

Annual Report 2016

Accident Investigation Board, Norway Railway Department

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Introduction

The Accident Investigation Board Norway (AIBN) is a multimodal organisation covering four transport modes. In year 1989, it was set up to investigate air accidents and incidents. The first railway accident investigation started 1 July 2002. Today, the AIBN is a multi-modal body investigating accidents and incidents in aviation, railways (including LTR, tramways and metros), road transport and the marine sector. The different transport modes are organised in different departments within the AIBN reporting to the Director General. The multi-modal concept has been very successful in relation to stimulating cooperation, how to approach an investigation, methodology, sharing relevant safety issues and learning from the other transport sectors. In year 2002, the AIBN's mandate was expanded to cover railway accidents, in 2005 road accidents and in 2008 marine accident, investigations were included in our mandate.

Rail accident investigation in Norway is subject to the Directive for the Accident Investigation Board Norway, laid down by the Ministry of Transport and Communications on 12 June 2002. The AIBN itself decides the scale of the investigations, including an assessment of the investigation's expected safety benefits with regard to resources required.

The AIBN is independent, focus entirely on safety, and not apportion blame or liability, nor do we enforce law or carry out prosecutions. The most important elements in the railway safety investigations are to improve the safety of railways, learning from experience and preventing accidents from recurring. Over the years, the investigations have increasingly addressed the human element, focusing on the system of interaction between human factors, technology and organisational factors. In addition, the AIBN addresses Safety Management System (SMS), safety culture etc.

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Regulation

Railway accident investigation in Norway is regulated in detail by the Norwegian Act of June 3rd 2005, No.34, relating to notification, reporting and investigation of railway accidents and railway incidents, and regulations stipulated pursuant to the Act. The act includes railway, metro, LTR and tramways.

EUs safety directive for railway was adopted and made official March 1st 2006 as Regulation 2006-03-31 nr 378. *Regulation for official investigation of railway accidents and serious incidents etc.* (“The Railway Investigation regulation”).

Mandate

AIBN shall investigate accidents and incidents in the aviation, railway, road and marine sectors.

The objective of the investigations is to elucidate matters deemed significant for the prevention of transport accidents. The AIBN shall not apportion any blame or liability under civil or criminal law.

The AIBN itself decides the scale of the investigations conducted, including an assessment of the investigation's expected safety benefits with regard to necessary resources.

Budget

The 2016 total budget is NOK 73671000,-

Organisational flow charts

Relationship between the AIBN and other national bodies:

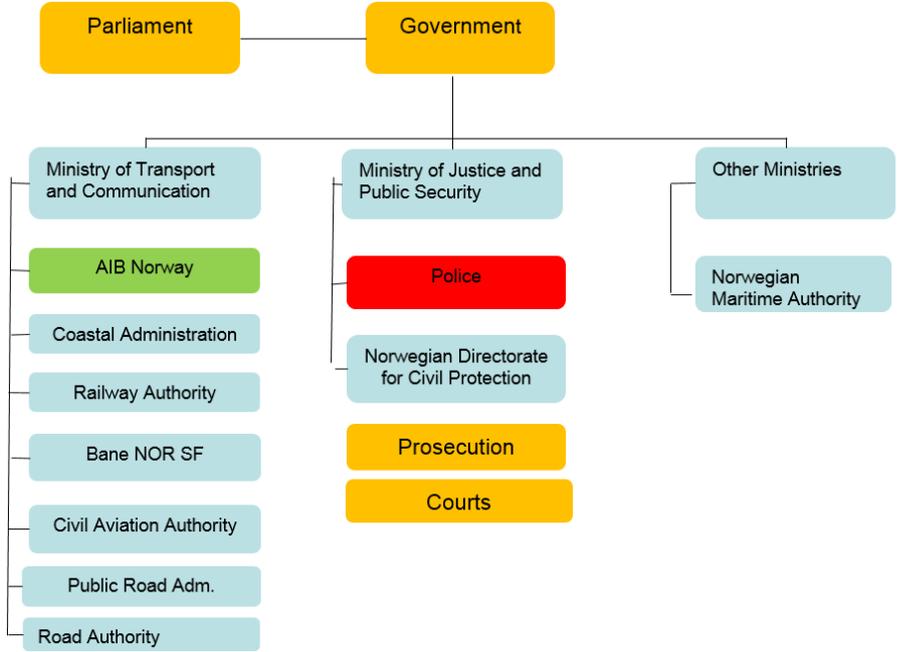


Figure 1: AIBN and other national bodies.

