

Reporting Body	IT Ministero delle infrastrutture e dei trasporti	ID	IT-1392
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#### Occurrence Summary

What		Location	
Date of occurrence	31-03-12	Location name	Line Sapri - Battipaglia, Policastro station
Local time	02:16	Latitude	40:04:34 North
Event type	Railway vehicle movement events Train derailment	Longitude	15:31:17 East

Description Derailment of the second wagon of the freight train 57369.

Direct Cause descrip Thermoplastic breaking of the journal No. 1 on the left of the first wheelset in the running sense of the train in the second wagon in the convoy, due to the high temperatures developed inside the axle bearing, and following the seizure of the bearing itself. The separation of the journal, including bearing fall on the railway, did detract from the point of support of the frame of the wagon on the axis No. 15 of the train determining the overlap of the corresponding wheel, and thus the derailment of the train.  
The mechanical failure of a component of the bearing No. 1 sx is a contributory cause.

#### Final Report

Nam	Desc	Type	Size	Last	Orga	Repo
Final _rep ort.p df	Final repor t	appli catio n/pdf	3160 98	5/6/ 2013 10:3 5:31 AM	Softe co	

#### Other Attachments

Nam	Desc	Type	Size	Last	Orga	Repo
Reco mme ndati ons. pdf	Reco mme ndati ons by the NIB	appli catio n/pdf	2668 0	5/6/ 2013 10:3 5:52 AM	Softe co	

#### What

Title Train derailment, 2012-03-31, Line Sapri - Battipaglia, Policastro station (Italy)

Occurrence type	Railway vehicle movement events Train derailment	Occurrence Class	Accident
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Date of occurrence	31-03-12	Local time	02:16
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Events Railway vehicle movement events - Train derailment

#### Descriptions

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Language	Italian	Translation provider	Information providers own translation
Description	Derailment of the second wagon of the freight train 57369.		

Location name	Line Sapri - Battipaglia, Policastro station		
Railway System type	Railway	Country	Italy
Location type	Station	Border Country	
Line type	Double track	Line number	
Allowed line speed		Km number	
Latitude	40:04:34 North	Longitude	15:31:17 East
Location description	Line Sapri - Battipaglia, Policastro Bussentino station		
Additional location in			
Location type details	Other	Fixed installations	

#### Occurrence details

##### Railway vehicles

Movement type	Freight train	Train number	57369
RU	Italy Trenitalia SpA	Wagons overturned	No
Train speed at mom	23 km/h	Passengers onboard	No
Vehicle description	1 electric loco (E656 050) + 1 inactive diesel loco + 23 wagons . The derailment regards the wagon 21 83 245 9 462-9		

##### Other objects involved in the occurrence

##### Other objects

##### Parties involved

IM Involved	Italy - RFI SpA	RU	Italy - Trenitalia SpA
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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

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Total	0	0	0
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#### Material consequences

Material Damage	Rolling stock Infrastructure	Estimated total mate	< 150 000 €
Damage description	12 000 € damages to rolling stock 10 037 € damages to infrastructure		

#### Images

Name	Description	Type	Size	Last modified	Organization	Repository
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#### Causation

##### Causes

Language	Italian	Translation provider	Information providers own translation
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##### Direct Cause description

Thermoplastic breaking of the journal No. 1 on the left of the first wheelset in the running sense of the train in the second wagon in the convoy, due to the high temperatures developed inside the axle bearing, and following the seizure of the bearing itself. The separation of the journal, including bearing fall on the railway, did detract from the point of support of the frame of the wagon on the axis No. 15 of the train determining the overlap of the corresponding wheel, and thus the derailment of the train.

The mechanical failure of a component of the bearing No. 1 sx is a contributory cause.

##### Underlying and root causes description

Underlying cause is the stop point of the train in the station Celle di Bulgheria, almost impracticable, (inaccessible area, with no footpath, full of weeds and with low visibility) which did not allow immediate feedback of the hot-box alarm.

