Report

TO

THE PRESIDENT

BY THE

EMERGENCY BOARD

APPOINTED FEBRUARY 15, 1949
PURSUANT TO SECTION 10 OF THE
RAILWAY LABOR ACT

To investigate the facts and report its findings as to dispute between the Carriers, represented by the Eastern Carriers' Conference Committee, Western Carriers' Conference Committee, and Southeastern Carriers' Conference Committee and certain of their employees represented by the Brotherhood of Locomotive Firemen and Enginemen

(*NMB Case A–3045*)

WASHINGTON, D. C.
SEPTEMBER 19, 1949

(No. 70)

WASHINGTON, D. C., *September 19, 1949.*

THE PRESIDENT,
The White House.

MR. PRESIDENT: The Emergency Board created by you February 15, 1949, under provisions of section 10 of the Railway Labor Act, as amended, to investigate and report on an unadjusted dispute existing between the Carriers represented by the Eastern Carriers' Conference Committee, Western Carriers' Conference Committee, and Southeastern Carriers' Conference Committee and certain of their employees represented by the Brotherhood of Locomotive Firemen and Enginemen, a labor organization, has the honor to submit its report and recommendations based upon its investigation of the matters in dispute.

GEORGE W. TAYLOR, *Chairman.*
GRADY LEWIS, *Member.*
GEORGE E. OSBORNE, *Member.*

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Report of Emergency Board No. 70, Appointed February 15, 1949, by the President, Pursuant to Section 10 of the Railway Labor Act

To investigate the facts and report its findings as to a dispute between the carriers, represented by the Eastern Carriers' Conference Committee, Western Carriers' Conference Committee, and Southeastern Carriers' Conference Committee, and certain of their employees represented by the Brotherhood of Locomotive Firemen and Enginemen

INTRODUCTION

The President, acting under authority of section 10 of the Railway Labor Act, as amended (45 U. S. Code 160), created this Emergency Board No. 70, by the following designations:

1. Designation of Emergency Board:

EXECUTIVE ORDER 10038

CREATING AN EMERGENCY BOARD TO INVESTIGATE DISPUTE BETWEEN THE CARRIERS REPRESENTED BY THE EASTERN CARRIERS' CONFERENCE COMMITTEE, WESTERN CARRIERS' CONFERENCE COMMITTEE, AND SOUTHEASTERN CARRIERS' CONFERENCE COMMITTEE, AND CERTAIN OF THEIR EMPLOYEES

WHEREAS a dispute exists between the carriers represented by the Eastern Carriers' Conference Committee, Western Carriers' Conference Committee, and Southeastern Carriers' Conference Committee, and certain of their employes represented by the Brotherhood of Locomotive Firemen and Enginemen, a labor organization; and

WHEREAS this dispute has not heretofore been adjusted under the provisions of the Railway Labor Act, as amended; and

WHEREAS this dispute, in the judgment of the National Mediation Board, threatens substantially to interrupt interstate commerce to a degree such as to deprive the country of essential transportation service;

NOW, THEREFORE, by virtue of the authority vested in me by section 10 of the Railway Labor Act, as amended (45 U. S. C. 160), I hereby create a board of three members, to be appointed by me, to investigate such dispute. No member of the said board shall be pecuniarily or otherwise interested in any organization of railway employes or any carrier.

The board shall report its findings to the President with respect to the said dispute within 30 days from the date of this order.

As provided by section 10 of the Railway Labor Act, as amended, from this date and for 30 days after the board has made its report to the President, no change, except by agreement, shall be made by the carriers represented by the Eastern Carriers' Conference Committee, Western Carriers' Conference Com-

mittee, and Southeastern Carriers' Conference Committee, or their employees in the conditions out of which the said dispute arose.

(Signed) HARRY S. TRUMAN.

THE WHITE HOUSE,
February 15, 1949.

2. Letters of Appointment:

Pursuant to the above Executive order, the President, on February 15, 1949, designated George W. Taylor, Grady Lewis, and George E. Osborne as members of the Board so created. The letters of appointment to each member stated that "You are hereby especially authorized to act in conformity with law and my Executive order. The Board will organize and investigate promptly the facts as to such dispute, and on the basis of facts developed, make every effort to adjust the dispute and report thereon to me within 30 days from the date of the Executive order."

At a preliminary meeting, the Board chose George W. Taylor to act as its chairman. Thus established, the Board met with representatives of the parties in Chicago, on February 23, 1949. At this meeting it became apparent that the Board would be unable to hold hearings and make its report to the President within the 30 days mentioned in the Executive order. The Board suggested to the parties that the hearing be recessed until June 27, 1949, and that a request be made to the President to extend until August 15, 1949, the time within which the investigation would be completed and the report made. The parties to the dispute agreed to the recess and approved the extension of time for filing the Board report. They so stipulated in the record.[1]

Acting upon the recommendation of the National Mediation Board, the President, on February 28, 1949, approved the extension request,[2] which had been made by letter dated February 24, 1949.

The hearings were resumed in New York on June 27, 1949. By July 6, 1949, it became clear that in addition to lengthening the hour schedule for daily hearings, another extension of time would be needed to permit submission of the case prepared by the parties. The approval of the parties as stipulated in the record [3] was transmitted to the President, through the National Mediation Board, and this constituted a requested for an extension until September 19, 1949, of the time within which the Board would complete its investigation and submit its report.

On recommendation of the National Mediation Board, the President, on July 27, 1949, approved this second extension request.[4]

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[1] Tr., p. 9.
[2] Tr., p. 2728.
[3] Tr., p. 832.
[4] Tr., pp. 3149, 3150.

At the initial meeting of the Board, on February 23, 1949, the following appearances were made before it:

For the Brotherhood of Locomotive Firemen and Enginemen: D. B. Robertson, president; Harold C. Heiss, general counsel.

Brotherhood of Locomotive Firemen and Enginemen Committee, consisting of W. H. Gilfoil, chairman; J. V. Fitzsimmons, secretary; W. B. Woodward, Jr.; J. C. Young; A. B. Johnson; A. J. Chipman; Thad S. Lee; L. E. Whitler; Carl Flowers; and William Polatsek, attorney.

For the Carriers:

Members of the Eastern Carriers' Conference Committee: Mr. H. A. Enochs, chairman; Mr. N. N. Baily; Mr. G. H. Caley; Mr. F. J. Goebel; Mr. L. W. Horning; Mr. E. B. Perry; and Mr. H. E. Jones.

Members of the Western Carriers' Conference Committee: Mr. D. P. Loomis, chairman; Mr. B. E. Dwinell, vice chairman; Mr. C. A. Conway; Mr. J. E. Kemp; Mr. W. L. More; and Mr. R. F. Welsh.

Members of the Southeastern Carriers' Conference Committee: Mr. C. D. Mackay, Mr. W. S. Baker, Mr. H. A. Benton, and Mr. A. J. Bier.