Relationship between the AIBN and the railway sector:

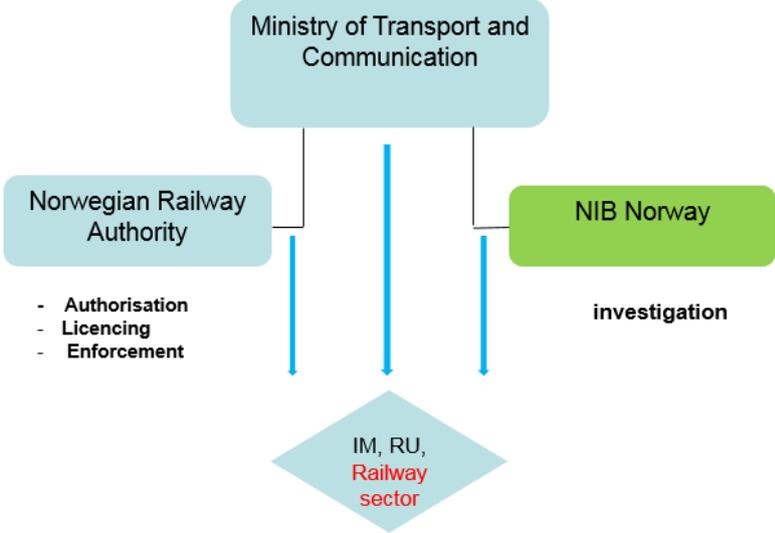


Figure 2: AIBN and the railway sector.

Accident Investigation Board Norway (AIBN) - Organisation

The AIBN organisation as of 31st December 2016:

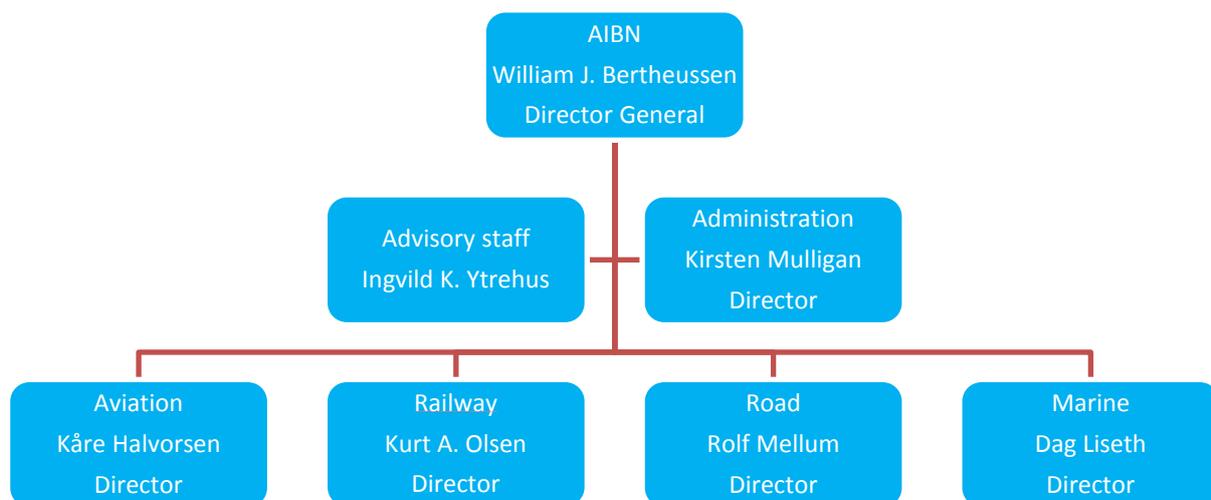


Figure 3: The AIBN organigram.

The AIBN employs 5 railway investigators with either a professional railway or investigation background, and who have been given extensive and bespoke training concerning railway operations, railway engineering and investigation skills.

All investigators carry an AIBN identification card, which identifies their powers at the scene of an investigation.

The AIBN railway investigators have the power to:

- Enter railway property, land or vehicles.
- Seize anything relating to the accident and make records.
- Require access to and disclosure of records and information.
- Require people to answer questions and provide information about anything relevant to the investigation.

Notifications of accidents and serious incidents – key numbers

The AIBN, Railway department received totally 204 notifications by telephone in 2016. The number of notification includes rail-, metro- and tram traffic including LTR. According to the Norwegian Railway Authority (responsible for official statistics), the total number of reported accidents and incidents is on the average level compared to the previous years.

Thirty-four accidents were registered including 21 fatalities including trespasses and suicides.

Nine accident or serious incident safety investigations started this year.

The AIBN, Railway department was involved in eight safety investigations as of 31st December 2016.

