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May 1, 1912.

IN RE INVESTIGATION OF ACCIDENT ON THE  
GRAND TRUNK RAILWAY, February 15, 1912.

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On February 15, 1912, there was a head end collision between two freight trains on the Grand Trunk Railway at North Yarmouth, Maine, resulting in the death of an engineman, a fireman and a brakeman, and the injury of a fireman.

This accident was reported by telegraph by the Grand Trunk Railway Company on February 16, and after investigation the Chief Inspector of Safety Appliances reports as follows:

The Portland and Island Pond sub-division of the Grand Trunk Railway where this accident occurred is a single track line extending from Portland, Maine, westward to Island Pond, Vt., a distance of 150 miles. No block signals are used on this portion of the road, trains being operated under the train order system.

On February 14, 1912, train No. 92 left Island Pond, Vt., at 5:15 p. m., 5 hours and 25 minutes behind its regular schedule. This train was in charge of conductor Smith and engineman Goff, and when leaving Island Pond it was hauled by engine 710 and consisted of 36 freight cars and a caboose. Upon arriving at Gorham, 53 miles east of Island Pond, at 10:10 p. m., conductor Smith received instructions to take engine 2345 coupled ahead from Gorham to Deering. Deering is a station about

two miles west of Portland, Me., where the shops of the railroad company are located. Engine 2345, in charge of engineman Ring, was disabled on the right side on account of a broken cylinder head, and was being taken to Deering shops for repairs. Engine 2345 was smaller than engine 710, and it was believed that its air pump was not of sufficient capacity to supply air enough to safely operate the brakes of the train. For this reason, before leaving Gorham, arrangements were made between enginemen Goff and Ring and conductor Smith to have Engineman Goff on engine 710 operate the train brakes.

Train 92 departed from Gorham at 11:10 p. m., February 14, with the disabled engine 2345 coupled in ahead of 710 and engineman Goff on 710 having control of the air brakes. At Bryant's Pond, a station about 30 miles east of Gorham, a stop was made, and train No. 92 took the siding and met west bound train No. 93. No difficulty was experienced in stopping, and the brakes appeared to be in good working condition. About 15 miles further east, at South Paris, another stop was made for the purpose of taking water. At this stop the train ran by the water plug two or three car lengths. This failure to make a good stop, however, was not attributed to any defect in the brakes, as the view of engineman Goff on engine 710 was obscured by steam and smoke from the leading engine, and for this reason he miscalculated the stop.

At South Paris train 92 received a copy of train order No. 6, reading as follows:

"Eng. 760 run extra Deering to Gorham meet No. 92 engs. 710 and 2345 coupled at North Yarmouth No. 84 eng. 754 at West Bethel and has right over No. 94 eng. unknown Deering to Gorham."

This order was made complete at 2:45 a. m., February 15, and was properly delivered to conductor Smith and engineers Goff and Ring and signed for by them, and all admitted that the order was read and properly understood by them. After taking water and receiving and signing for this order the train departed from South Paris at 3 a. m., February 15. At Danville Junction, about 19 miles east of South Paris and about 16 miles west of the place of the accident, another stop was made for the purpose of taking water. At this point the engines were uncoupled from the train and after taking water the engines were again coupled to the train, and the fact that the brakes released properly after the engines were coupled on was considered to be a sufficient test that the brakes were in good working condition. After coupling up, train 92 proceeded on its way and collided head on with extra 760 about 400 feet east of the east switch at North Yarmouth, at 4:40 a. m., February 15. The force of the collision was so great as to almost completely demolish the three engines, as well as nine cars on train 92 and two on extra 760. The wrecked cars caught fire and were completely destroyed.

West-bound extra No. 760 departed from Deering about three a. m., February 15, with order No. 6 directing it to meet train 92, engines 710 and 2345, at North Yarmouth. The train consisted of 21 cars, and was in charge of conductor White and engineman Barnes. This train arrived at North Yarmouth about 4:39 a. m., and stopped 400 feet east of the passing siding switch for the purpose of taking the siding to meet train 92. Head brakeman McClearn got off the engine as the train came to a stop and unlocked the switch to let his train in on the siding. About that time he saw the headlight of train 92 near the bridge which crosses Royal River, about 3300 feet west of the switch, and believing that the train would not be able to stop, he did not throw the switch but flagged train 92 with his white light. Train 92 went by him at a speed estimated at between 12 and 20 miles per hour. Engineman Barnes on extra 760, when he saw train 92 would be unable to stop, reversed his engine and was attempting to back his train away when the collision occurred.

