ANSF *Agenzia Nazionale per la Sicurezza delle Ferrovie*

Settore ispettorato e controlli

ANSF Agenzia Nazionale per la Sicurezza delle Ferr
prot. n.° 004977/2016
03/05/2016

IMPRESE FERROVIARIE con certificato di sicurezza per traffico merci

Loro SEDI

Soggetti Responsabili della Manutenzione carri merci

Loro SEDI

Detentori carri merci

Loro SEDI

RETE FERROVIARIA ITALIANA S.p.A.
Direzione Tecnica
Piazza della Croce Rossa, 1

00161 Roma

p.c. **MINISTERO DELLE INFRASTRUTTURE E DEI TRASPORTI**
Direzione Generale per le investigazioni ferroviarie e marittime
Via dell'Arte, 16

00144 Roma

Oggetto: **Safety Alert relativo al non corretto serraggio dei bulloni di fissaggio del braccio di collegamento dell'alloggiamento delle sospensioni nei carrelli AM III dei carri merci.**

Allegato: Safety alert inviato dall'Autorità Nazionale per la sicurezza della Finlandia.

Si trasmette in allegato il "Safety Alert", inviato dall'Autorità Nazionale per la sicurezza finlandese, attraverso il sistema informatico dell'ERA Safety Information System, a cui si rimanda per gli ulteriori dettagli sulla problematica in oggetto.

Si evidenzia che il non completo serraggio dei bulloni non è facilmente rilevabile nelle verifiche in esercizio e che tale problematica, come riportato dall'Autorità Nazionale finlandese può determinare lo svio del treno.

È necessaria pertanto una particolare attenzione al corretto serraggio dei bulloni durante l'esecuzione degli interventi manutentivi.

Codesti Soggetti, ognuno per la parte di propria competenza, devono adottare tutti gli opportuni accorgimenti, scambiandosi, nel rispetto dell'art. 5, comma 5 del Regolamento Europeo n. 445/2011, le informazioni necessarie ad evitare che gli eventi possano ripetersi, comunicando alla scrivente Agenzia se nel proprio contesto operativo siano già accaduti inconvenienti similari e indicando i provvedimenti adottati.

IL DIRETTORE
ing. Amedeo Gargiulo

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SAFETY ALERT

SYSTEM/ EQUIPMENT	Bogie AM III for freight wagons
SAFETY ISSUE DESCRIPTION	Bogie structure can under certain conditions collapse. If the tightening of the fastening bolts for connection arm in the saddle structure is not properly done, the parts are loosened. This will lead quickly to a fatique crack and a complete rupture of the saddle assembly. This will cause a de-railment of the wagon.
CIRCUMSTANSES *(e.g. special weather conditions)*	After the saddle structure is collapsed, the axles has no suspension, the positioning of the axles is not under control. Therefore the de-railment can take place anywhere. The realized de-railment happened in the tight curve. The probability of the de-railment is highest in the curves and in the rail switches
REASON FOR ISSUE	Proper tightening of the bolts forgotten in the maintenance. The loosening of the bolts is difficult to be identified in the normal controls during the service
LIST OF SUPPORTING DOCUMENTS *(e.g. PHOTOS, LINKS)*	A similar type of a saddle structure with a connection arm seems to be in the AM II bogies and in the Unitruck Single axled suspensions.

LINKED WITH OCCURRENCE NOTIFIED TO ERA DATABASE?	no	**LINK TO ERA NOTIFICATION**
	OCCURRENCE DATE **01/03/2016**	Click here to enter text.

ISSUER

ORGANISATION	Finnish Transport Safety Agency (Trafi)			
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ISSUE DATE	29/04/2016			

Trafi Finnish Transport Safety Agency

Safety alert: Bogie AM III for freight wagons

Description

Coil wagons derailed because of Axle Motion III (K-17) bogie failure. The problem was found from a saddle assembly, which surrounds axle boxes. The main springs of the bogie (coil spring packages) are placed on to the ends of the saddle assembly. The coil springs transmit the vertical loads of the wagon from the side beam to the saddle assembly and further on to the axle boxes.

The saddle assembly includes a connection arm, which closes the structure under the axle boxes. The connection arm is bolted to the saddle structure from its ends and forms a part of a load carrying structure.

The bolts were loosened during the service because of the vibrations. The bolts were finally fallen down together with the connection arm on the track. The strength of the structure gets dramatically worse because of this, the stress levels are raised in the vertical parts of the saddle. Dynamical type of loading in service causes quickly cracks in to saddle parts, which are propagated collapsing finally the main saddle structure. Spring packages with coil springs and saddle parts are fallen on the track. Side beam of the bogie is dropped on to a direct contact with axle boxes.

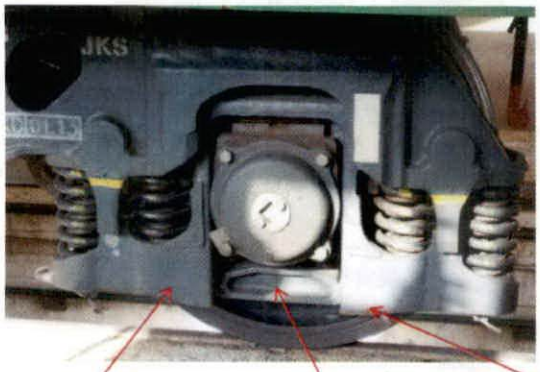
The wheelset is after the failure without suspension, locked into the side beam structure. The wheel forces are increased remarkably causing wheel and track failures, the bogie and the whole wagon gets easily derailed in this condition.

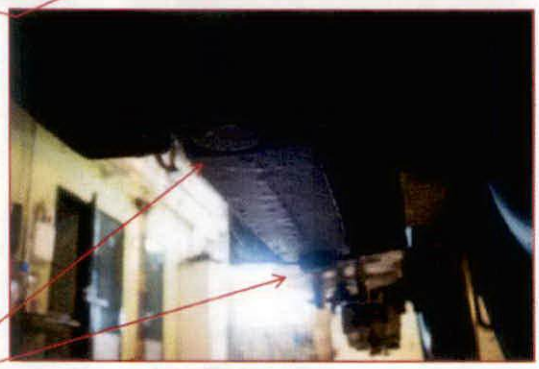
One wagon group of 4 wagons was derailed because of this type of the failure. The operator made inspection to all 160 wagons equipped with this type of bogie. Loosened bolts were found from 12 bogies.

The bolts should be torqued to a certain torsion moment. Loosening of the bolts is very difficult to be identified. The bolts have to locked mechanically so that a visual check would be possible to be carried out.

AM III (K17) Wagon and the Bogie

Saddle structure





Connection Arm

Fastening bolts for Connection Arm