

INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON THE
TEXAS & PACIFIC RAILROAD, AT RANGER, TEXAS,
JUNE 12, 1919.

July 21, 1919.

On June 12, 1919, there was a derailment of a passenger train on the Texas & Pacific Railroad, at Ranger, Texas, which resulted in the death of 2 passengers and the injury of 73 passengers and 3 employees. After investigation, the Chief of the Bureau of Safety submits the following report:

This accident occurred on the Fort Worth sub-division of the Fort Worth division, a single track line extending from Fort Worth to Baird, Texas, a distance of 140 miles. The movement of trains is governed by time table and train orders transmitted by telephone; no block signal system is in use. Approaching the point of accident from the west, beginning at Ranger passenger station, the track is straight, and is level for a distance of 350 feet, after which there is an ascending grade, varying from .35 to .8 per cent, for a distance of 1600 feet. From this point to the point of accident, a distance of 1400 feet, there is a descending grade reaching a maximum of 1.25 per cent. The track is laid with 75-pound rails, 30 feet in length, single-spiked, with four-hole angle bars, and with from 15 to 16 ties to the rail. In the immediate vicinity of the accident the rails are tie-plated, and there are eleven 7x16 switch ties to the rail. Beginning at a point about 500 feet in advance of and extending for some distance beyond the point of derailment, the track was skeletonized preparatory to ballasting, but there was no slow order in effect. The

surface and alignment were good. On the south side of the main line there is a lead known as the Dorsey lead track, 940 feet in length, the west switch of which is a facing point switch for eastbound trains. It was at this switch that the derailment occurred. The switch leading to this lead track is a No. 9 turnout; the switchstand is on the right side of the track going east.

The train involved was eastbound passenger No. 13, en route from Baird to Fort Worth, consisting of engine 413, four baggage cars, four coaches, and three sleepers, all of wooden construction, in charge of Conductor Ferguson and Engineer Bailey. It left Baird at 8.45 p.m., arrived at Ranger, 45 miles east of Baird, at 11.20 p.m., departed at 11.35 p.m., and about three minutes later, while running at a speed of about 18 miles an hour, was derailed at the switch leading to the Dorsey lead track.

When the train came to rest all of the cars were upright and coupled together. The locomotive and the first five cars stopped on the main line, the rear end of the fifth car being approximately 300 feet east of the switch with its rear truck derailed and astride of the south main line rail. The rear end of this car was scraped on the right side by having come in contact with a box car standing on the lead track. The sixth car, coach No. 224, collided nearly head on with this box car. The box car was equipped with a steel underframe, which tore out the right side of coach 224 for its entire length, resulting in its being practically demolished. The seventh car, coach No. 231, also sustained some damage. The

eighth car, as well as the forward truck of the ninth car, entered the lead track, but neither car was damaged. The last two cars remained on the main line. The damage to the track was slight.

The first indication of the derailment was a wheel mark on the flange on the right side of the left main-line rail, 19 feet east of the switch point. There was a corresponding mark on the ties on the right side of the stock rail 33 feet from the switch point, the derailed wheels thus straddling the right main-line rail and the left side-track rail. These marks gradually diverged to the right, and at a point 33 feet east of the switch point four flange marks appeared. They diverged to the right up to the point where the left wheels of the derailed truck struck the right rail of the main line, which they followed up to the point where the side track diverged far enough from the main track to make the distance between the tracks greater than the distance between the inside faces of the wheels. From this point the right main-line rail was pulled southward and the left side-track rail was pulled northward by the truck which had been straddling them.

Engineer Bailey stated that his train ran along smoothly from Baird to Ranger and that after going over the ascending grade leaving Ranger station he shut off steam, and was drifting when he felt the train jerk. He looked out and seeing what was happening applied the air brakes in emergency, but found that the brakes had already been applied. He made an examination of the switch and found the switch points to be

cocked, no lock on the stand, the handle out of the socket, and the switch light showing both green and red. He found no indication that anything had been dragging. His locomotive was equipped with an electric headlight, which was burning well, and when he approached the switch he observed that the light was green and nothing was wrong with the switch points. He had no slow order over the portion of the track where the accident occurred, but had been moving slowly for the reason that the track was undergoing reconstruction, and also because it was his practice to pass slowly through hanger yard. He thought the speed at the time of the accident was about 15 miles an hour.