Engineman King of engine 2345 said that there was considerable steam and smoke from his engine trailing back on engine 710, which obscured the view of engineman Goff. He stated that he did not pay particular attention to the brakes, as he was depending on engineman Goff to control the train. There was nothing to indicate that the brakes were not working properly; it is apparent that

the brakes were working properly at the several stops made between Gorham and the place of the accident. He received a copy of order No. 6 at South Paris, and understood that it meant for him to stop at North Yarmouth unless extra 760 was there and in the clear. He saw the headlight of extra 760 when his train was a mile and a half away from the place where the accident occurred. His train was then running about 30 miles an hour, and he did not have any doubt about a proper stop being made until he reached a point just west of the bridge, at which time he began to realize that the train was going too fast to make the stop, and he then whistled for brakes. Just after they went over the bridge he called for brakes the second time. When asked why he did not apply the brakes himself when he felt that the train was not under control he said the other man was handling the brakes and he thought he (Ring) had done all he could. He stated that he shut off steam nearly five miles away from the point of collision, and that engineman Goff on engine 710 shut off steam a mile or a mile and a half away. He stated that engineman Goff did not commence to brake the train until about the time he went over the bridge. He felt the brakes take hold somewhere between the bridge and the station. He whistled for brakes three or four times and did not know positively whether or not brakes were applied before he whistled the first time. He made no attempt to cut in

his own brake and apply the emergency after he realized that the train was beyond control, nor did he reverse his engine. He put on the sand blower about the time the train passed the station and after his engine passed the east switch, about 400 feet away from the point of collision, he got off. He stated that when he felt the brakes go on he thought they had plenty of time to stop before the train would get to the switch. He admitted that he might have avoided some of the shock of collision had he reversed his engine after he saw that the train could not be stopped in time to avoid the accident, but stated that he did not think it would have made much difference.

Engineman Goff on engine 710 stated that when he took on engine 2345 at Gorham he had an understanding with engineman Ring that the air was to be used from the second engine because engine 2345 was unable to supply the train line with air on account of its small pump. He stated that in cases of this kind it was always customary for the engineman on the second engine to handle the air. There was nothing said about signals or orders, nor keeping a lookout ahead; it was still understood that Goff was to handle the air brakes from his engine. At all the stops made between Gorham and North Yarmouth the brakes operated in a satisfactory manner, but Goff stated that they were not working quite as well as he thought they ought to. He attributed this to the cold weather, and said the brakes

were average winter brakes. He had to make an unusually heavy reduction in order to secure proper results. He was on the lookout for train 760 at North Yarmouth and expected to stop there, but stated that he could not see very well on account of smoke and steam from the leading engine and miscalculated his distance. He first began to use his brakes just as he went over the bridge. That was about the time engineman Ring on the leading engine whistled for brakes. He stated that he thought he knew where he was, but when he got to the bridge he found out that he was a quarter of a mile nearer North Yarmouth than he had previously supposed he was. He then realized that he had been lost on account of the smoke from the leading engine. He at once made a heavy application of the brakes, but stated that they did not seem to take hold at all. His train was then running about 30 miles an hour. When he applied the brakes he also opened the sand blower. After his train had gone perhaps half a train length and the brakes did not take hold as they should, he then applied the brakes in emergency. He did not see train 760 at that time, but saw it about the time he passed the station about 1850 feet from the point of collision, and then reversed his engine. After reversing the engine he told the fireman and brakeman that they had better be ready to get off because he thought they were not going to be able to stop, and after his engine passed the switch he got off. The fireman and brakeman were killed.

Conductor Smith of train 92 stated that when engine 2345 was taken on at Gorham it was understood that engineman Goff of engine 710 should handle the air, because engineman Ring of engine 2345 said that his pump was too small to supply the train line. He read the orders to both enginemen and knew that they understood them. He stated that there was nothing wrong with the brakes and said that they were a little better than the average. When the train approached North Yarmouth conductor Smith was sitting at the desk in the caboose making out his reports and did not notice the location of the train until his attention was called to it by the brakeman who was riding in the cupola. Just before going over the bridge the brakeman said to the conductor that they were going rather fast and that he thought they would run by the switch. Conductor Smith stated that he then immediately got up from the desk and went into the cupola; they were just then passing over the bridge. He said that he felt no application of the brakes previous to that time but felt a slight jerk as though the brakes were applied just as he got into the cupola. He at once took hold of the conductor's valve and made an emergency application of the brakes. He stated that before he had taken his hand away from the conductor's brake valve the collision occurred and he was thrown down on to the floor of the caboose. He stated that there was no appreciable



time from his application of the emergency brakes until the collision occurred. As soon as he picked himself up after the collision he ran to the head end of the train and asked engineman Goff what was the trouble, and Goff replied, "I was lost until I struck the switch."

