

In Re: Investigation of an accident which occurred on the Denver & Rio Grande Railroad, at Military Junction, Colorado, on July 17, 1916.

On July 17, 1916, a passenger train on the Denver & Rio Grande Railroad ran into an open switch and collided with a out of ten freight cars standing on a passing track, at Military Junction, Colo., the collision resulting in the injury of twenty-four passengers and three employees.

After investigation of this accident the Chief of the Division of Safety submits the following report:

This accident occurred on the First District of the First Division of the Denver & Rio Grande Railroad, which is a double-track line at this point. Trains are operated by time-table and telegraphic train orders, no block signal being used. There is a  $1\frac{1}{2}$  degree curve 350 feet long, beginning 570 feet west of the passing track switch at Military Junction, but the view for a distance of about a mile west of the switch is unobstructed. The grade is slightly descending for eastbound trains.

The trains involved in the accident were east-bound passenger train No. 12, en route from Pueblo, Colo., to Denver, Colo., and westbound extra 329 known as a "short local," running from Denver to Loviers, Colo., and return. The passenger train consisted of locomotive 703, a baggage car, two coaches, a dining car and a Pullman car, in the order named, the dining and Pullman cars having steel

underframes and the other cars being of wooden construction. This train, with Conductor MacFarland Engineman White in charge, left Littleton, Colo., its last stopping point, about two miles west of Military Junction, at 11:01 a. m., on time, and at 11:05 a. m., while running at an estimated speed of thirty-three miles per hour, headed into an open switch at the west end of the passing track at Military Junction, 8.2 miles west of Denver, colliding with a cut of ten freight cars which had been left on this passing track by extra 629 west while doing station switching.

Extra 629, consisting of engine 629 and twelve freight cars, with Conductor Lyman and Engineman Stringman, in charge, left Burnham Yard, Denver, at 10:00 a. m., and at 10:20 a. m. arrived at Petersburg, which is half a mile east of Military Junction. This train pulled down to a crossover between the two main tracks at Military Junction and backed ten cars over into a passing track on the south side of the eastbound main track; this cut of cars was left standing a distance of about one car length into clear, while the locomotive, with two cars, backed down the eastbound main line to do some work at Petersburg freight house; the locomotive then returned on the eastbound main line to Military Junction, and at 10:35 a. m. crossed over to the west bound main line and ran out on a branch line leading to Fort Logan, a distance of two and one-half miles from Military Junction. Conductor Lyman of Extra 629 sent his two brakemen with the locomotive to place a car at

Fort Logan, while he remained at Military Junction to care for the switches and to take note of passing trains.

Four switches at Military Junction had been used by the local in making these movements, one on each end of the crossover, one leading from eastbound main line to passing track, and one leading from westbound main line to branch line. After the engine had gone on the branch line to Fort Logan the switches on the crossover and from the westbound main track to the branch were not closed but were left open for the return movement of the engine. Conductor Lyman stated he expected his engine would be gone not more than fifteen minutes and he thought he would be able to get his train off from the passing track and on the westbound main line before the arrival of train No. 12. However, his engine was gone nearly half an hour, and he saw it coming back at about the same time that he heard No. 12 whistle and saw it approaching. To permit No. 12 to go by, he threw the crossover switch on the eastbound main line to the main track position, and forgetting or not noticing that the passing-track switch was already lined up for the main line, he threw that switch, in error; he then walked over to the westbound main line as No. 12 approached. He did not signal the approaching train, but noticed that the fireman was disturbed or agitated and was at a loss to account for his actions until he saw the passenger train enter the siding.

Fireman Tanney of train No. 12 saw Conductor Lyman

standing opposite the switches, and when his train was about four hundred feet from the passing track switch he noticed that the switch was open; he shouted to Engineman White, who made an emergency application of the brakes just about the time the train entered the passing track, but the speed was not materially reduced before the collision occurred.

The first car on the passing track was a flat car loaded with ties. Engine 758 of train No. 12 mounted this car, and came to rest at an angle of about 45 degrees with the front end of the engine on the flat car, the ten freight cars having been driven back a distance of about 60 feet. The engine was considerably damaged. None of the cars in the passenger train was derailed and only the baggage car was slightly damaged.

This accident was caused by Conductor Lyman of the local freight train forgetting that the passing track switch was already lined up for the main track and improperly opening it in front of the approaching passenger train.

Conductor Lyman is a man of thirty years' railroad experience, with an excellent record, and it is impossible to account for his neglect and gross carelessness in this instance. He stated that he supposed there were four switches open instead of only three; when No. 12 was half or three-quarters of a mile away he threw the two switches on the eastbound main line, and he did not realize that he had set the passing track switch wrong until he saw the train head in. He stated that he was not at all excited or muddled until he saw the train enter the siding. At the time of the acci-

dent Conductor Lyman had been on duty for about one hour after a period off duty of 28 hours and 35 minutes.

A time-table rule provides that "all trains will approach crossovers at Military Junction, Overland Park Junction, Sixth Avenue, Eleventh Avenue and Larimer Street, West Denver, under full control." But this rule is interpreted by officials of the railroad as protecting crossover movements only and as not referring to switches; if when a train is approaching it is seen that no crossover movement is being made and the way is clear, it is to be assumed that the switches are properly lined up for the main track.

The investigation disclosed that it is not an uncommon practice for the switches at this point to be left open for considerable periods of time during switching operations at comparatively remote points. This practice, while not responsible for this accident, is not conducive to safety, and should be discontinued.