Conductor Ferguson stated that he was in the front vestibule of the seventh car when the crash came. He started for the emergency cord, but found that the brakes had already been applied. On examining the track some time afterwards he found a piece of a brake beam head weighing $1\frac{1}{2}$ to 2 pounds on the south side of the frog between two switch ties, but there was no indication in the vicinity that anything had been dragging.

Train Porter Crittenden, who was riding in the head end of the fifth car, stated that his first knowledge of anything wrong was when he felt the rear truck of the car derail and heard a crash. He then applied the brakes by means of the conductor's emergency cord.

General Yardmaster Carskar stated that he reached the point of accident about 30 minutes thereafter, and examined the switch and switch points and all track conditions. He found

flange marks east of the frog where the wheels hit the rails, but saw no marks on the rails. The switch points and the switchstand were in good condition. He stated that the normal position of main line switches is for main line movements, and that the rule requires these switches to be locked. He did not know whether or not the west switch of Dorsey lead had a lock at the time of the accident, but did know that most main line switches had heretofore been equipped with locks and that all such switches are now so equipped.

Extra Gang Foreman Taylor stated that he arrived on the scene of accident about four or five minutes after its occurrence and found the switch cocked and the switch handle out of its socket far enough for the light to show both green and red. There was no lock on the switch, and his impression was that the accident occurred either through the malicious pulling of the lever out of the switchstand socket, or, the lever being loose, by the jar or vibration of the train, which had the effect of working the switch points away from the main line rail, particularly as the track was in a skeletonized and unballasted state.

Det. Supt. Johnson stated that he arrived on the scene about 20 minutes after the accident occurred. He got underneath one of the cars and found the switch points cocked, wheel marks on the ties, and the switchstand lever midway between sockets and difficult to throw in either direction. He thought something might have been dragging, which would spread the points, but found nothing to bear this out, and reached the conclusion

that the accident was caused by the lever having been out of the socket. The switch points were in good condition and nothing was wrong with the switchstand.

Engine Foreman Taylor stated that at about 5.00 p.m. he pulled a cut of cars through the west switch onto the Dorsey lead track and found the switchstand and the switch points in good condition, the points fitting properly when switch was set for main line, but there was no lock on the switchstand. He added that the main line switches were not in all instances equipped with locks and that he had not been furnished with a switch key, though he had asked for one. Between the time this switch crew used the switch and the time of the accident, two eastbound freight trains passed without incident, one at about 6.00 p.m., and the other at about 9.45 p.m.

Engineman Edwards, of the train which passed at about 9.45 p.m. with a train of 51 cars, said that the switch and switch lights were in good condition at that time.

Night Yardmaster Kirk stated that all main line switches were not equipped with locks and had not been for some time, though his understanding was that all these switches should have locks. He also stated that neither he nor some of the men had any switch key.

Headmaster Foley stated that the Dorsey lead switch originally had been equipped with a switch lock, but he could not say whether it had one at the time of the accident. There were 38 main line switches in the yard, and on the day following the accident he renewed 3 switchstands on which the lock hasps or staples had been broken; replaced 6 defective locks

with serviceable ones, and applied all locks on switches where there were none. While it was his duty to see that locks were applied on all main line switches, his supply was not always sufficient, and, furthermore, the locks were so frequently broken that it was a nuisance to keep constantly putting them on; he also had other duties which required his attention. He also said that all switches had been equipped with locks when installed, but that there had been more or less trouble in this yard with locks being broken or thrown away.

This accident was caused by a split switch, due either to the switch lever working out of the socket, or to its having been left out of the socket, the switch points thus having an opportunity to work open, as a result of the jar or vibration produced by the movement of the train over the unballasted track. Rule 363 of the Texas & Pacific Railroad's book of rules, which relates to the duties of yardmasters, reads in part as follows:

Main line switches in yards, except when in use, must invariably be locked for the main track.

Had this switch been equipped with a lock at the time of the accident, and had the lock been in use, as required by this rule, the accident would not have occurred. The primary responsibility for the accident rests with the Texas & Pacific Railroad for its failure to furnish the supplies necessary for the maintenance of its track in a safe condition. The evidence indicates that all switches were originally equipped with locks, but as many of the employees did not have keys the locks could not be universally used and were often damaged or thrown away.

The existence of a condition of this kind could not fail to result in an accident of this character.

The attitude of Roadmaster Foley does not indicate a commendable spirit. In taking the position that it was a nuisance to keep renewing locks on the various switches, he did not show a proper appreciation of the responsibility imposed upon him. It was his duty to see that locks were provided for these main line switches, and he should have performed it.

H. F.