Counsel for the Carriers' Conference Committees: Mr. E. A. Lucas, Mr. William J. Milroy, Mr. M. V. Barnhill, Jr., and Mr. Howard Neitzert.

When the hearings were resumed in New York on June 27, 1949, the following changes were made in the appearances for the Carriers:

Eastern Carriers' Conference Committee:

The following original appearances were withdrawn: Mr. H. A. Enochs, chairman; Mr. N. N. Baily; and Mr. G. H. Caley.

The following substituted appearances were entered: Mr. J. W. Oram, chairman, chief of personnel, the Pennsylvania Railroad; Mr. F. J. Goebel, vice president, personnel, Baltimore & Ohio Railroad; and Mr. R. C. Randall, vice president, personnel, Erie Railroad Co.

Southeastern Carriers' Conference Committee: The appearance of Mr. C. D. Mackay, chairman, assistant vice president, Southern Railway, was withdrawn, and that of F. A. Burroughs, Jr., chief personnel officer, Southern Railway, was entered in substitution for him as a member of the committee. Mr. H. A. Benton, whose original appearance was as a member of the committee, was designated chairman.

The hearings of the Board extended from June 27 to August 23, inclusive. Both parties were given full opportunity to present such evidence, submit such exhibits, and make such arguments as they wished, and to rebut opposing evidence and argument. Both parties were given an opportunity to examine and to cross-examine witnesses.

The Board also attempted to clarify and amplify the evidence presented to it by asking questions of the witnesses. The parties presented extensive oral arguments to the Board at the end of the hearing and, by September 1, written briefs were filed with the Board by the parties.

The record consists of 5,922 pages of testimony and argument, and 155 exhibits covering additional thousands of pages.

On July 7, 1949, Mr. Clarence M. Mulholland, attorney for the Railway Employees Department of the Ameerican Federation of Labor, which represents, for the purposes of collective bargaining the men known as Diesel maintainers, asked leave to intervene in these proceedings.[5] This request was denied, but the Board announced that it reserved the right to call upon the representatives of this organization, or other parties, as Board witnesses, if that seemed essential or desirable in order to make a complete investigation of the dispute.[6] At the same time the Board indicated that the Railway Employees Department could, if it wished, file a statement of its position. Such a statement was filed on August 19, 1949.[7]

A petition by the provisional committee to organize colored locomotive firemen to intervene in these proceedings was filed with the Board on July 22, 1949, by Messrs. A. Philip Randolph and Benjamin F. McLaurin.[8] The Board denied the requested intervention but reserved the right to call upon the representatives of this organization, or other parties, if that seemed essential or desirable in order to make a complete investigation of the dispute.[9]

The Board determined that its investigation did not require evidence from those who sought to intervene, or from other parties, and persons other than those directly involved in the dispute were not requested to appear.

PROCEDURAL HISTORY OF THE CASE

This case arose out of notices dated June 30, 1947, served by the B. L. F. and E. upon 160 railroads represented in the proceeding by the Western, Eastern, and Southeastern Carriers' Conference Committees,[10] and three different notices, also dated June 30, 1947, served by the Western, Eastern, and Southeastern Carriers on the general chairman of the B. L. F. and E. on the respective lines where firemen

[5] Tr., p. 887.
[6] Tr., pp. 888, 889.
[7] Tr., pp. 5570–5584.
[8] Tr. pp. 2535–2541.
[9] Tr., p. 2533.
[10] Tr., p. 15.

were represented by that organization.[11] The B. L. F. and E. notices were of three characters, depending upon the scope of the employees represented by it. One hundred and thirty-five notices were served upon railroads where the B. L. F. and E. represents a craft composed of firemen, hostlers, and hostler helpers and where it is designated as the bargaining agent for that craft of employees.[12] Twenty-four notices were served upon railroads where the B. L. F. and E. represents locomotive engineers, in addition to the foregoing crafts.[13] On one railroad the B. L. F. and E. represents only the craft of locomotive engineers.[14]

The notices of the B. L. F. and E. had for their purpose the alteration of the three existing regional agreements between the B. L. F. and E. and the Eastern, Western, and Southeastern group of carriers, entered into in 1943 and 1944, and the adoption of the agreement which would be the result of this proposed alteration by a few railroads on which none of the 1943–44 agreements are now in effect.[15]

The notices contained both a summary statement of the six major demands of the B. L. F. and E. and also a complete proposed new agreement. This latter took the form of a reproduction of each existing regional agreement, with a red line drawn through those portions of it intended to be deleted and new provisions inserted in italics.[16]

The issues raised by these requested changes will be stated in detail later.

On December 22, 1947, following service of these notices, request was made by the B. L. F. and E. to the three chairmen of the Carriers' Conference Committees for a national conference.[17]

Because of the inauguration of a wage-rules movement which was not finally settled until November 12, 1948,[18] no further action was taken until November 20, 1948, when the request for a national conference was renewed by a letter from the President of the B. L. F. and

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[11] Carriers' exhibit 7, 275–277. See also Carriers' exhibit 3, pp. 6–13, for list of carriers. Also note amendment to p. 10 of Carriers' exhibit 3 (Tr., p. 5510), eliminating the names of two railroads from the list of carriers appearing under the caption "Engineers."

[12] Tr., p. 15, B. L. F. and E. Exhibits 4A, 4C, 4E, 4G; Carriers' exhibit 1, p. 264.

[13] Tr., p. 16, B. L. F. and E. exhibits 4B, 4D, 4F, 4H; Carriers' exhibit 1, p. 253. Note Tr., p. 5510, with respect to carrier amendment of list of companies whose engineers are represented by the B. L. F. and E.

[14] Tr., p. 16.

[15] Tr., p. 16.

[16] See Carriers' exhibit 1, 253, 264; B. L. F. and E. exhibits 4, A–F. Where the notice was to a carrier with whom there was no existing contract, the summary of changes was omitted and the proposed new agreement only was set forth. B. L. F. and E. exhibits 4–G, 4–H; for a comparison, section by section, of the proposed agreement with existing agreements, see B. L. F. and E. exhibit 5.

[17] Tr., pp. 18, 19; Carriers' exhibit 1, 285.

[18] Tr., p. 19; Carriers' exhibit 1, 285.