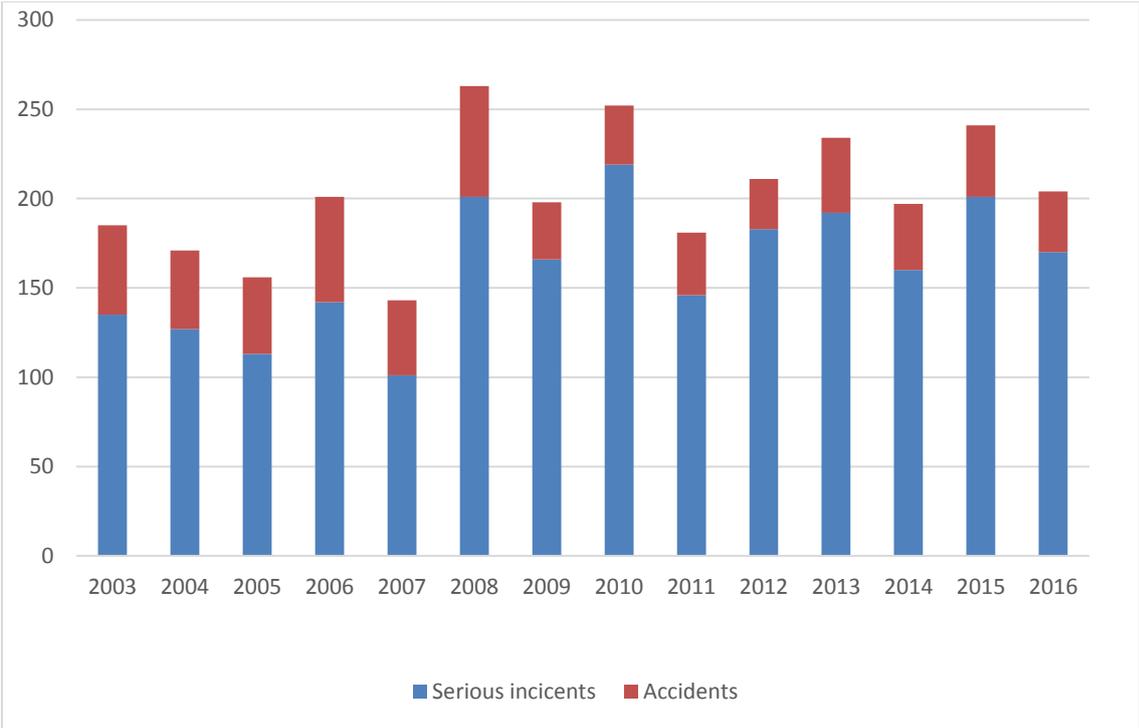


Figure 4: Key numbers, notified railway accidents and serious incidents.

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Serious railway incidents	127	113	142	101	201	166	219	146	183	192	160	205	170
Railway accidents	44	43	59	42	62	32	33	35	28	42	37	40	34
Total	181	156	201	143	272	198	252	181	211	234	197	245	204
Published reports	15	7	11	13	9	11	9	10	9	9	7	9	7

Table 1: Key numbers, reported railway accidents and serious incidents (not official statistics).

Other activities

During 2016, several meetings have been arranged with the Norwegian Railway Authority, IMs and the operators, including metro and tram operators. The meetings have focused on closing safety recommendations, accident reporting and classification, organisational changes, point of contact etc.

Norway, Sweden, Denmark, Finland, Estonia, UK and Ireland are members of the Nordic Network of Accident Investigation Bodies (NRAI). The network organises one meeting per year, where the main objective is to inform each other about safety investigations in progress, safety learning, ERA network and task force meetings and any other business common to the Nordic Region. ERA participates in the NRAI meetings.

The NIB Railway department was subject to internal revision in 2016. This year revision included QA, internal and external consultation procedures and finalizing investigation reports.

Investigation reports

The Accident Investigation Board, Norway, Railway Department, published nine final investigation reports, within 12 months after the date of the occurrence. This gives approximately two reports pr. year for each Investigator. See appendix A for details.

Key elements of the report (roadmap):

The AIBN reports follow the Directive 2004/49/EC of the European Parliament annex IV (Principal content of accident and incident investigation report) and include the following key elements:

- Notification of the accident

- Summary (in Norwegian and English language)
- Facts
- Investigations carried out
- Analysis
- Conclusion
- Planned and implemented measures
- Safety recommendations (in Norwegian and English language)
- References
- Appendices

Safety recommendations

The Accident Investigation Board Norway, the Railway department, published nine safety recommendations in 2016. An overview of the recommendations, see appendix B.

Status of the safety recommendations, (see actions taken for the 2016 safety recommendations below):

Year:	2010	2011	2012	2013	2014	2015	2016
Open:	0	0	0	0	0	0	3
Closed:	16	16	9	6	9	9	5
Total:	16	16	9	6	9	9	8

Table 2: Number of safety recommendations.

