

INTERSTATE COMMERCE COMMISSION

REPORT OF THE DIRECTOR OF THE BUREAU OF SAFETY CONCERNING AN
ACCIDENT ON THE NEW YORK, NEW HAVEN & HARTFORD RAILROAD
AT NEW HAVEN, CONN., ON JUNE 6, 1933.

August 30, 1933.

To the Commission:

On June 6, 1933, there was a head-end collision between a light engine and an electric motor on the New York, New Haven & Hartford Railroad at New Haven, Conn., which resulted in the injury of 8 employees. This accident was investigated in conjunction with the Connecticut Public Utilities Commission.

Location and method of operation

This accident occurred on that part of the New Haven Division extending between Air Line Junction and Devon, Conn., a distance of 13.83 miles; this is a four-track line over which trains are operated by time-table, train orders and an automatic block-signal system. The accident occurred within yard and interlocking limits, at a point 1,951 feet east of the passenger station at New Haven or 89 feet east of Signal Station 78, at a crossover switch located between Water Street bridge and Fair Street bridge; these are overhead bridges located about 400 feet apart. Approaching this point from the west there are 10 station tracks, most of which, together with various other tracks, converge into the four main-line tracks. These tracks curve gradually to the left, then there is a short tangent under Water Street bridge, following which the tracks curve gradually to the right, this curve extending beyond tower 78, and is followed by tangent track. The accident occurred at the west switch of crossover 24, connecting main tracks 2 and 4, about 85 feet west of tower 78. The grade is level.

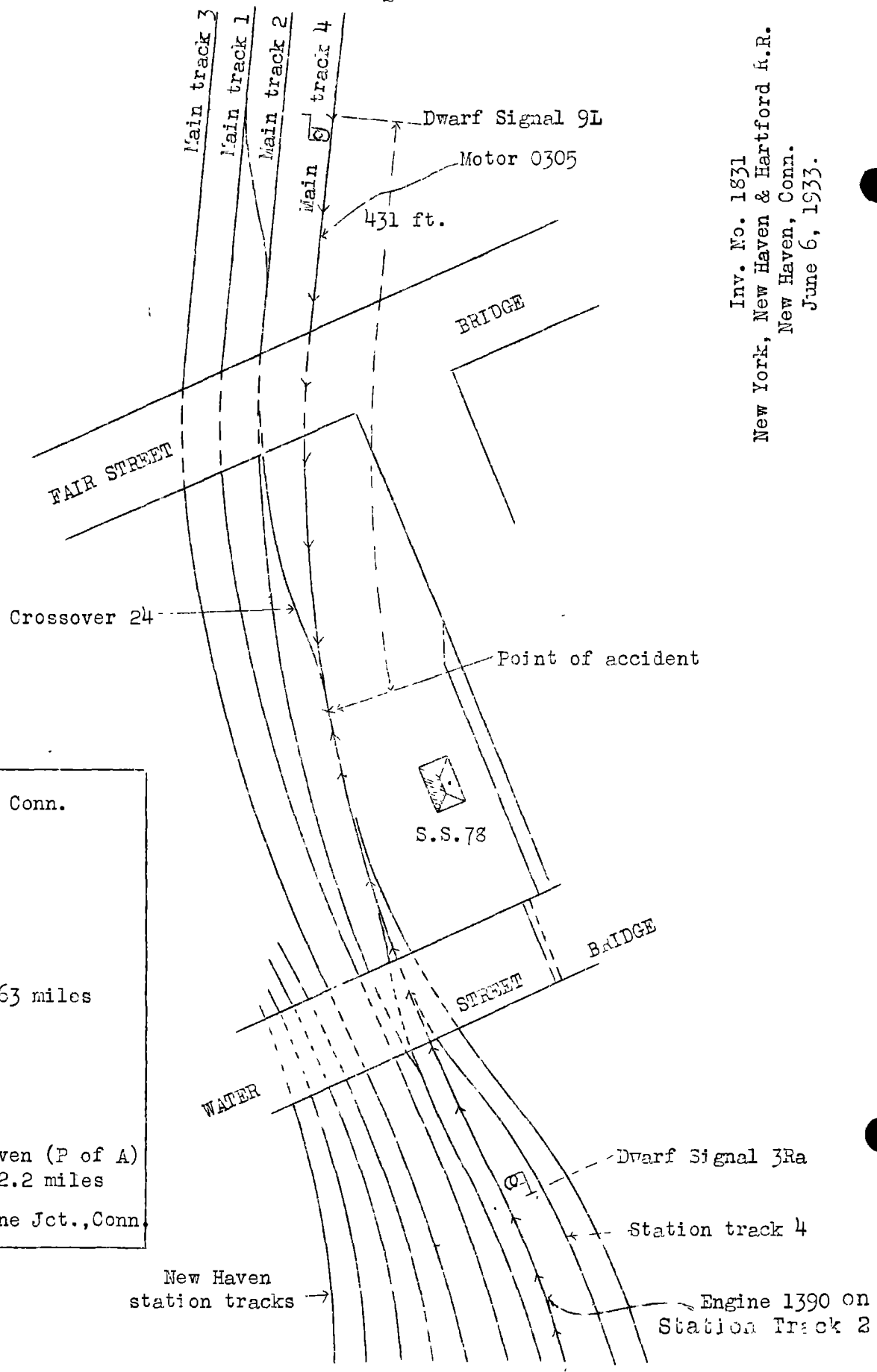
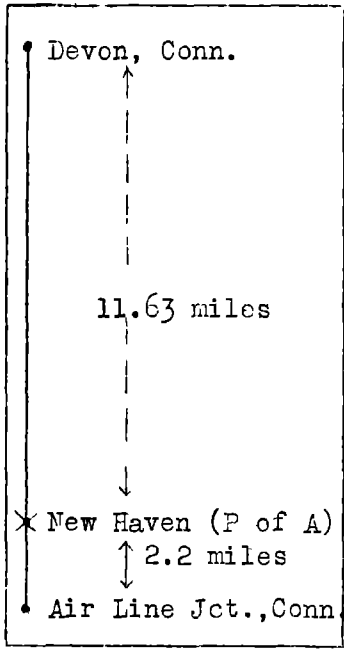
Tower 78 is located south of the tracks; the interlocking is an electric plant with 47 working levers, and the crossovers and signals involved are operated from this signal station. The signal directly involved in this accident is west-bound dwarf signal 9L, which gives 2 indications, purple for stop and yellow for proceed at slow speed, located 431 feet east of the west switch of crossover 24, a trailing-point switch for westbound movements.