E., addressed to representatives of three regional carriers' conferences.[19] This letter stated that conferences between carrier and employee representatives had been held on all railroads covered by the June 30, 1947, notice, and no agreement had been reached.[20]

On January 13, 1949, the Diesel-electric committee of the B. L. F. and E. met with members of the National Mediation Board and objected to recognition by the Mediation Board of the movement by the B. L. E. to obtain an assignment of an additional engineer to the engine room of Diesel locomotives.[21]

On January 14, 1949, the first meeting between the B. L. F. and E. and the carriers was held. The carriers suggested progressing the case into mediation immediately, in order to expedite the proceeding. The B. L. F. and E. president then stated that he opposed any procedure which would result in a repetition of the 1943 situation in which the B. L. F. and E. case and the B. L. E. case were heard before the one Emergency Board.[22]

The carriers then declined to make any changes in the existing agreements, and the parties jointly invoked the services of the National Mediation Board, on January 15, 1949.[23] Meetings with its representatives were held beginning on January 18, 1949. They culminated in an offer of arbitration which was rejected by the carriers on January 25, 1949, and accepted by the B. L. F. and E. on February 3, 1949.[24]

On January 28, 1949, Emergency Board No. 68 was created to hear the B. L. E. case, and this Board began hearings on February 7, 1949. On February 8, 1949, representatives of the B. L. F. and E. requested permission to intervene in those proceedings. This request was denied, but the Board announced that it reserved the right to call upon representatives of the B. L. F. and E., as Board witnesses, if that seemed essential or desirable to make a complete investigation of the dispute.[25]

On February 15, 1949, without any strike vote having been taken by the B. L. F. and E., this Board was created.[26]

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[19] Carriers' exhibit 1, 288; tr., p. 19.

[20] Carriers' exhibit 1, 289.

[21] Carriers' exhibit 1, 309, 310.

[22] Carriers' exhibit 1, 310, 311; see also 1943 Diesel Board Report, 2 (Carriers' exhibit 1, 78, 79). Report of Emergency Board No. 68, p. 8.

[23] Carriers' exhibit 1, p. 311.

[24] Tr., p. 19.

[25] Report, Emergency Board No. 68, p. 5. The Board completed its hearings in that case without finding it essential or desirable to exercise this announced right. Ibid.

[26] The Mediation Board's docket number assigned to this case is case A–3045.

ISSUES

The notices served by the B. L. F. and E. raised six major issues as stated in the summary contained in it. In addition, one minor change, not strictly under any of those stated in the summary, is before the Board.

The counter demands of the carriers raise two additional issues. To an extent which will be indicated later, these issues overlap some of those raised by the employees, or the claims in them are inconsistent with certain of the demands by the B. L. F. and E.

Although the numbering of the issues as contained in the B. L. F. and E. notices will be adhered to, the order in which they will be stated has been altered so as to put in one group all demands raising a manpower issue. Those raising wage differential issues are placed in a second group, with the remaining issues dealt with last.

The issues raised by the carriers' counter demands are designated by capital letters A and B. Both of them fall into the wage differential group.

MANPOWER ISSUES

1. *Road Diesel issue.*[27]—Shall an additional fireman (helper) be assigned on all Diesel-electric locomotives operated in road service for each four units or less?

This issue, by far the most important in the case, is raised by the request in the B. L. F. and E. notice that section 3 in the Eastern and section 4 of the Western and of the Southeastern regional agreements between the B. L. F. and E. and the carriers be rewritten to provide an identically worded section 3, all of them to read as follows:

"3. On Diesel-electric locomotives operated in road service, a fireman (helper) shall be in the cab at all times and an additional fireman (helper) shall be employed on all such locomotives for each four units or less. The working conditions and rates of pay for each fireman (helper) shall be those which are specified in the Firemen's agreement and such rates of pay shall be determined by the weight on drivers of the combined units." [28]

At present section 3 of the Eastern and section 4 of the Western and Southeastern carriers' contracts with the B. L. F. and E. are the same in substance but very slightly in wording. In order to show how

[27] B. L. F. and E. notice no. 2.

[28] B. L. F. and E. exhibit 5, p. 4; Carriers' exhibit 1, pp. 255, 256; exhibit 4, p. 3. Note the clarification by Mr. Robertson of the term "road service" in the proposed sec. 3 beginning on tr. p. 375. The B. L. F. and E. proposal does not contemplate the employment of an additional fireman (helper) on single-unit hooded locomotives, in transfer service, or on work, wreck, on construction trains even though road rates are paid in such services.

the proposed new section 3 would alter the existing provisions, the text of these existing sections as they now read in each of the regional agreements is reproduced with a line drawn through the portions which would be deleted and with the added provisions in italics.

Eastern agreement of August 13, 1943:

"3. On ~~multiple unit~~ Diesel-Electric locomotives ~~in high speed, streamlined, or main line through passenger trains~~ *operated in road service,* a fireman (helper) shall be in the cab at all times ~~when the train is in motion. If compliance with the foregoing requires the service of~~ *and* an additional fireman (helper) ~~on such trains to perform the work customarily done by firemen (helpers), he shall be taken from the seniority ranks of the firemen, in which event he~~ *shall be employed on all such locomotives for each four units or less. The* working conditions and rates of pay ~~of~~ *for* each fireman shall be those which are specified in the ~~firemen's schedule. The~~ *Fireman's Agreement and such* rates of pay shall be determined by the weight on drivers of the combined units."[29]

Western agreement of November 27, 1943:

"3. 4. On ~~multiple-unit~~ Diesel-electric locomotives ~~in high-speed, streamlined, or main line through passenger trains~~ *operated in road service,* a fireman (helper) shall be in the cab at all times ~~when the train is in motion. If compliance with the foregoing requires the service of~~ *and* an additional fireman (helper) ~~on such trains to perform the work customarily done by firemen 'helpers', he shall be taken from the seniority ranks of the firemen, in which event he~~ *shall be employed on all such locomotives for each four units or less. The* working conditions and rates of pay ~~of~~ *for* each fireman (helper) shall be those which are specified in the ~~firemen's schedule. The~~ *Firemen's agreement and such* rates of pay shall be determined by the weight on drivers of the combined units.

~~"(Note—The term "main line through passenger trains" includes only trains which make few or no stops.)~~

~~"Nothing herein requires the assignment of an additional or second fireman 'helper' on multiple-unit Diesel-electric locomotives operated in other classes of service, but should there be added a man to perform the work customarily performed by firemen (helpers), such man shall also be taken from the seniority ranks of the firemen and his working conditions and rates of pay shall be those which are specified in the Firemen's schedule. The rates of pay shall be determined by the weight on drivers of the combined units."~~

[29] B. L. F. and E. exhibits 4-A, 4-B, p. 3.

Southeastern agreement of May 11, 1944:

"3. 4. On ~~multiple-unit~~ Diesel-electric locomotives ~~on high speed, streamlined, or main line through passenger trains~~ *operated in road service,* a fireman (helper) shall be in the cab at all times ~~when the train is in motion. If compliance with the foregoing requires the service of~~ *and* an additional fireman (helper) ~~on such trains to perform the work customarily done by firemen (helpers), he shall be taken from the seniority ranks of the firemen, in which event the~~ *shall be employed on all such locomotives for each four units or less. The* working conditions and rates of pay ~~of~~ *for* each fireman (*helper*) shall be those which are specified in the ~~firemen's schedule. The~~ *Firemen's agreement and such* rates of pay shall be determined by the weight on drivers of the combined units.