##### Causation classification

Railway vehicle movement events - Train derailment

1 - Wheels, axles, boogies and running gear (Bearing failure)

1 - Ambient conditions (Impracticable path in the stop point after the hot-box detector)

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Recommendations  
Recommendation

Issuing information

Recommendation title	1		
Recommendation ID	REC-000139	End implementer	IM
Status	Sent to addressee	Addressee	NSA
Issue date	05-04-13		

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Recommendation texts

Language	English	Translation provider	Information providers own translation
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Recommendations text

It is recommended to the NSA to promote an activity by the Infrastructure Manager, ensuring that areas identified for stop of the train in case of "selective hotbox alarm" in order to ensure safe technical assessments by the staff, are adequate in terms of size, establishing for that purpose, and where necessary, the minimum requirements, including the practicability of the place and sufficient visibility conditions

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Implementation information

Implementation status	Unknown	Implementation date	
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NSA Response

NIB Comment

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Recommendation

Issuing information

Recommendation title			
Recommendation ID	REC-000140	End implementer	IM
Status	Sent to addressee	Addressee	NSA
Issue date	05-04-13		

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Recommendation texts

Language	English	Translation provider	Information providers own translation
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Recommendations text

It is recommended to the NSA to promote the following initiatives by the Infrastructure Manager and the Railway Undertakings, to ensure that the relief of the thermal state, during checks to bearings, is as free as possible from subjective interpretations:

- continuity in the training and skills of the crew involved in the verification of the recording of the thermal state of the bearings, on how to conduct the checks, keeping in account the returns of experience, as the result of incidents that have occurred in the past;
- modification of the template M40 RTB annexed to the Disposition No. 48/2001 regarding the "Statement to exploit the hot-box detectors (RTB)" by inserting the appropriate boxes in which are shown the temperatures detected by the RTB following absolute and/or relative selective alarm (measures available to the Control Room);
- availability to the driving personnel of the trains marching on railway lines equipped with hot-box detectors a suitable tool for thermal pad, necessary to judge objectively the opportunity to continue or not the run of the train.

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#### Implementation information

Implementation status

Implementation date

Unknown

NSA Response

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 NIB Comment

#### Recommendation

Issuing information

Recommendation title 3

Recommendation ID REC-000141

End implementer

RU

Status Sent to addressee

Addressee

NSA

Issue date 05-04-13

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#### Recommendation texts

Language

English

Translation provider

Information providers own  
translation

Recommendations text

It is recommended to the NSA to raise awareness of the railway companies permitting them to integrate properly the existing procedures of detail, issued pursuant to art. 1, paragraph 8, of the Disposition No. 48/2001, so that it may be inferred unequivocally:

- the technical tools provided;
- the limit temperatures, by type of material, for which it must be proceeded in the removal of the material in question from operation;

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#### Implementation information

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Implementation status Implementation date  
Unknown

NSA Response

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NIB Comment

#### Recommendation

Issuing information

Recommendation title	4	End implementer	NSA
Recommendation ID	REC-000142	Addressee	NSA
Status	Sent to adreesee		
Issue date	05-04-13		

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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 to promote specific actions, for the verification of freight trains, in order to achieve a higher level of reliability of the real weight of the load, also in relation to the maximum axle load

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Implementation information

Implementation status Implementation date  
Unknown

NSA Response

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NIB Comment

#### Recommendation

Issuing information

Recommendation title	5	End implementer	NSA
Recommendation ID	REC-000143	Addressee	NSA
Status	Sent to adreesee		
Issue date	05-04-13		

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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 to make a reference to the observance of the provisions governing the procedures for the operation of a shunting movement of a train without a conductor as within a unattended station operated in remote control, as in the specific case of retrocession, also considering possible improvement actions of those provisions

Implementation information

Implementation status	Implementation date
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Unknown

NSA Response

NIB Comment

Causation links

Railway vehicle movement events - Train derailment

Subsystem - Rolling stock - Wagons - Wheels, axles, bogies and running gear (Bearing failure)

Causal factors - Ambient conditions (Impracticable path in the stop point after the hot-box detector)

Investigation details

Legal Basis National rules imposed by implementing of the Safety Directive 2004/49/EC - in light of Article 19, §2 of SD - (a) the seriousness of the accident or incident

Other reason descrip

ID	IT-1392	Reporting Body	Ministero delle infrastrutture e dei trasporti
National investigatio		Investigator in charge	
Occurrence creation	05-04-12 10:29:48		
Decision to investigate	04-04-12		
Declaration date	05-04-12		
Date of IM/RU notific			

Report Type	Final report	Workflow Status	Validated
Report Version	2	Investigation Status	Closed

Other Attachments	Name	Descriptio	Type	Size	Last	Organizati	Repositor
	Recomme ndations.p df	Recomme ndations by the NIB	applicatio n/pdf	26680	5/6/2013 10:35:52 AM	Softeco	

Final Report	Name	Descriptio	Type	Size	Last	Organizati	Repositor
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Reporting Body

IT  
Ministero delle infrastrutture  
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ID

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