The weather was clear at the time of the accident, which occurred about 8:51 p.m.

Description

On arrival of train no. 90 at the New Haven station from New York, electric motor 0305, in charge of Engineman Jensen and Fireman Sullivan, was detached and was moved eastward on station track 4, thence to main track 4, continuing thereon until a point

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New Haven, Conn.
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just east of dwarf signal 9L was reached, where the motor was stopped and the controls reversed from the east end to the west end of the motor, it being intended to return westward with the motor to the storage tracks located west of New Haven station. Electric motor 0305 started westward and passed dwarf signal 9L, the indication of which is in dispute, ran through the west switch of crossover 24 which was lined for a crossover movement, and collided with engine 1390 while traveling at a speed estimated to have been from 5 to 8 miles per hour.

Steam engine 1390, in charge of Engineman Newton and Fireman Burke, was detached from train no. 29 on arrival of that train at New Haven station from Boston, and was making a back-up movement eastward en route to the Cedar Hill roundhouse. The route was from station track 2 via crossover 24 to main track 2 and thence to main track 1; this route was lined and signals displayed for the movement and engine 1390 passed dwarf signal 3Ra, but at a point 470 feet beyond that signal the tender collided with motor 0305 while traveling at a speed estimated to have been from 5 to 15 miles per hour.

The force of the impact drove the tender into the cab of engine 1390, and both locomotives were damaged. At the time of the accident there were 6 employees riding in the cab of engine 1390, on their way to work, and 5 of them were injured; the fireman of engine 1390 and the engineman and the fireman of motor 0305 were also injured.

Summary of evidence

Engineman Jensen, of motor 0305, stated that it was the regular movement to detach the motor from the train, proceed eastward on station track 4 to main track 4 and to a point beyond dwarf signal 9L, stop, reverse the controls, and return westward to put the motor away on the storage track; he had been making this movement almost daily for the past 10 years; sometimes he would have to wait at dwarf signal 9L before returning westward, as a conflicting route would be lined for a light engine or a freight train to go to Cedar Hill and the signal would then be displaying a stop indication, but on other nights the signal would be clear for him and he would not have to wait. On this occasion he stopped the motor about 30 or 35 feet east of dwarf signal 9L and he stated that when he started westward the signal was displaying a proceed indication, and continued to display that indication until he passed the signal; he said he also observed the arm of the signal by the reflection from the headlight on the motor which was burning with the dimmer on, and it was in the diagonal position. After his motor came out from under Fair Street bridge he saw the tender of the steam engine loom up in front of him, about 40 feet distant; he had only time to shut off the power and apply the air brakes when the collision occurred. He could not say whether there was a lighted hand lantern on the rear end of the tender of steam engine 1390. There was no other signal in the vicinity that he could have confused with dwarf signal 9L. Fireman Sullivan was still at the opposite end of the motor, and

Engineman Jensen said it was not customary to wait after reversing the controls if the fireman did not come to the west end of the motor promptly; why he did not do so in this instance he could not say; he said he would have felt more certain about the signal indication if the fireman had also seen it, but he was sure at the time that he got the signal to proceed.

