

Reporting Body	IT Ministero delle infrastrutture e dei trasporti	ID	IT-2417
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Occurrence Summary

What		Location	
Date of occurrence	25-06-13	Location name	Formia-Gaeta
Local time	02:41	Latitude	41:17:14 North
Event type	Railway vehicle movement events Train derailment	Longitude	13:36:47 East

Description Derailment of 4 car transporter wagons of the train 60629

Direct Cause descrip Breakage of the journal and of the axle bearing of the first axle on the right side of the 15th wagon (n. 23834363032-9) of the train, due to excessive overheating of the rolling parts of the axle bearing and thermoplastic failure.

Final Report

Nam	Desc	Type	Size	Last	Orga	Repo
RELA		appli	3330	4/30	Softe	
ZION		catio	911	/201	co	
E_IN		n/pdf		5		
DAGI				10:3		
NE_1				2:27		
7.02.				AM		
2015						
.pdf						

Other Attachments

Nam	Desc	Type	Size	Last	Orga	Repo
			0			

What

Title Train derailment, 6/25/2013, Formia-Gaeta (Italy)

Occurrence type	Railway vehicle movement events Train derailment	Occurrence Class	Serious accident
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Date of occurrence	25-06-13	Local time	02:41
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Events Railway vehicle movement events - Train derailment

Descriptions

Language	English	Translation provider	Information providers own translation
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Description Derailment of 4 car transporter wagons of the train 60629

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Location name	Formia-Gaeta		
Railway System type	Railway	Country	Italy
Location type	Station	Border Country	
Line type	Double track	Line number	
Allowed line speed		Km number	
Latitude	41:17:14 North	Longitude	13:36:47 East
Location description			
Additional location in			
Location type details	Plain track	Fixed installations	

Occurrence details

Railway vehicles

Movement type	Freight train	Train number	60629
RU	Italy Trenitalia Cargo	Wagons overturned	No
Train speed at mom	92 km/h	Passengers onboard	No
Vehicle description	car transporter wagons (empty)		

Other objects involved in the occurrence

Other objects

Parties involved

IM Involved	Italy - RFI SpA	RU	Italy - Trenitalia Cargo
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	Fatalities	Serious injuries	Minor injuries
Passengers	0	0	0
Staff	0	0	0
Level crossing users	0	0	0
Unauthorised persons	0	0	0
Others	0	0	0
Total	0	0	0

Material consequences

Material Damage	Infrastructure Rolling stock	Estimated total mate	> 2 000 000 €
Damage description	€ 502.160,00 damages to rolling stock		

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€ 3.502.356,30 damages to infrastructure

Images

Name	Description	Type	Size	Last modified	Organization	Repository
0						

Causation

Causes

Language	English	Translation provider	Information providers own translation
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Direct Cause description

Breakage of the journal and of the axle bearing of the first axle on the right side of the 15th wagon (n. 23834363032-9) of the train, due to excessive overheating of the rolling parts of the axle bearing and thermoplastic failure.

Underlying and root causes description

The type of axle bearing used in wagons Laaers 152 has some design problems that determine a watertight seal not adequate.

The timing of the checks provided for the axle bearing in the Maintenance Plan was not adequate to prevent the event.

The incorrect management of the warning provided by the system for the thermic control of the axle bearings, in the station of Priverno - Fossanova, dated 05.28.2013, has not led to the activation of the flows of communication in order to report the failure to the maintainer of the system and therefore the restarting of the system, which would have allowed the train stop at the Control Post, and then the discard of the 15th wagon for abnormal temperature of the axle bearing.

The layout of the control center in Priverno-Fossanova appears inadequate to present effectively to the traffic controller notices of abnormalities .

Causation classification

Railway vehicle movement events - Train derailment

- 1 - Wheels, axles, boogies and running gear
 - 1 - Design
 - 2 - Procedures
 - 3 - Maintenance plan
 - 4 - Design

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Recommendations
Recommendation

Issuing information

Recommendation title	n. 1		
Recommendation ID	REC-000090	End implementer	Other
Status	Sent to addressee	Addressee	NSA
Issue date	16-04-15		

Recommendation texts

Language	English	Translation provider	Information providers own translation
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Recommendations text

It is recommended to the National Safety Authority (ANSF) to ensure that the keepers of the wagons type Laaers 152 increase the frequency of checks of the running gear provided by maintenance plans, with particular attention to the complex axle bearing- journal, and to assess their effectiveness, in order to make the circulation of the same wagons compatible with the safety of operation.

Implementation information

Implementation status	Implementation date
Unknown	

NSA Response

NIB Comment

Recommendation

Issuing information

Recommendation title	n. 2		
Recommendation ID	REC-000091	End implementer	Other
Status	Sent to addressee	Addressee	NSA
Issue date	16-04-15		

Recommendation texts

Language	English	Translation provider	Information providers own translation
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Recommendations text

It is recommended to the NSA (ANSF) to request to the keepers to carry out checks on the whole axle bearing - journal (and possibly on other critical components for the safety of rail traffic), whenever the rolling stock is remitted in circulation after a long stop, particularly if preventative measures have not been already taken to mitigate the risks arising from a prolonged stop.

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Implementation information

Implementation status	Implementation date
Unknown	

NSA Response

NIB Comment

Recommendation

Issuing information

Recommendation title	n.3	End implementer	IM
Recommendation ID	REC-000092	Addressee	NSA
Status	Sent to adreesee		
Issue date	16-04-15		

Recommendation texts

Language	English	Translation provider	Information providers own translation
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Recommendations text

It is recommended to the NSA (ANSF) to ensure that are put in place effective actions to avoid underestimation of warnings from interfaces of the thermal check systems for axle bearings. Information on anomalies of thermal state of the bearings must be sent to stakeholders (keepers and railway undertakings) to enable a predictive analysis on the state of efficiency of rolling stock.

Implementation information

Implementation status	Implementation date
Unknown	

NSA Response

NIB Comment

Recommendation

Issuing information

Recommendation title	n. 4	End implementer	IM
Recommendation ID	REC-000093	Addressee	NSA
Status	Sent to adreesee		
Issue date	16-04-15		

Recommendation texts

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Language	English	Translation provider	Information providers own translation
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Recommendations text

It is recommended to the NSA (ANSF) to verify that the information relating to systems for the temperature check of axle bearings and notices of abnormalities are made visible so easy for operators of control centers, in order to increase the effectiveness of information already provided by the equipment.

Implementation information

Implementation status	Implementation date
Unknown	

NSA Response

NIB Comment

Causation links

Railway vehicle movement events - Train derailment

Subsystem - Rolling stock - Wagons - Wheels, axles, boogies and running gear

Causal factors - Design

Causal factors - Procedures

Causal factors - Operational planning - Maintenance plan

Causal factors - Design

Investigation details

Legal Basis	National rules imposed by implementing of the Safety Directive 2004/49/EC - in light of Article 19, §1 of SD
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Other reason descrip

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National investigatio

Occurrence creation	27-06-13 12:13:43	Investigator in charge
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Decision to investigate	25-06-13
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Declaration date	27-06-13
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Date of IM/RU notific

Report Type	Final report	Workflow Status	Validated
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Report Version	3	Investigation Status	Closed
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Other Attachments	Name	Descriptio	Type	Size	Last	Organizati	Repositor
				0			

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Final Report	Name	Descriptio	Type	Size	Last	Organizati	Repositor
	RELAZION E_INDAGI NE_17.02. 2015.pdf		applicatio n/pdf	3330911	4/30/2015 10:32:27 AM	Softeco	