Brakeman Gardner of train 92 stated he was riding in the cupola, and that conductor Smith was at his desk until he called his attention to the fact that they were getting close to North Yarmouth. He saw the semaphore light at the east end of the bridge, and felt that the train was going too fast to make the stop. West of the bridge he called to conductor Smith and said to him that he did not believe that they would be able to stop. He felt the brakes go on just before conductor Smith applied the emergency. Almost at the same instant conductor Smith put on the emergency brake the collision occurred. He stated that the brakes had worked all right and that he did not notice any trouble with them. He said that when the conductor opened the emergency valve he noticed a strong exhaust from the train line.

From the point of the accident westward in the direction from which train 92 was approaching the track is straight and practically level to Royal River bridge, and from the west side of the bridge an object can be distinctly seen at the east switch of the passing track a distance of 3360 feet. Extra 760 was standing on straight track 400 feet east of this switch, so that it could be

distinctly seen at a point approximately 4000 feet away in the direction from which train 92 was approaching.

Bulletin No. 246 of the Grand Trunk Railway Company, issued on March 22, 1905, reads as follows:

Engines running coupled over the road. The air brakes must be worked from the front engine.

Bulletin No. 426, issued February 21, 1907, addressed to all conductors and engineers, reads as follows:

When two or more engines are coupled together at the head end of a train the air brakes must be connected through to and operated from the leading engine. Enginemen on each engine except the leading one must close the cock in train pipe below engineer's brake valve and place the head of brake in running position. Under no circumstances must air brakes be operated from rear engine.

These bulletin orders were not obeyed in this instance.

Trainmaster Farrell of the Grand Trunk Railroad stated that the order to put engine 2345 ahead of train 92 at Gorham was issued by the Chief Dispatcher over his signature. He stated that it is customary to handle disabled engines in that way, and did not consider that there was any source of danger in it. He said that the leading engine was supposed to handle the air if it had a proper pump. He said that he knew that there were cases when the second engine controlled the brakes of the train in violation of bulletin orders of the company, and that under conditions such as existed on train 92 on the date of the collision "it is being done right along." In his opinion it would have been possible for either one of the

engineemen on train 92 to stop the train in time to avoid the collision if they had used the appliances under their command. In his opinion engine 2345 was all right to run coupled ahead of engine 710 to the shop for repairs, and it had been the practice of the officials of the Grand Trunk Railway to permit this to be done. He did not consider that there was any danger in the arrangement. He said that they had handled a number of them in that way.

Rule 283 of the company reads as follows:

Engineers on passenger and freight trains leaving a terminal, or at any point where the make-up of their train has been changed, must, after starting, but before running one thousand (1,000) feet, apply the air brake sufficiently to know that it is in good working order.

This rule applies to all trains, but such a test was not made after the engine coupled on to train No. 92 at Danville Junction, and engineman Ring stated that it was not customary to make the test with freight trains. Trainmaster Farrell also stated that he was aware it was customary not to obey this rule. He stated that no running test of air brakes on freight trains had ever been made that he knew of, and the company did not expect the men to obey that rule except on passenger trains.

The primary cause of this accident was the failure of enginemen Coff and Ring to approach North Yarmouth with their train under control, knowing that extra No. 760 was to be met at that station. Engineman Ring admits that he saw the headlight of extra 760 a mile and a half away from the meeting point, and when his train approached the bridge at a speed of 30 miles per hour, and

he realized that engineman Goff was allowing the train to get beyond control, a proper regard for safety should have induced him to at once cut in his brake valve and make an emergency application of the brakes. He appears to have relied altogether upon the engineman of the second engine, even after he must have realized that the train was beyond control. Engineman Goff and conductor Smith are equally responsible for failing to exercise proper precaution to see that their train was under control prepared to stop at a meeting point. All these men were culpable, in the first instance, in disobeying the bulletin orders of the company which required the air brakes to be controlled from the leading engine. Had this order been obeyed the accident would not have occurred.

According to the statement of trainmaster Farrell, an exceedingly lax enforcement of rules appears to have prevailed on this portion of the Grand Trunk Railway. It was admitted by him that the positive direction of bulletin 246, that "Under no circumstances must air brakes be operated from rear engine", was habitually disregarded by employees, with full knowledge of the Grand Trunk officers. He also admitted that men are not expected to make running tests of air brakes on freight trains, although rule 280 of the Grand Trunk Railway Company positively requires such tests to be made. When company officers have full knowledge of and acquiesce in the disobedience of positive rules for the prevention of accidents, they cannot reasonably

expect to evade responsibility for carelessness and inattention to duty on the part of employees.

The employees responsible for this accident were experienced men with good records. They had been on duty about 12 hours at the time of the accident and had had sufficient time off duty before starting out on this trip.

Chief Inspector of  
Safety Appliances.