Accident Investigation Board, Norway

Lillestrøm, September 30, 2017

Appendix A - Published reports 2016

See link: <http://www.aibn.no/Jernbane/Avgitte-rapporter>

No:	Identification:	Date of occurrence:	Report published:
1	<p>At 17:57 on Tuesday 6 January 2015, the driver and the head conductor of train 2387 observed an abnormal signal at Atna station on the Røros line. The driver and head conductor have explained that they saw that the main departure signal N was green (proceed) for a period of around ten seconds, at the same time that the pre-signal for this signal showed 'expect stop' and the information in the driver's cab showed 'expect stop'. During this period, an oncoming train was on its way to Atna from the opposite direction, from Hanestad.</p> <p>The incident itself did not lead to a dangerous situation, because, as was explained, the signal that showed green went back to red before train 2387 had reached the platform at Atna station.</p> <p>However, the logs from the signalling system did not show the same situation as described by the driver and the head conductor. According to the log, the signalling system worked as intended, and the log states that the signal was red during the period in which it was reported as being green.</p> <p>As the driver and the head conductor were certain about their observations of an incorrect green light, this has led to uncertainty concerning the safety function of the signalling system. The Accident Investigation Board Norway (AIBN) has therefore conducted a series of checks in order to find an explanation for the observation. A comprehensive review of the documentation and analyses of the NSB-87 signalling system have been carried out, in addition to inspections and tests of the signalling system at Atna. This is described in the report and pertaining appendices.</p> <p>There are four main theories that may explain the incident: an optical illusion that resembled a green light, sabotage, human error in the form of misinterpretation, or a technical fault in the signalling system. It is the technical element of the signalling system that has been the main focus of this investigation.</p>	06.01.2015	06.01.2016

	<p>The AIBN has not found any basis in the documentation or the tests conducted that can explain the situation described by the driver and the head conductor. All the tests conducted have shown that the signalling system works as intended.</p> <p>The driver and the head conductor are certain about their observations, and this has weighed heavily in this investigation. The AIBN cannot say for certain what caused the ambiguous signal observed by the driver and the head conductor of train 2387 at Atna station on 6 January 2015.</p>		
2	<p>At approximately 8.20 on Monday 9 February 2015, the locomotive of freight train 5502 derailed at Grytå between Tunga and Haugastøl stations on the Bergen Line. The freight train, which is operated by CargoNet AS, was on its way from Bergen to Alnabru.</p> <p>East of Tunga station, the train ran into a cutting where a snowdrift had started to build up. Here, the locomotive derailed, with three of its axles going off the rails to the right in the direction of travel. The locomotive stopped at km 285.28 on Grytå Bridge. The size of the snowdrift was not documented. All the wagons were on the track, and the freight car set was connected to the locomotive. The locomotive and the first wagon had become buffer-locked. The rescue work was demanding and was delayed, and the section of line was reported ready for traffic at 19:25 on Wednesday 11 February, approximately 60 hours after the incident.</p> <p>In its Technical Regulations, the Norwegian National Rail Administration (NRA) states that the trains must be equipped and prepared to plough large amounts of snow on high mountain sections, even though the NRA, in principle, ploughs the track. The Rolling Stock Regulations require rolling stock to be equipped with a plough, although it is not defined or described what properties the plough should have beyond that the rolling stock must be tested in winter under all foreseeable conditions and approved without restrictions. In the compatibility declaration for the Vectron locomotive, the NRA submitted that the locomotive can be used with different snowplough configurations, and that this must be taken into consideration and lead to restrictions on use where snow conditions are difficult.</p> <p>A lot is known in Norway about the design and functioning of snowploughs. It is important that this and other general technical knowledge about the running, construction and functional properties of traction vehicles are collected and made available to all present and future operators. The Accident Investigation Board Norway (AIBN) wishes to draw attention to how to ensure the best</p>	09.02.2015	08.02.2016

	<p>possible management and communication of existing knowledge in connection with the implementation of the ongoing railway reform.</p> <p>The AIBN proposes a safety recommendation in this report. It recommends that all railway undertakings be required to carry out analyses of their own operations and implement measures to redress any matters that are uncovered.</p>		
3	<p>On Tuesday 10 March 2015, at approximately 11:00, passenger train 7224 collided with the jib of a crane on a crane wagon at Aker in Oslo. A work train was on its way to an assignment with a crane wagon in tow when the jib swung into the opposite track and hit a passenger train. The jib should have been held in place by the transport securing devices, but they failed.</p> <p>No one was injured in the collision, but under slightly different circumstances, the incident could have led to a serious accident.</p> <p>A reconstruction after the incident showed both vertical and horizontal jib movements while the crane wagon was being towed along the relevant section. Vertical track faults were also found to exist in several places along the track.</p> <p>The crane's transport securing devices consisted of a hydraulic lock and a bracket that was intended to hold the jib in place. In the AIBN's opinion, both these securing devices failed. The vertical track faults along the track probably also contributed to the incident.</p> <p>More than 100 other railway cranes and crane wagons are available for use on the national railway network. If they are not sufficiently secured, they can represent the same type of risk.</p> <p>The Accident Investigation Board Norway submits one safety recommendation to the Norwegian National Rail Administration, for it to ensure that sufficient barriers against movement are in place on plant such as cranes etc. during transport on all rolling stock it owns or hires.</p>	10.03.2015	09.03.2016
4	<p>At approximately 10.06 on 20 May 2015, a freight wagon on train 45958 derailed near Oppegård on the Østfoldbanen line. The train from Green Cargo AB was on its way from Gothenburg to Alnabru in Oslo.</p> <p>Immediately after Oppegård, the driver felt the train 'jerk', after which the main brake pipe pressure disappeared. When the train stopped, it was established that wagon number 3 in the train had been derailed for about 840 metres.</p> <p>As the wagon was negotiating a sharp curve, wheel lift occurred in the right forward wheelset. The wheel lift could have occurred as a result of the wagon in front being significantly heavier, creating strong buffer forces</p>	20.05.2015	19.05.2016