~~"(Note—The term 'main line through passenger trains' includes only trains which make few or no stops.)~~

~~"Nothing contained herein requires that two men shall be in the cab at all times when the train is in motion or the assignment of an additional or second fireman (helper) on multiple-unit Diesel-electric locomotives in any other class of service, but if an additional man is employed to perform the work customarily performed by firemen (helpers), such man shall also be taken from the seniority ranks of the firemen and his working conditions and rates of pay shall be those which are specified in the firemen's schedule. The rates of pay shall be determined by the weight on drivers of the combined units."~~

In addition to the foregoing changes, the organization proposal is for the deletion of memorandum agreements, identical in language except for date and name of carriers' conference, executed between the Western and Southeastern Carriers and the B. L. F. and E. at the same time that each of these two regional agreements was entered into. The language of these agreements is as follows:

MEMORANDUM

"The agreement signed at Chicago this 27th day of November 1943, between the Western Carriers' Conference Committee and the Brotherhood of Locomotive Firemen and Enginemen's Committee is without prejudice to the practice of employment or nonemployment of Diesel maintainers, instructors or supervisory employees; it being understood, however, that such employees will not be used to perform the work customarily done by firemen (helpers)."

2. *Yard Diesel issue.*[30]—Shall a fireman be assigned to locomotives operating in yard service and weighing 90,000 pounds or less on driv-

[30] B. L. F. and E. notice No. 3.

ers? Under the existing regional agreements, the assignment of a fireman in this category is not required, and the engineer operates these locomotives without the assistance of a fireman.

Section 4 of the Eastern, and sections 3 and 4 of the Western and Southeastern existing agreements now read as follows:

A fireman, or a helper, taken from the seniority ranks of the firemen, shall be employed on all locomotives; provided that the term "locomotives" does not include any of the following:

(a) Diesel-electric, oil-electric, gas-electric, other internal combustion, steam-electric, or electric, of not more than 90,000 pounds weight on drivers in service performed by yard crews within designated switching limits.[31]

The B. L. F. and E. proposes to eliminate subsection (a) just quoted.

3. *The rail motorcar issue.*[32]—Shall firemen be assigned to rail motorcars (*a*) that handle trailing cars; (*b*) that have been installed since March 15, 1937, and weigh 90,000 pounds or less on drivers; and (*c*) that were installed prior to March 15, 1937, have been made more powerful by any method and weigh 90,000 pounds or less on drivers? As will presently be noted, under existing agreements the carriers are not required by existing agreements to employ a fireman under each of the categories noted.

Section 4 (*c*) of the existing Eastern, and sections 3 (*c*) of the existing Western and Southeastern agreements provide as follows:

A fireman, or a helper, taken from the seniority ranks of the firemen, shall be employed on all locomotives; provided that the term "locomotive" does not include any of the following:

(*c*) Gasoline, Diesel-electric, gas-electric, oil-electric, or other rail motorcars, which are self-propelled units (sometimes handling additional cars) but distinguished from locomotives in having facilities for revenue lading or passengers in the motorcar; except that new rail motorcars installed after March 15, 1937, which weigh more than 90,000 pounds on drivers shall be considered "locomotives."

If the power plants of existing rail motorcars be made more powerful by alteration, renewal, replacement, or any other method, to the extent that more trailing units can be pulled than could have been pulled with the power plants which were in the rail motorcars on March 15, 1937, such motorcars, if then weighing more than 90,000 pounds on drivers shall be considered "locomotives." [33]

Instead of the foregoing subsection (*c*) it is asked that a new subsection (*b*) of section 4 of the proposed agreement be adopted to read as follows:

Gasoline, Diesel-electric, gas-electric, oil-electric, or other rail motorcars, which are self-propelled but handle no other cars and are distinguished from locomotives in that they have facilities for revenue lading or passengers; except that new rail motorcars installed after March 15, 1937, shall be considered "locomotives."

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[31] Employees' exhibit 5, p. 4; Carriers' exhibit 1, pp. 136, 156, 194.

[32] B. L. F. and E. notice No. 4.

[33] Carriers' exhibit No. 1, pp. 136, 156, 194; B. L. F. and E. exhibit No. 5, p. 5.

If a rail motor car installed prior to March 15, 1937, be made more powerful by any method, such rail motor car shall be considered a "locomotive." [34]

WAGE DIFFERENTIAL ISSUES

4. *The electric helper differential.*[35]—Shall firemen assigned to electric locomotives be paid wage rates applicable to firemen assigned to coal-burning steam locomotives?

This issue is raised by the request in the B. L. F. and E. notices to "eliminate all existing * * * electric * * * differentials where lower than coal burning rates." [36] To accomplish this purpose it is proposed that the schedules of wages attached to the regional settlement agreements [37] be amended to provide uniform rates for firemen assigned to steam and electric locomotives.[38]

The standard basic wage rates as set forth in appendices (B) attached to and made a part of the Eastern agreement of August 13, 1943, and the Western agreement of November 27, 1943, were modified by provisions of the National Wage Agreement of January 24, 1944, and Eastern memorandum agreement of May 4, 1945, and the Western Memorandum Agreement of October 22, 1945.

These appendices, as well as appendix (C) of the Southeastern agreement of May 11, 1944, were modified still further by the National Wage Agreement of April 19, 1946, the National Wage Agreement of May 25, 1946, and the National Wage and Rules Agreement of November 12, 1948. These modifications of the standard basic wage rates, except the last two, were reflected in the proposed schedule in the original notices. In order to take into account the last two basic wage rate changes of 1948, a revision of the proposed appendix (B) was made and submitted at the time of the hearing.[39]

5. *The oil burner wage differential.*[40]—Shall firemen assigned to oil-burning steam locomotives be paid wage rates applicable to coal-burning steam locomotives?

This issue, like the preceding one concerning electric differentials, is raised by request in the B. L. F. and E. notices which asked that "all existing oil * * * differentials where lower than coal burning

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[34] B. L. F. and E. exhibit 5, p. 5; carriers' exhibit 1, pp. 255, 256.

[35] B. L. F. and E. notice No. 1.

[36] Carriers' exhibit 1, pp. 253, 264; B. L. F. and E. exhibit 5, p. 1, notice request No. 1. This clause of the notices originally also requested the elimination of Diesel-electric differentials where lower than coal-burning rates. These, however, had been abolished between the original serving of the notices and the hearing in this case by settlement agreements between the B. L. F. and E. and the carriers, following the 1948 wage and rules case. Carriers' exhibit 4, p. 9; B. L. F. and E. exhibit 5, p. 8.

[37] For these schedules, see carriers' exhibit 1, pp. 141–143; 164–166; 199–204.