Engineman Newton, of steam engine 1390, stated that the intended movement of his engine was the customary one; he stopped at dwarf signal 3Ra long enough to light the white kerosene lantern on the rear end of the tender, which is required on an engine running backward at night. He did not observe the indication of dwarf signal 3Ra as it was on the opposite side of the engine cab but as he got back on the engine Fireman Burke told him that the dwarf signal indication had just changed from stop to proceed; he started the back-up movement eastward and had attained a speed of about 12 or 15 miles per hour when the collision occurred; he had no warning of danger as he was not able to see motor 0305 from his side of the cab. His engine was not working steam at the time, and he did not apply the air brakes. Fireman Burke stated that when the indication of dwarf signal 3Ra changed from stop to proceed, he called its indication to Engineman Newton and the back-up movement was started; he saw the headlight of motor 0305 after it came out from under Fair Street bridge and when it was about 200 or 300 feet distant, but he thought at that time that the motor was making some movement, not in conflict with their route and the accident occurred before he realized there was anything wrong; he estimated the speed of his engine to have been 5 or 6 miles per hour.

Operator Carey, on duty at tower 78, stated that after motor 0305 proceeded eastward and stopped just east of dwarf signal 9L on main track 4 the route was lined for steam engine 1390 from station track 2 via crossover 24 to main track 3, thence to main track 1 for Cedar Hill; with this route lined up it was impossible to clear dwarf signal 9L for motor 0305 to return westward to the storage track; furthermore, there was no occasion to change the route and it was not changed in any way prior to the accident. Immediately after the accident he inspected the machine and it showed the entire route to be properly lined for steam engine 1390, with dwarf signal 3Ra in proceed position, crossover 24 reversed, and dwarf signal 9L in stop position for motor 0305; all levers were locked and he could not move the lever for dwarf signal 9L. Statements of Leverman Lynch practically corroborated those of Operator Carey; the leverman said that he and the operator decided between themselves to line the route for steam engine 1390 to go to Cedar Hill before permitting motor 0305 to start the return movement westward from dwarf signal 9L.

Signal Maintainer Gilhuly was in tower 78 at the time of the accident; immediately after its occurrence he examined the machine and found the route properly lined for steam engine 1390, with the lever for dwarf signal 9L in stop position. He then left the signal station and went to dwarf signal 9L and observed that it was displaying a stop indication. He also checked crossover 24 and found three of the switch rods of the west switch bent as a result

of the switch having been run through by motor 0305; the east switch was reversed, as it should have been for the intended movement of engine 1390. He had also looked over the plant about 2 hours prior to the accident and found all lights in proper condition.

Signal Engineer Morrison stated that with crossover 24 reversed, dwarf signal 9L is both mechanically and electrically locked in stop position and that it is necessary to have the route lined before the operator can clear the signal at the entering point. Even had crossover 24 been normal, although in this instance it was reversed, steam engine 1390 being east of dwarf signal 3Ra on the track circuit would electrically lock dwarf signal 9L and it would not be possible to clear it.

An examination of the interlocking plant after the accident disclosed nothing to indicate that the mechanism was not functioning properly at the time this accident occurred.

Conclusions

This accident was caused by the failure of Engineman Jensen, of motor 0305, properly to observe and obey signal indications.

Engineman Jensen was thoroughly familiar with the tracks and signals in the vicinity of the point of accident, and the intended movement of the motor under his charge was the regular movement which he had made almost daily for several years. Engineman Jensen maintained that dwarf signal 9L was displaying a proceed indication, when he started the movement westward and that when he passed the signal the arm was in diagonal position. However, the evidence is clear that the route was lined for steam engine 1390 from station track 2 via crossover 24 to main track 2 and thence to main track 1; furthermore, motor 0305 ran through the west switch of crossover 24, proving conclusively that the crossover was reversed and properly lined for steam engine 1390, in which position dwarf signal 9L is locked in stop position both mechanically and electrically, and immediately after the accident signal 9L was found to be in stop position. Thorough inspection and tests of the interlocking plant after the accident disclosed no defects, and with the route lined up as for engine 1390 it was found to be impossible to clear signal 9L. It is therefore believed that dwarf signal 9L was displaying a stop indication when motor 0305 started the return movement westward and passed it, and that the indication was not properly observed by Engineman Jensen.

Respectfully submitted,

W. P. BORLAND,

Director.