

No. 13413<sup>1</sup>IN THE MATTER OF AUTOMATIC TRAIN CONTROL  
DEVICES

DELAWARE, LACKAWANNA &amp; WESTERN RAILROAD COMPANY

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*Submitted May 2, 1951. Decided July 19, 1951*

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Upon further hearing, petition of The Delaware, Lackawanna and Western Railroad Company for (1) authority to install an automatic train-stop system on its line between East Buffalo, N. Y., and Scranton, Pa., in lieu of an automatic cab-signal system, and to equip all Diesel locomotives with such train-stop devices, and (2) for relief from the requirements of section 136.568 of the order of June 29, 1950, entered in Ex Parte No. 171 so as to permit it to operate its trains on its line between East Buffalo, N. Y., and Scranton, Pa., at speeds in excess of those authorized by the cab signal when such cab signal is more restrictive than the roadway block signal when the train enters the block governed by such roadway block signal, denied. Prior reports 69 I. C. C. 258, 192 I. C. C. 47, and 278 I. C. C. 267.

*Rowland L. Davis, Jr., and Harold Gilmartin* for petitioner.

*Jonas A. McBride and Charles W. Phillips* for protestants.

*Harold H. McLaughlin and T. J. Harkins* for a labor organization.

## REPORT OF THE COMMISSION ON FURTHER HEARING

DIVISION 3, COMMISSIONERS PATTERSON, JOHNSON, AND KNUDSON

PATTERSON, *Commissioner*:

By petition filed February 27, 1951, in the title proceeding The Delaware, Lackawanna and Western Railroad Company, hereinafter referred to as the Lackawanna, seeks authority to install an automatic train-stop system on its line between East Buffalo, N. Y., and Scranton, Pa., in lieu of an automatic cab-signal system now in service between these points and to equip all of its Diesel locomotives operated in road service in the involved territory with automatic train-stop devices.

By another petition filed January 18, 1951, in the embraced proceeding in Ex Parte No. 171, the Lackawanna requests modification of section 136.568 of the order of June 29, 1950, entered in connection with our original report in 278 I. C. C. 267, wherein certain revisions, modifications, and amendments were made in the rules, standards,

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<sup>1</sup> This report also embraces Ex Parte No. 171, petition of The Delaware, Lackawanna and Western Railroad Company for relief from the provisions of section 136.568 thereof. 281 I. C. C.

and instructions for installation, inspection, maintenance, and repair of automatic block-signal systems, interlocking, traffic-control systems, automatic train-stop, train-control, and cab-signal systems, and other similar appliances, methods, and systems, formerly prescribed by order of April 13, 1939, as amended. Section 136.568 reads as follows:

*Difference between speeds authorized by roadway signal and cab signal, action required.*—If for any reason a cab signal authorizes a speed different from that authorized by a roadway signal, when a train enters the block governed by such roadway signal, the lower speed shall not be exceeded.

Since the above petitions deal with interrelated matters they were heard on a consolidated record and will be disposed of by a single report.

As set forth in its petitions and as shown by our records, this carrier, under our order of March 10, 1933, in 192 I. C. C. 47, amending our prior orders of June 13, 1922, and January 14, 1924, was permitted to continue the use of an automatic cab-signal system in lieu of automatic train-stop or train-control devices on its line between East Buffalo, N. Y., and Scranton, Pa., 256.5 miles. This system, which was originally installed in 1924, has been in operation to the present time and consists of a two-aspect cab signal, one indicating clear and the other a restricting aspect. The roadway block-signal system is a three- and, in some instances, a four-indication system which shows clear, approach, and stop-and-proceed, or clear, approach-medium, approach, stop-and-proceed. Under this method of operation when a train passes an approach-medium roadway signal, the aspect of the cab signal immediately changes from clear to restricting and the warning whistle in the cab sounds and continues to sound until silenced by operation of the acknowledging switch. Once the cab signal changes to a restricting aspect upon passing an approach-medium roadway signal, there is no further change in the cab-signal indication or further sounding of the whistle when passing the next roadway signal in advance displaying an approach aspect or a stop-and-proceed aspect. If a train encounters a series of successive signals displaying restrictive aspects, the cab signal changes from clear to restricting and the warning whistle sounds only upon passing the first restrictive signal and thereafter no further change occurs in the cab-signal indication until the train again passes a roadway signal displaying a proceed aspect.