	<p>in the tight curve in connection with braking. Parts of the transition curve were near to the maintenance limit for track twist. Load calculations show that the load distribution in the derailed wagon was uneven, both laterally and longitudinally. The uneven load that was registered using an automatic wheel damage detector indicates a big difference between the wheels on the back axle that cannot be explained by load transfer. The Accident Investigation Board Norway (AIBN) believes that it is probable that the wagon had a fault condition that either could not be detected at the accident site or that was of such a nature that it was camouflaged by the consequential damage after the derailment. It is also probable that the Lgjns wagon from 1976 had weaknesses in the form of small cracks on the surface of the longitudinal girder and concealed cracks in welds that would act as fracture lines in the event of extensive stress. Investigations that the AIBN has had carried out at the Norwegian Armed Forces Laboratory Services support this.</p> <p>The AIBN believes that several factors contributed to the accident. Under normal circumstances, each individual factor alone would not have been capable of causing a derailment, but in combination they constituted a risk. The AIBN makes two safety recommendations to Green Cargo AB concerning the properties of two-axle Lgjns wagons. One of them addresses the risk of crack formation where the axle guards are fixed to the longitudinal girder. The other concerns load distribution on light, two-axle wagons of this type.</p>		
5	<p>On 5 October 2015 at approximately 17:25, the driver lost control of a locomotive owned by CargoNet AS during shunting in Mantena AS's yard at Nyland in Oslo. The locomotive had been taken to the yard for a check after a similar incident had occurred on Friday 2 October, and was being shunted from track 4 to track 1 to make room for other rolling stock.</p> <p>The driver was operating to normal procedure, but when he applied the locomotive's brakes and the electro-dynamic resistance brakes, the locomotive did not stop, but started to accelerate very quickly instead. At a speed of approximately 79 km/h, the locomotive ran through a derailer intended for preventing rolling stock from passing the stop signal on leaving the Nyland yard. The locomotive continued uncontrolledly towards Alnabru terminal at a speed of approximately 103 km/h before the driver was able to disconnect the battery so that it lost traction.</p> <p>On 23 June 2015, there had been a fire in the locomotive's traction motor no 3 and the motor's electrical cabinet. The</p>	5.10.2015	22.09.2016

	<p>damage was repaired by Mantena AS and it was found in the investigation that two cables had been incorrectly connected when the repair work was carried out. The incorrectly connected cables meant that the switch for traction inhibition had been bypassed and a delay had been introduced in the signal that resets the speed signal. This meant that when the drive control handle was set to the position for electro-dynamic resistance braking, the train built up speed rather than braking power and that the speed would be further increased by any attempt to apply more braking power. S-marking is used when work is carried out that could potentially affect critical systems. An S-marked activity or system triggers a requirement for additional peer inspections, both while the work is in progress and on completion of the work. Repair of the motor cabinet had not been identified as an S-marked activity.</p> <p>After the incidents, Mantena AS and CargoNet AS have introduced several measures to prevent similar incidents in the future.</p> <p>The AIBN submits one safety recommendation concerning requirements for train-protection installations such as derailleurs.</p>		
6	<p>At approximately 16:35 on 30 March 2016, NSB train 471 from Trondheim to Bodø was scheduled to stop and pass local train 1790 at Fauske station. Using a fixed pattern, the train was directed to track 1, across the pedestrian crossing at the southern end, while the local train was to use track 2.</p> <p>This meant that passengers catching the local train from track 2 would have to cross track 1, either before or after the arrival of train 471. One person who was going to catch the local train was approaching the pedestrian crossing as train 471 approached. As the train reached the pedestrian crossing, the person continued walking, and was hit by the train and died. The Accident Investigation Board Norway (AIBN) finds it probable that the person in question was distracted from observing the surroundings as a result of using a smart phone with ear plugs and did not notice the train. A train dispatcher was present on the platform and, according to the instructions, has the authority to intervene when possible in situations that could give rise to an undesirable incident. In the AIBN's view, this was neither possible in the given situation, nor is it something that passengers should rely on. More stations are likely to be unmanned in the future, and pedestrian crossings must be monitored and secured accordingly. Had train 471 run on track 2 rather than track 1, it would not have had to cross the pedestrian crossing while approaching the station. The</p>	30.03.2016	08.12.2016

