioritizing telephone contacts provided for integrated rescue system, which the operator of the integrated rescue system uses to request to stopping the operation of railway transport in imminent danger.
- Recommendations:
- 1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:
    - determine for the integrated rescue system priority of phone contacts, to which the operator of the integrated rescue system, in imminent danger, contact the rail operator and pass the requirement to ensure the safe operation of the railway and railway transport.
  - 2) Addressed to Czech National Safety Authority (NSA):
    - it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.
  - 3) Addressed to Správa silnic Olomouckého kraje (road maintenance manager):
    - place on the road III / 4496, from both directions before the right direction arches, after which follows the railway crossing P6520, vertical warning traffic signs warning on the right arc or on two consecutive directional arcs or to take other appropriate measures to improve safety in the area of level crossing P6520.

4) Addressed to Czech Ministry of Transport in cooperation with Czech National Safety Authority (NSA):

- extend by legislation governing the rules of road traffic to the requirement of participants of traffic for these roads on knowledge of the location of the uniform identification numbers of level crossings and its use in the detection of threats to safety of railway transport on the level crossings;
- extend public awareness of the location of the uniform identification numbers of level crossings at level crossings, its purpose and method of use.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	24 <sup>th</sup> March 2014, 8:31 (7:31 GMT).
Occurrence type:	level crossing accident.
Description:	collision of regional passenger train No. 5306 with an obstacle – a car at the active level crossing.
Type of train:	regional passenger train No. 5306.
Location:	railway track Havlíčkův Brod – Pardubice-Rosice nad Labem, open line between Rozsochatec and Chotěboř stations, active level crossing P5270, km 16,388.
Parties:	SŽDC, s. o. (IM); ČD, a. s. (RU of the regional passenger train No. 5306); driver of the car (level crossing user).
Consequences:	1 fatality, 1 injury; total damage CZK 450 000,-
Direct cause:	third party – level crossing user (car driver violation).
Contributory factor:	none.
Underlying cause:	<ul style="list-style-type: none"><li>• failure to respect rules for operation on the road by the driver of the car;</li><li>• entering of the car on active level crossing when the arriving train has been visible.</li></ul>
Root cause:	none.

### Recommendations:

- 1) Addressed to infrastructure manager Správa železniční dopravní cesty, s. o.:
  - it is recommended to increase safety at the level crossings which are equipped with warning lights in accordance with previous safety recommendations No. 877/2012/DI of 14. November 2012, No. 937/2012/DI of 2. January 2013, No. 940/2012/DI of 3. January 2013 and No. 134/2014/DI, of 18. February 2014, in such a way that at reconstruction and modernization of railway tracks and the level crossings (not only at railway tracks included to European railway system) were designed and installed only level crossing safety equipment with warning lights and barriers.
- 2) Addressed to Czech National Safety Authority (NSA):
  - it is recommended to take own measure forcing implementation of the above recommendations for other infrastructure manager (IM) in the Czech Republic.



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## ACCIDENT SUMMARY

Grade:	accident.
Date and time:	30 <sup>th</sup> April 2014, 12:40 (10:40 GMT).
Occurrence type:	level crossing accident.
Description:	Collision of regional passenger train No. 1725 with an obstacle – a car at the level crossing.
Type of train:	passenger train No. 1725.
Location:	open line between Kyjov and Vlkůš stations, level crossing No. 7935 near the Kyjov train stop, km 64,247.
Parties:	ČD, a. s. (RU of the passenger train No. 1725); Správa železniční dopravní cesty, s. o. (IM); driver of the car (level crossing user).
Consequences:	1 fatality (car driver); total damage CZK 488 233,-
Direct cause:	<ul style="list-style-type: none"><li>• third party – level crossing user (car driver's violation);</li><li>• failure to comply with measures for train caution train Sp 1725.</li></ul>
Contributory factor:	none.
Underlying cause:	<ul style="list-style-type: none"><li>• car driver behaviour before the level crossing, in the distance of visibility warning crosses for safe stop where it is necessary to behave particularly carefully and make sure it is possible safely cross over the level crossing;</li><li>• not giving priority to rail traffic at level crossings with road track;</li><li>• human error, which resulted in a failure to oversights and observe the signal "open level crossing" and disregard for the universal order for the train No. 1725 by the train driver.</li></ul>
Root cause:	none.
Recommendations:	not issued.