Petitioner's witness testified that under the circumstances described in the preceding paragraph, when the cab signal changes from a clear to a restricting indication upon passing an approach-medium roadway signal, the engineer of the train is required to be governed by the roadway-signal indication rather than the more

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restrictive indication of the cab signal and to approach the next signal at a speed not exceeding medium speed, which petitioner's present rules define as one-half the maximum authorized speed but not exceeding 30 miles per hour. This requirement appears to be in conflict with petitioner's present operating rule 686, paragraphs (f) and (i) which reads as follows:

f. Enginemen must be governed by cab signal indications, and by the most restrictive indications displayed by either fixed signals or cab signals. After passing a fixed signal the cab signal indication will govern until the next fixed signal is reached.

1. When the cab signal changes from clear to restricting, the train speed must be reduced immediately in conformity with the restricting indication and the change then acknowledged by engineman operating the acknowledgment lever. Failure to acknowledge causes continuous sounding of cab whistle as long as a restricting signal continues.

In its petition in Ex Parte No. 171 petitioner submits several proposed operating rules, including rule 541 (d) upon which it predicates its request for relief from section 136.568 of our order of June 29, 1950. Rule 541 (d) reads as follows:

Cab signal indications do not supersede wayside block signal indications, except:

1. When cab signal changes from clear to restricting when passing a clear wayside block signal, train must immediately stop and then proceed at restricted speed.

2. When the cab signal changes from clear to restricting, between wayside block signals, train must immediately stop and then proceed at restricted speed.

3. When a cab signal changes from restricting to clear after having passed a wayside block signal, speed may be increased to medium speed after train has run its length.

Section 136.568 of our order of June 29, 1950, does not permit a train to exceed the speed authorized by the cab signal if the cab signal is more restrictive than the roadway block signal when the train enters the block governed by the roadway block signal. Under petitioner's proposed rules trains would be permitted to approach the next signal after passing an approach-medium wayside signal at a speed not exceeding medium speed when the cab signal would require movement at restricted speed. Petitioner's proposed rules define medium speed as a speed not exceeding 40 miles per hour and restricted speed as one not exceeding 15 miles per hour. Approval of the proposed rules would thus permit petitioner to disregard the most restrictive signal indicated by the cab signal and operate its trains by the less restrictive roadway signal. Petitioner does not intend to make any changes in the roadway portion of its present cab-signal system if its petitions herein are granted. However, it proposes to install a train-stop system in augmentation of its present cab signals on all Diesel engines operated in road service, and this proposal is the basis of its request

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in its petition herein filed February 27, 1951. For the present it intends to continue operation of its steam-powered locomotives with cab signals but without train-stop devices.

In this respect petitioner proposes to install an automatic train-stop device to be so arranged that when the cab signal in the engine changes from clear to restricting when passing a roadway block signal, an audible signal will sound in the cab of the engine, and, unless the engineman acknowledges the signal within 6 seconds, an application of the brakes will automatically result which will stop the train, but if the signal is acknowledged within 6 seconds, the train will continue at the speed authorized by the roadway block signal, as required by the rules proposed by petitioner in its petition herein filed January 18, 1951.

Petitioner admits that an engineman may forestall an automatic brake application if he acknowledges the restricting cab signal within 6 seconds and may then proceed at the speed authorized by the indication of the roadway signal. If the aspect of the roadway signal is approach-medium when the train passes it and the automatic brake application is forestalled and the next roadway signal encountered by the train displays an approach aspect, there would be no further change in the cab-signal aspects, nor would the automatic train-stop device operate to initiate an automatic brake application when the train passed the latter signal. It is not petitioner's intention to install roadside equipment to provide for recurrent acknowledgment of successive restrictive signals requiring a further reduction in speed as specifically required by section 136.502 of our order of June 29, 1950, which states that an automatic train-stop or train-control system shall operate to initiate an automatic brake application at least stopping distance from the entrance to a block wherein any condition described in section 136.205 obtains, and at each signal requiring a reduction in speed.