	<p>AIBN is of the opinion that track allocation at Fauske should be reconsidered, and that this should also be done at other stations where trains pass each other in a similar way and exchange passengers.</p> <p>The AIBN submits two safety recommendations to Jernbaneverket (the Norwegian National Rail Administration) as a result of this accident. The first concerns track allocation where an approaching train crosses a pedestrian crossing, and the second focuses on requirements for securing pedestrian crossings at stations with regard to the increasing use of ear plugs and smart phones.</p>		
7	<p>In Norway, road-rail vehicles are used for maintenance assignments on railway, metro and tram tracks. Maintenance work is normally carried out at night, often in several places at the same time.</p> <p>In the early hours of Friday 26 February 2016, the brakes of a road-rail vehicle failed during maintenance work near Sinsen metro station. There were two people on board, and the driver's perception of the situation was that it was not possible to stop with the brakes available. They therefore chose to jump from the vehicle before it gathered too much speed. Both people sustained slight injuries as they hit the ground. They were able to notify a work team that was working on the track approximately one kilometre from where they had jumped off. They then proceeded in the direction the road-rail vehicle had taken and found it approximately 600 metres down the track towards Carl Berners plass, where it had come to a halt.</p> <p>An examination of the brake system after the incident showed that there was no brake fluid in one of the hydraulic circuits, and that the brake pressure was unstable in the other circuit because of an internal leakage in the main cylinder.</p> <p>The Accident Investigation Board Norway's investigation showed that the brake system for the rail wheels on the road-rail vehicle constitutes a safety risk, as the brakes are not fail-safe. The following findings were made during the investigation:</p> <ul style="list-style-type: none"> • The brake system is not in accordance with the Legal Requirement Regulations, BOStrab or EN 15746. • The Norwegian Railway Authority did not detect the faults in the brake system when it authorised use of the road-rail vehicle. • The maintenance procedures were not able to prevent the faults that occurred. • The pre-use checklist was not designed in a way that enabled the driver to detect the faults. 	26.02.2016	19.12.2016

	<ul style="list-style-type: none"> • The driver received no automatic warning of the faults (pressure drop) in the brake circuits for • the rail brakes. <p>The supplier, SRS Sjölanders AB, states that it has delivered more than 300 track maintenance vehicles with similar brake systems. According to the Norwegian National Rail Administration (Jernbaneverket), 24 vehicles belonging to private maintenance undertakings may be used for work assignments on their track systems.</p> <p>The AIBN submits one safety recommendation requesting the undertakings to consider the introduction of restrictions on use of vehicles with this type of brake system.</p>		
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Appendix B - Safety recommendations

The safety recommendations are translated from Norwegian language. The Norwegian text remains the official version of the safety recommendations. Should ambiguity arise between the two, the Norwegian text takes precedence.

See link: <http://www.aibn.no/Jernbane/Avgitte-rapporter>

Report No.	Rec. No.	Safety recommendation:	Ministry of Transportation and Communication Status report.	Status:
2016/02	01	<p>At 20:15 on Monday 9 February 2015, freight train 5502 derailed at Grytå between Tunga and Haugastøl on the Bergen Line when it ran into a snowdrift. The train was pulled by a new type of locomotive. Operators that are to operate a section of line are required to carry out risk assessments in order to identify all technical and operational risk factors, but this had not uncovered the weaknesses in the positioning and design of the snowplough.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian Railway Authority take steps to ensure that railway undertakings have</p>	<p>The railway undertakings have been informed of the report, and the supervisory authority specifies their responsibility for carrying out the necessary risk assessments when introducing new rolling stock, including in connection with winter operations. They have also been informed that this may be the subject of future supervision.</p> <p>The supervisory authority has also informed the Norwegian National Rail Administration (Jernbaneverket) of the report's sections 3.3 Other factors and 4.2 Other observations: 'Grytå bridge does not have railings, which means that it is unsafe for personnel who need to cross the bridge to pass this area'. This means that it is challenging to pass the</p>	Closed

		procedures for and are aware of their duty to assess risks and implement adequate barriers when introducing new rolling stock in winter operations.	bridge in a safe manner when a stationary train is on the bridge.	
2016/03	02	<p>On Tuesday 10 March 2015, the jib of a crane in work train 55208 hit a passenger train at Aker station in Oslo. Two barriers that should have prevented the jib from moving during transport failed in connection with this accident. More than 100 other railway cranes and crane wagons are available for use on the national railway network. If they are not sufficiently secured, they can represent the same type of risk.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian Railway Authority ensures that the Norwegian National Rail Administration has sufficient barriers against movement in place on plant such as cranes etc. during transport on all rolling stock it owns or hires.</p>	<p>The Norwegian National Rail Administration (Jernbaneverket) has made amendments to the driver's rulebook:</p> <p>‘Vehicles with protruding, movable equipment. Lifting equipment and personnel lifts that are not secured behind casing or with a physical lock, and that may, inadvertently, come outside the loading gauge, shall be secured in another manner.’</p> <p>During the course of 2016, a barrier analysis will also be carried out when new rolling stock is procured and a cradle will be prepared for existing stock.</p>	Closed
2016/04	03	<p>On 20 May 2015, an Lgjns freight wagon on train 45958 derailed near Oppedgård on the Østfoldbanen line. Upon inspection after the derailment, fracture lines were detected in the form of small cracks on the surface of the longitudinal girder and concealed cracks in welds. They were found where the axle guards are fixed to the longitudinal girder, an area that is subjected to strong forces because of the design of the wagon.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian National</p>	<p>Since the wagon in question was welded, Green Cargo AB has introduced a welding standard for railway vehicles and a requirement that certification is needed to carry out the work, as well as documentation of the welding process. All wagons welded before the standard was introduced will be checked during maintenance. By following the new standard, welding will be carried out and the work documented in accordance with the recommendation. The company is also checking previously welded wagons through the maintenance programme.</p>	Closed