[38] Carriers' exhibit 1, pp. 258–263; 269–274; B. L. F. and E. exhibits 4–A, 4–C, 4–D, 4–E, pp. 6–9.

[39] B. L. F. and E. exhibit 5, note p. 8 for appendix (B) as so rivised; ibid. pp. 8–10.

[40] B. L. F. and E. notice No. 1.

rates be eliminated."[41] To accomplish this, it is proposed that the schedule of wages attached to the Western agreement of November 27, 1943, which was the only one of the existing regional agreements in which a different rate of pay for firemen assigned to oil-burning steam locomotives is set forth,[42] shall be amended to provide for firemen assigned to oil-burning steam locomotives and coal-burning steam locomotives.[43]

Since this proposed single rate schedule is identical with the one proposed in order to eliminate the electric differential, what has already been said as to it also applies here.

6. *Savings clauses as to higher than standard rates of pay and differentials based upon them.*[44]—Shall higher than standard rates paid to firemen working in various yards, divisions, and territories or portion thereof, and to firemen assigned to various types of locomotives, and any differentials based thereon be preserved by virtue of savings clauses in existing regional agreements or in the proposed national agreement?

This issue is raised both by the carriers and the B. L. F. and E. All three existing regional Diesel-electric agreements now contain the following clause in section 5 (*a*): "Existing rates of pay which are higher than those herein provided shall not be reduced."[45] In the Western and Southeastern agreements there is this additional sentence in the same subsection which reads: "If a rate higher than that provided by this agreement is in effect by reason of some special agreement with individual carriers such higher rate shall continue to be paid but need not be increased."[46]

The Western and Southeastern regional agreements each have a subsection (*b*) of section 5. In the Western contract this reads as follows: "(*b*) Existing differentials for divisions or portions thereof; or mountain or desert territory as compared with valley territory, whether expressed in the rates or in constructive mileage allowances shall be preserved."[47] The Southeastern clause provides: "(*b*) Existing differentials for divisions or portions thereof, regardless of how expressed in agreements on the individual railroads, shall be preserved."[48] There is no comparable subsection or provision in the existing Eastern agreement.[49]

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[41] Carriers' exhibit 1, pp. 253, 264; carriers' exhibit 4, p. 10; B. L. F. and E. exhibit 4–B.
[42] Carriers' exhibit 1, pp. 164, 165; carriers' exhibit 4, p. 10.
[43] Carriers' exhibit 1, pp. 258–263, 269–274.
[44] B. L. F. and E. notices No. 5; carriers' notices.
[45] Carriers' exhibit 1, pp. 137, 157, 196; B. L. F. and E. exhibit 5, p. 5.
[46] Carriers' exhibit 1, pp. 157, 196; B. L. F. and E. exhibit 5, p. 5.
[47] Carriers' exhibit 1, p. 158.
[48] Carriers' exhibit 1, p. 196; B. L. F. and E. exhibit 5, p. 5.
[49] Carriers' exhibit 1, p. 137; B. L. F. and E. exhibt 5, p. 5.

Besides the foregoing clauses in section 5 of the existing regional agreements, all these contain the following subsection: [50]

> Except as specifically provided herein, this agreement does not modify or supersede existing agreements covering rates of pay, rules, and working conditions of locomotive engineers, firemen, helpers, hostlers, and outside hostler helpers.[51]

By its notices of June 30, 1947, the B. L. F. and E. proposed certain changes in these clauses.[52] In place of the foregoing provisions it is requested that there be substituted the following section: [53]

> 5 (*a*). Existing rates of pay which are higher than those herein provided shall not be reduced. If a rate higher than those provided by this agreement is in effect by reason of some special agreement with an individual carrier, such differential in rates shall be preserved.
>
> 5 (*b*). Existing differentials for divisions or portions thereof; or mountain or desert territory as compared with valley territory, whether expressed in rates or in constructive mileage allowances, shall be preserved.
>
> 5 (*c*). Except as specifically provided herein, this agreement does not change in any manner or supersede existing agreements covering rates of pay, rules, and working conditions of locomotive engineers, firemen, helpers, hostlers, and outside hostler helpers represented by the Brotherhood of Locomotive Firemen and Enginemen.

In conflict with both the foregoing proposal by the B. L. F. and E. and the above quoted existing provisions of current agreements are the proposals contained in notices served by the Western and Southeastern carriers, dated June 30, 1947. The Western notice contained the following request:

> All existing rates of pay which are higher then standard rates of pay shall be reduced to standard rates of pay. All existing differentials for divisions or portions thereof or mountain or desert territory as compared with valley territory, whether expressed in rates or in constructive mileage allowances shall be eliminated.[54]

The similar proposal in the Southeastern notice is as follows:

> (*b*) All existing differentials for divisions or portions thereof, however established, and regardless of how expressed, shall be eliminated.[55]

7. *The 4–8–4 and 2–10–14 type engine differentials.*—Shall steam locomotives of the 4–8–4 and 2–10–4 types be reclassified for pay pur-

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[50] It is subsec (*c*) in the Western and Southeastern agreements and subsec. (*b*) of the Eastern.

[51] Carriers' exhibit 1, pp. 137, 157, 196; B. L. F. and E. exhibit 5, p. 5. The word "engineers" does not appear in the Southeastern agreement.

[52] B. L. F. and E. exhibits 4A–4F; Carriers' exhibit 1, pp. 253, 264; B. L. F. and E. exhibit 5, p. 5.

[53] Carriers' exhibit 1, pp. 256, 267; B. L. F. and E. exhibits 4A–4F, p. 4; B. L. F. and E exhibit 5, p. 5.

[54] Carriers' exhibit 1, p. 275; carriers' exhibit 5, p. 6.

[55] Carriers' exhibit 1, p. 277; carriers' exhibit 5, p. 6.

poses by being moved into the same wage brackets as other locomotives of like weight on drivers?

This issue was raised by the request contained in the carriers' notices dated June 30, 1947, to eliminate section 2 of the existing regional agreements, which provides as follows:

> Steam locomotives of the 4–8–4 and 2–10–4 type to be reclassified for pay purposes by being moved into the next higher wage bracket.[56]

In addition, the request under discusison may also be involved in that part of the B. L. F. and E. notices which concern the provisions of the savings clauses sought to be incorporated in the new national agreement.[57]

During the course of these proceedings, on August 19, 1949, the proposal of the carriers for a change in the existing classification for pay purposes of the 4–8–4 and 2–10–4 steam locomotives was withdrawn from the consideration of this Board.[58] The withdrawal was accompanied by a statement that the carrier proposal in this regard was being deferred and not abandoned. Pursuant to this action of the carriers, this Board will make no recommendations as to the 4–8–4 and the 2–10–4 type engine differentials.