It is petitioner's contention that operation of its trains under the proposed rules supplemented by automatic train-stop devices on its Diesel locomotives operated in road service would be a safe operation and that it would unnecessarily restrict its train movements if its trains were required to immediately reduce their speeds to restricted speeds under the circumstances heretofore described.

The line between East Buffalo and Scranton is double- and multiple-track main line and operations thereover are by timetable and train order. It is laid with 130- and 131-pound rail on hardwood ties with crushed-stone ballast. There is a grade crossing with the Erie Railroad at Painted Post, N. Y., another with the Pennsylvania Railroad at Mount Morris, N. Y. (mile post 334), and a junction with the New

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York Central Railroad at Corning, N. Y. The maximum authorized speed for passenger trains between Scranton and Clark's Summit, Pa., is 70 miles per hour, and between Clark's Summit and East Buffalo, 80 miles per hour, and for freight trains is 50 miles per hour in this territory except for certain symbol freight trains which are permitted to be operated at 60 miles per hour between Clark's Summit and East Buffalo. There are four such symbol freight trains authorized to operate at 60 miles per hour. This line has numerous curves of from  $0.13^{\circ}$  to  $7^{\circ}$ . Weather conditions in this territory are generally good with occasional fog at several of the points.

There are four regularly scheduled passenger trains in each direction daily between Scranton and Buffalo, and two additional trains are operated daily in each direction between Scranton and Binghamton, N. Y. In addition, one passenger train is operated Sunday mornings between Scranton and East Buffalo and is used primarily for the handling of newspapers. The average daily freight-train movement for the month of March 1951 was 10.1 east-bound and 9.9 west-bound. All regularly scheduled passenger trains and 87 percent of the gross-ton-miles of freight moving in this territory are handled by Diesel locomotives.

Petitioner estimated that the cost of installing an automatic train-stop device on road Diesel locomotives would be \$350 for each control cab, and a similar installation on a road steam locomotive would be \$3,000. It was estimated that about 101 Diesel units would be required to be equipped with automatic train-stop devices, installation of which could be completed in about 4 months after receipt of materials. It is not petitioner's intention to equip its steam locomotives operating in this territory with these devices for the reason that complete dieselization is expected between Scranton and Buffalo by the end of 1952. At present petitioner operates twenty odd steam locomotives in this territory. Petitioner estimated that it would cost approximately \$700,000 to install a four-aspect cab-signal system in lieu of its present two-aspect cab signal should it desire to fully utilize its wayside-signal system.

In our opinion petitioner has not shown adequate cause for the substitution of an automatic train-stop system in lieu of its present automatic cab-signal system, or for the necessity of relief from the requirements of section 136.568 of our order of June 29, 1950. Operation in the manner proposed by petitioner would not give the maximum protection intended in railway operation. Since the more restrictive indication of the cab signals will not be observed and movements of petitioner's trains will be governed by the less restrictive indications of the wayside signals, the usefulness of the cab-signal system will be

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minimized and its effectiveness materially reduced. The proposal to operate under an automatic train-stop system in lieu of the automatic cab-signal system now in use within the considered territory and the installation of automatic train-stop devices on Diesel locomotives operating in road service between these points would not comply with section 136.502 of our order of June 29, 1950, for the reason that after the automatic cab-signal indication changes from clear to restricting upon passing the first restrictive roadway signal and the engineman forestalls the automatic application of the brake within 6 seconds, no further change will occur in the cab-signal indication, nor will the train-stop device operate to initiate an automatic brake application when the train passes successive roadway signals which would require a further reduction in speed.

An appropriate order will be entered.

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