		Rail Administration request Green Cargo AB to ensure that future welding work in the area where axle guards are fixed to the longitudinal girder on Lgjns wagons is carried out and documented in accordance with applicable welding norms.		
2016/04	04	<p>On 20 May 2015, an Lgjns freight wagon on train 45958 derailed near Opegård on the Østfoldbanen line. The container on the wagon was more heavily loaded at the rear than at the front, but it was within the applicable rules for loading. This wagon type is more at risk of derailment than others because of the low weight of the wagon, short wheel base and large overhang. Uneven load distribution contributed to the wheel lift and the derailment.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian National Rail Administration request Green Cargo AB to verify that the applicable loading principles are sufficient for this type of wagon.</p>	<p>Green Cargo AB is participating together with several European and Norwegian companies in the development of common loading rules in the UIC for new and existing wagons, where, among other things, experience from accidents and undesirable incidents is shared. This provides a greater basis for Green Cargo AB to develop existing and new loading rules. The loading rules developed by the UIC will first be assessed before they are adopted by the companies. This type of wagon has been used in Norway and Sweden since the end of the 1980s and Green Cargo AB has not been made aware, or experienced itself, that the existing loading rules are insufficient for this type of wagon. They have therefore considered the existing loading rules to be sufficient.</p> <p>To avoid compressive stresses on the train, the locomotive is operated in brake group G for trains weighing more than 600 tonnes. This extends the application time for the brake on the locomotive and will thereby help to stretch the train and avoid compressive stresses. Green Cargo AB obtains information from Network Statement about infrastructural factors that can lead to limitations in the use of vehicles and wagons. Based on the accident in question, Green Cargo AB will initiate cooperation with Bane NOR SF to assess the interaction of the wagon in question with the infrastructure, in order to check</p>	Closed

			<p>whether new information arises that is significant to the performance of this type of wagon.</p> <p>In addition to following up the safety recommendations for Green Cargo AB, the Norwegian Railway Authority has notified the freight train companies of the report so that they can consider any learning aspects of the accident.</p>	
2016/05	05	<p>On Monday 5 October 2015, a locomotive ran out of control between Nyland yard and Alnabru terminal in Oslo during shunting. The driver tried to brake using the electrical resistance brakes, but rather than slowing down, the locomotive continued to accelerate to a speed of 103 km/h. After approximately 200 metres, the locomotive ran through a derailer without derailing and continued to the Alnabru terminal against a stop signal.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian Railway Authority ask the Norwegian Railway administration to conduct a review of the regulations for train-protection installations, including to assess the design and function of derailleurs to ensure that they provide an adequate barrier capable of bringing the rolling stock to a halt.</p>		Open
2016/06	06	<p>On 30 March 2016, a person was hit by a train and died on the pedestrian crossing between tracks 1 and 2 at Fauske station. Jernbaneverket (the Norwegian National Rail Administration) has chosen an</p>		Open

		<p>unfortunate track allocation in that long-distance trains are directed to track 1 and therefore have to cross the pedestrian crossing when approaching the station. This means that passengers catching the train from track 2 have to cross track 1, either before or after the arrival of the long-distance train.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian Railway Authority and Jernbaneverket review and, if possible revise, the track allocation pattern for trains that pass each other and exchange passengers, in places where the approaching train has to cross a pedestrian crossing.</p>	
2016/06	07	<p>On 30 March 2016, a person was hit by a train and died on a pedestrian crossing at Fauske station. The accident occurred on a pedestrian crossing without any mechanical barrier. The person was probably unaware of the approaching train as a result of being distracted by the use of ear plugs and a smart phone.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian Railway Authority request Jernbaneverket (the Norwegian National Rail Administration) to review and clarify its requirements for securing pedestrian crossings at all stations with regard to the increasing use of ear plugs and smart phones.</p>	Open

2016/07	08	<p>In the early hours of Friday 26 February 2016, a road-rail vehicle was engaged in maintenance work near Sinsen metro station. The brakes failed at the work site and the crew jumped from the moving vehicle. The vehicle rolled uncontrolled for 600 metres before it stopped. The brake system for the rail wheels does not meet the fail-safe requirements of the Legal Requirement Regulation.</p> <p>The Accident Investigation Board Norway recommends that the Norwegian Railway Authority request the undertakings to consider the introduction of restrictions on use of vehicles with this type of brake system.</p>	<p>The Norwegian Railway Authority has requested that infrastructure operators for trams and railways consider whether the issue commented on in the AIBN's report may also be relevant to them, both in relation to own and hired rolling stock.</p>	Closed
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Appendix C – Directive for the Accident Investigation Board Norway

Laid down by the
Ministry of Transport and Communications on 12 June 2009.