8. *Local or way freight service differential.*—Shall the provision to be incorporated into the proposed uniform national agreement, which specifies for local and way freight certain amounts of pay to engineers and firemen in addition to through freight rates, according to class of engine, have added to the sentence covering the matter which now appears in all three regional agreements a sentence which is at present incorporated only into the Southeastern agreement?

This issue is raised by the request in the notices of the B. L. F. and E. of June 30, 1947, asking that the following sentence be added to the note at the bottom of the wage schedule for freight service: "52¢ for engineers and 40¢ for firemen shall also be added for all classes of service (as set forth in individual schedules) paying local or way freight rates." [59]

At present all three regional agreements contain the following sentence as a note to the schedule of rates for freight service: "For local or way freight service, 52¢ for engineers and 40¢ for firemen shall be added to through freight rates, according to class of engine.[60]
Southeastern regional agreement contains, in addition, the sentence now sought to be included in the proposed national agreement.[61]

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[56] Carriers' exhibit 1, pp. 275–277.
[57] B. L. F. and E. exhibit 5, p. 5, sec. 5; carriers' exhibit 4, p. 8.
[58] Tr., 5543, 5544.
[59] B. L. F. and E. exhibits 4A–4F, p. 10; B. L. F. and E. exhibit 5, p. 9.
[60] Carriers' exhibit 1, pp. 142, 165, 200, 202, 233, 237; B. L. F. and E. exhibit 5, p. 9.
[61] Tr., 366–373; carriers' exhibit 1, pp. 200, 202; B. L. F. and E. exhibit 5, p. 9.

9. *Machinery for settlement of disputes.*[62]—Shall certain machinery for settlement of disputes arising out of the interpretation or application of the B. L. F. and E. agreements be provided for?

This issue arises out of the request in the B. L. F. and E. notices of June 30, 1947, that the new national agreement contain the following section:

> 6. Any dispute or controversy arising out of the interpretation or application of any of the provisions of this agreement may be referred by either a carrier or representative of its employees to a committee, the carrier members of which shall be the members of the carriers' conference committee, or their successors or representatives; and the labor members of which shall be the international president of the Brotherhood of Locomotive Firemen and Enginemen, or his representative, together with nine general chairmen selected by the brotherhood. Interpretation or application agreed upon by such committee shall be final and binding upon the parties to such dispute or controversy.
>
> This provision is not intended to prohibit the parties from filing claims with the National Railroad Adjustment Board in the manner provided in the Railway Labor Act as amended, but if the committee provided for herein agrees upon an interpretation or application of any provisions of the agreement, such claims shall be withdrawn and settled in accordance with the decision of the committee.[63]

At present the Western and Southeastern regional Diesel-electric agreements contain similar provisions by virtue of memorandum agreements.[64] The proposed new section would extend the coverage of the provision to the railroads represented by the Eastern conference committee as well as retaining it in the other two conferences.

ISSUE NO. 1. DIESEL MANPOWER QUESTION

The issue raised by the proposal of the Brotherhood of Locomotive Firemen and Enginemen for the employment of an additional fireman (helper) on all road Diesel-electric locomotives is by far the most important of the various issues before this Board.[65] Not only does this issue involve a substantial proposed addition to the wage bill of the industry,[66] but it has an important bearing upon what the relative operating effectiveness of Diesel-electrics in comparison with steam and other types of locomotives will be. For, in contrast to other road locomotives which are operated with but one fireman, the B. L. F. and E. seeks the assignment of two firemen on all road Diesels of four

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[62] B. L. F. and E. notices, No. 6.

[63] B. L. F. and E. exhibits 4A–4F, p. 4; B. L. F. and E. exhibit 5, p. 6.

[64] Carriers' exhibit 1, pp. 168, 206; B. L. F. and E. exhibit 5, p. 6.

[65] For a detailed discussion of the contract changes requested by the B. L. F. and E. to effectuate this proposal, see material in the first section of this report relating to the issues in dispute.

[66] The carriers have estimated (carriers' exhibit 50, pp. 1–2) that their acceptance of the organization proposal for the assignment of a second fireman (helper) on road Diesels would increase the total annual wage bill of class I railroads by more than 40 million dollars.

units or less. Such a crew consist might provide more jobs for the firemen, but it would also entail an offset of an increased wage cost against the proved operating advantages—against the productivity—of Diesels and would substantially cut down the extent of the technological advantages which have been widely attributed to this power.

Basic to the contention of the B. L. F. and E. is its position that, because of the construction, speed, and power of Diesel-electrics, the safe and efficient operation of these locomotives in road service requires (1) the presence of a fireman (helper) in the cab at all times to provide adequate assistance to the engineer, particularly in maintaining a lookout, and (2) the employment of an additional fireman (helper) on all such locomotives, for each four units or less, to give necessary attention to the engine room machinery located behind the cab. The organization maintains that these two jobs must be performed on road Diesels and that a fireman (helper) should be assigned to each of them. Thus, a watching rule is first requested and that rule is then referred to, along with other reasons, as necessitating the employment of an additional fireman in the engine room.

In setting up its arguments in support of the claims above mentioned as respects all road Diesels, the brotherhood has stressed two main points. These general contentions are: (*a*) Claim for an additional fireman on all road Diesels, based upon an allegation that existing agreements have been violated and (*b*) claim for an additional fireman on all road Diesels, based upon considerations of safety and of efficiency of operation. Part 1 of this report on our examination of the road Diesel issue consists of a consideration of each of these two major classes of arguments just noted, with their various subdivisions, but such consideration is proceded by an introductory statement relating to the background of the case. There is also a part 2 in this report of our examination of the Diesel issue. In addition to general arguments which apply generally to every class of road Diesels, arguments have been advanced to point up particularized contentions that relate specifically to each one of the major classes of service. This consideration is given in part 2.

Part 1

INTRODUCTION

Only about 14 years have elapsed since the Diesel-electric locomotive was first operated in road service. Since 1935, rapid developments in the use of this power have brought about what is frequently referred to as "the Diesel revolution" in railroading. Nor have the technological changes incident to dieselization run their course. They are continuing.

Dieselization has also given rise to a number of successive problems and labor disputes about the crew consist necessary for successful operation of the new power. The present dispute is one in that series. A complete investigation of the present dispute thus requires, first of all, an understanding of its historical background and of its significance in relation to long-established practices in the railroad industry. To provide such an understanding and sharply to delineate the present issues, this introduction has been prepared.

SIGNIFICANT ASPECTS OF CLAIM FOR AN ADDITIONAL FIREMAN

With few exceptions, an engine crew of two has long been standard in the operation of locomotives in road service.[1] An engineer is in charge of the locomotive. He is assisted by a fireman or by a fireman (helper)[2] whose specific operating duties necessarily vary with the type of power used. Irrespective of type of power, however, the general duties of the fireman involve assisting the engineer. The fireman is an assistant to the engineer and is subject to the engineer's orders. Like all others in the train crew, the fireman is expected to do whatever he can "to get the locomotive over the road."