1 Organisation

The Accident Investigation Board Norway (AIBN) is an administrative agency that reports to the Ministry of Transport and Communications. The AIBN is an independent body as regards professional issues.

The areas of road, air and railway transport are the responsibility of the Ministry of Transport and Communications. Marine transport is the responsibility of the Ministry of Trade and Industry.

The Ministry of Transport and Communications cannot instruct the agency in professional matters in those areas for which the AIBN is responsible. With the exception of such matters as stated in Section 476, seventh subsection of the Norwegian Maritime Code, the same applies to the Ministry of Trade and Industry within the marine sector.

2 Objective

The AIBN shall investigate accidents and serious incidents in the aviation, railway, road and marine sectors.

The objective of the investigations is to elucidate matters deemed to be significant for the prevention of transport accidents. The AIBN shall not apportion any blame or liability under civil or criminal law.

The AIBN itself decides the scale of the investigations to be conducted, including an assessment of the investigation's expected safety benefits with regard to necessary resources. Details of the objectives within the various transport sectors:

Aviation

The AIBN shall investigate aviation accidents and serious aviation incidents within the framework stated in Act No. 101 of 11 June 1993 relating to Aviation (the Aviation Act), Chapter XII Notification, reporting and investigation of civil aviation accidents and civil aviation incidents etc., and regulations stipulated pursuant to the Act. Reference is also made to Council Directive 94/56/EC of 21 November 1994 establishing the fundamental principles governing the investigation of civil aviation accidents and incidents.

Railways

The AIBN shall investigate railway accidents and serious railway incidents within the framework stated in the Act of 3 June 2005, No. 34, relating to notification, reporting, and investigation of railway accidents and railway incidents etc. (the Railway Investigation Act), and regulations stipulated pursuant to the Act.

Road traffic

The AIBN shall investigate serious road accidents and road incidents within the framework stated in the Act of 18 June 1965, No. 4, relating to road traffic (the Road Traffic Act),

Chapter VII Investigation of traffic accidents etc., and regulations stipulated pursuant to the Act.

Marine

The AIBN shall investigate marine accidents within the framework stated in the Norwegian Maritime Code of 24 June 1994, No. 39, Chapter 18 (II) Maritime inquiries, and regulations stipulated pursuant to the Code and obligations Norway has assumed under international law.

3 Delineation

The activities of the AIBN do not comprise areas of responsibility that come under the Police and Prosecution Authority, the Armed Forces, the Norwegian Railway Inspectorate, the Norwegian Public Roads Administration, the Norwegian Civil Aviation Authority or the Norwegian Maritime Directorate.

The AIBN shall also cooperate with other parties to the extent necessary, where this may be beneficial in terms of resource use and user-friendliness.

4 Duties

Within the framework of current legislation the responsibilities of the AIBN shall include:

- investigating transport accidents/incidents as mentioned in Item 2,
- preparing reports containing a statement from the AIBN on the causes of the accident/incident and any recommendations on matters the responsible party should consider rectifying to prevent re-occurrences of the same or similar nature, but without outlining specific solutions.
- performing special duties of significance for safety as may be imposed on the agency by the Ministry of Transport and Communications, and for maritime matters in consultation with the Ministry of Trade and Industry, pursuant to statutes and regulations,
- representing the Ministry of Transport and Communications and/or the Ministry of Trade and Industry as required, or participating in meetings with the said ministries in various international organisations and forums within the relevant transport sectors.
- issuing comments/statements on matters submitted by the Ministry of Transport and Communications, and for maritime matters in consultation with the Ministry of Trade and Industry, to the extent requested by the ministries, assisting in processing cases, etc.

The AIBN shall report to the Ministry of Transport and Communications in the course of the year and in a separate annual report on the agency's activities and results.

The activities shall be conducted within the framework of current statutes, rules and regulations. Cases shall be considered in accordance with generally accepted administrative principles and applicable rules for case processing in the public sector.

5 Day-to-day management

Day-to-day management of the AIBN is exercised by the Director General. The Director General is appointed by the King upon recommendation from the Ministry of Transport and Communications.

The Director General shall:

- inform the Ministry of Transport and Communications of important matters that come under the AIBN's area of responsibility,
- ensure good quality in cases submitted to the Ministry of Transport and Communications,
- decide all cases that do not require submission to a higher authority,
- ensure that the AIBN is run efficiently in accordance with current statutes, rules and regulations and the requirements stipulated in the management dialogue,
- ensure that there are documentable systems for internal control and risk management, and that evaluations are conducted of the agency's efficiency, goal achievements and results.

Within limited areas the Director General may delegate authority to other employees of the AIBN and issue further instructions for the performance of the delegated authority in general or for individual cases.

6 Authority to issue a directive

The Ministry of Transport and Communications has the authority to stipulate a new directive or make changes in the directive.

7 Entry into force

This directive enters into force on 12 June 2009.

From the same date the directive for the AIBN of 21 June 1999 with subsequent changes is repealed.