[1] Prior to the introduction of stoker-fired, coal-burning locomotives provision was made for the employment of a second fireman under certain conditions. See Eastern 1913 Arbitration Award (employees' exhibit 1–a, p. 49) and Western 1915 Arbitration Award (employees' exhibit 1–a, p. 88). There was also an early practice of assigning laborers at specified points en route to assist the fireman by shoveling coal in the tender to a spot where the fireman could more readily reach it. There are a few other exceptions. In some instances, e. g., rail motor cars, Diesels weighing 90,000 pounds or less on drivers and possibly others, locomotives have been operated without any fireman, i. e., with only an engineer.

[2] The designation "helper" came into being with the development of schedules for straight electric locomotives and was carried over into Diesel-electric operation as "fireman (helper)."

Assignment of each crew member to the locomotive is related to the performance of certain primary duties, but, by and large, the various detailed tasks involved in the operation of a locomotive are not allocated among the several crafts. In other words, sharp craft lines governing work jurisdiction have not been drawn, and we have been informed by both parties to this proceeding that they cannot properly be drawn. For example, all members of the train crew observe the right-of-way whenever they can. If something goes wrong on the train or on the right-of-way, whoever observes the difficulty does what he can to rectify it. Safety considerations evidently dictate such a method of operation.

This characteristic of locomotive operation has given rise to a number of complexities in the present case. The claim of the B. L. F. and E. for an additional fireman on Diesels has been based, to a significant degree, upon a contention that others are being improperly required to perform the "customary duties of firemen." But, as just noted, the duties of firemen cannot be defined precisely or in detail. Some tasks which are performed by firemen are also commonly done by others. For example, the engine-room work of firemen and of maintainers or spot checkers on Diesel-electrics unquestionably overlap, and this has been the case since the very inception of Diesels. Furthermore, what a fireman does as a part of his regular routine varies with type of locomotive, as will be presently noted in more detail.

In the last analysis, therefore, the B. L. F. and E. claim for an additional fireman cannot properly be appraised in relation to the allegation that approval of the claim is necessary to preserve an exclusive craft jurisdiction over certain operating activities. The claim for an additional fireman can only be reasonably appraised in terms of its intrinsic merit. There is an important substantive contention before us, namely, that safe and efficient operation of road Diesels requires the employment of an additional fireman. That gives rise to the fundamental question in these proceedings, and it should not be obscured. Our conclusion in this regard is based upon reasons that will be set forth in later pages. It may be noted here, however, that, although the B. L. F. and E. did present considerable evidence and argument designed to show that the employment of a second fireman under certain conditions was a matter of contract, its spokesmen also made it clear that they were seeking no make-work or no so-called featherbedding arrangement.[3] They did not claim that a "fireman should be placed on a locomotive if his services were not actually needed." The brotherhood case thus depends, in the last

[3] See, for example, tr., 65, 1677, 2000, 2002.

analysis, upon whether or not there are actually two jobs that must be filled by firemen if Diesel-electric locomotives are to be safely and efficiently operated.

BASIS OF CLAIM—DIVIDED DUTIES

In appraising the actual need for an additional fireman on road Diesels, it is significant that no claim has been made in these proceedings for an additional fireman on any type of locomotives other than Diesel-electrics. The two-man engine crew, composed of an engineer and a fireman, has long been and is now the rule on hand-fired, coal-burning locomotives, on stoker-fired, coal-burning locomotives, on oil-fired locomotives, and on so-called straight electric locomotives. The arguments for singling out the Diesel-electric as the one locomotive which needs an additional fireman starts with the observation that, on this power, the duties of the fireman (helper) are divided as to place of performance between the cab and the engine room behind the cab. Claiming that there is virtually continuous work to be done in both places, and pointing out that one person cannot be in two places at the same time, the organization concludes that an additional fireman must be added to the Diesel-electric locomotive crew.

Separation of the fireman's duties between the cab and the engine room on Diesels is the operational fact that is basic to the brotherhood contention. In contrast to Diesels, the various duties of the fireman on steam locomotives are, by and large, all performed in the cab and in the immediate presence of the engineer. The B. L. F. and E. insists that Diesel operation thus creates a peculiar safety factor that requires individual attention. It maintains that the safe operation of Diesels is seriously jeopardized during the absence of the fireman (helper) from the cab incident to his attendance upon engine-room machinery.

A competent person in addition to the engineer should be available at all times in the cab of Diesels, the organization insists, primarily to act as a lookout but also to take over immediately in case of any emergency arising out of the sudden incapacity of the engineer. It is to be noted, however, that on straight electrics the duties of the fireman (helper) are also divided between the cab and the engine room. No claim has been made in this proceeding that the absence of the fireman (helper) from the cab on straight electrics constitutes an unsafe method of operation.[4] Actually, in pressing its claim for elimination of the electric differential, which is another issue in this proceeding, the brotherhood has sought to emphasize the amount of

[4] Such a claim was made before the 1943 Emergency Diesel Board which recommended against the employment of an additional fireman on straight electric locomotives.

work which must be done by the fireman (helper) in the motor room on these types of locomotives.[5]

In developing existing agreements, and in the report of the 1943 Emergency Board which preceded them, serious attention was given to the claim of the B. L. F. and E. that, for reasons of safety, an engineer should not be alone in the cab of Diesel-electrics while the train is in motion. Provisions in current agreements and in current operating rules or under current practices on practically all railroads have been promulgated to insure the presence of two men in the operating cab while the train is in motion in two classes of Diesel service—on main line, high-speed, multiunit passenger trains and on freight trains. These rules, as well as the organization's safety claim in general, should be considered in relation to the fact that visibility from the cab of the Diesel locomotive is incomparably better than on the various steam locomotives. There can be no doubt at all that the greater visibility deriving from the construction of Diesel-electrics contributes substantially to the safety of their operation.

As respects high-speed, main line, multiunit passenger trains, current agreements require the fireman to be in the cab at all times while the train is in motion, and the rules of the carriers require the train to be stopped, if necessary, to enable the fireman (helper) to give attention to engine-room machinery en route. Except for those roads on which maintainers are still employed, engine rooms of these locomotives are not given patrolling attention while the train is in motion, but the fireman (helper) may inspect the engine room at the infrequent station stops and do a limited amount of work then if necessary. The organization claims, however, that this rule has proved to be far from satisfactory in practice, primarily because (1) firemen are in reality expected to perform engine-room work while the train is in motion and the watching rule is accordingly frequently violated in order to maintain schedules, (2) unscheduled stops to enable the fireman to attend to the engine room greatly increase the chance of rear-end collisions, and (3) when the fireman must remain in the cab, others, in violation of his rights, perform his "customary work" in the engine room. The only way out, contends the organization, is to assign an additional fireman to these locomotives.

The organization also claims that present operating methods in freight service are entirely unsatisfactory. First listing six reasons

[5] From direct observation, the members of this Board conclude that the principal engine-room work of the fireman (helper) on straight electrics is attention to the steam boiler on passenger trains. At times this attention may be time-consuming and, while this attention is being given, the engineer is alone in the cab. The evidence before the Board does not indicate that this has been or is an unsafe method of operation. The safety record on straight electrics compares favorably with steam.

why there must be someone in addition to the engineer in the cab at all times, the B. L. F. and E. then sets forth eight more reasons [6] why that person must be a fireman rather than a head brakeman who, on most railroads either because of rule or established practice, rides in the cab at such times as the fireman is in the engine room while the train is in motion. These last eight reasons amount to three main contentions: (1) That the regular duties of the head-end brakeman prevent him from properly performing the lookout functions of the fireman, (2) that, unlike the brakeman, the fireman is the person fitted by training and experience to act as lookout assistant to the engineer, and (3) the brakeman takes over customary duties of the fireman when he is given the assignment in question. Again the B. L. F. and E. concludes that the only way out is to employ an additional fireman.

The organization's claim for an additional fireman is not limited to the two classes of service, just referred to, where rules and practices have been developed to insure that two men will be in the cab while the train is in motion. Employment of an additional fireman is also requested on all other Diesel-electrics in road service. Separate and individual reasons have, by and large, not been advanced in support of the claim as related to the other services. The brotherhood contends, however, that its evidence shows in an over-all way the need for an additional fireman on all road Diesels.

It is appropriate here to note a number of other factors important to a full consideration of whether or not safe and efficient operation of Diesel-electrics is attainable when one fireman is assigned. Mention has already been made of the improved visibility from the cab which is a notable feature of Diesel operation. Unlike steam locomotives, most Diesels are equipped with an automatic stop or control for applying the brakes should the incapacity of an engineer cause him to release the controls. Reasonable doubts exist about the total efficacy of this device, but it is a safety devise available on Diesels that is of value in cases of rare emergency. In recent years, the time of the fireman (helper) required in attending to the engine room has been minimized by redesign, by substitution of automatic controls for hand controls, and by the installation of control devices in the cab. The latter changes are chiefly in high-speed passenger service but the same features could be installed in other services. To the extent that these changes have been made, the amount of time available to the fireman on Diesel-electrics for lookout has doubtless tended to increase. Then, too, the managements of some roads have decided that greater attention to terminal and to shop maintenance of Diesel-electrics will go far

[6] See section of this report dealing particularly with freight operations for a complete statement of all 14 stated reasons.

in assuring that little attention to the engines will be required en route. Some roads still use maintainers or spot checkers on Diesels, a practice which limits the amount of time the fireman must be away from the cab.

On the basis of the evidence before us, then, it appears that the manner of operating Diesels to achieve maximum efficiency and safety is still being developed. Although most Diesels are operated in main line, high-speed passenger service and in freight service—the classes in which particular attention to watching rules has been developed—there is an increasing use of this power in other services. As respects the operation of Diesel locomotives in conventional passenger service, as well as in single-unit, high-speed passenger and local freight, the fireman divides his time between the cab and the engine room although a considerable part of the engine-room inspection can ordinarily be performed at scheduled station stops.[7]

The rules and developments above referred to were for the purpose of insuring the safe operation of Diesel-electric locomotives without an additional fireman, except under certain limited conditions.[8] The safety and on-time performance of Diesel-electric locomotives operated under current rules have been notably good according to the evidence before us. Rates of train and crew accidents indicate that Diesel-electric operation has been safer than steam locomotive operation, even though the safety record of the latter type of power has been steadily improving and constitutes a notable achievement of railway management and railway labor.

The B. L. F. and E., however, contests the adequacy of current operating practices. It fears that there may be too much complacency about the railroads' safety record and believes that use of an additional fireman on road Diesels would further eliminate avoidable train accidents and crew injuries. The additional fireman is not only to insure proper lookout, it is contended, but also to insure the giving of proper attention to engine-room machinery by those whose "customary duties" encompass this work. Safe operation of the Diesel-electric locomotive, according to the B. L. F. and E. position, requires not just two men in the cab at all times on certain service

[7] The 1943 Emergency Board found that a second fireman was not required on this service since "these locomotives operate at slow speeds and under comparatively simple traffic conditions, with numerous stops, affording the regular firemen (helpers) opportunity to make inspections of the engine rooms." In other words, in these classes of service there will ordinarily be two men in the cab at all times since engine-room inspection can be done in the main at scheduled stops.

[8] As will be noted later, should the operation of the watching rule on the passenger service necessitate the employment of an additional man, the current agreements provide that he should be taken from the ranks of firemen.

while the train is in motion, but two men, of whom one must be a fireman (helper) in the cab at all times on all road Diesels.[9]

NATURE OF CLAIM FOR ADDITIONAL FIREMAN

The claim of the brotherhood involves the idea that two principal functions make up the major part of the primary and customary duties of firemen. These duties comprise (1) work incident to supplying fuel or tending engines, both of which the organization embraces in the term "production of power," and (2) lookout responsibility including checking signals with the engineer, observing the right-of-way and inspecting the train on curves. Although these may be looked upon as tasks done by firemen, they are not exclusively the work of firemen.

In the present proceeding, on Diesel-electric locomotives the B. L. F. and E. actually seeks to break what it considers the traditional combined fireman (helper) job into two jobs with one fireman assigned to each. One of the major functions would be assigned to a cab fireman (helper) who would be primarily a lookout and who would also be available at all times to act in case of the incapacity of the engineer. The other major function would be assigned to an engine-room fireman (helper) who would provide such needed attention to the motor rooms as he could give en route.[10]

The claim for an additional fireman on road Diesels is made despite the fact that, on every other type of locomotive, the fireman regularly performs a combined job made up of the two general functions just noted. Up to now, he has been doing a combined job on Diesels. On hand-fired locomotives—and they constitute a sizeable proportion of all locomotives presently on the railroad [11]—the fireman is primarily

[9] The watching rule asked for in this case is broader than the one now in force as to high-speed, streamlined, or main line through passenger trains. In that service the fireman now is required to stay in the control compartment only at all times when the train is in motion. The present request is that he stay there at all times on all road Diesels. This would necessarily include all time when the train is stopped. Notwithstanding the fact that the brotherhood is not demanding that the present narrower rule be extended to other branches of road service, but that the broader rule be applied to all classes of road service, including high-speed passenger service, the Board has not limited its investigation and findings to the propriety of adopting the asked-for broader rule. Throughout its inquiry and report, the Board, wherever it thought there might be any substantial difference resulting from the adoption of one rule rather than the other, has carefully considered the merits of each and stated its opinion on them.

[10] Although the two jobs would result in the assignment of two firemen, according to the B. L. F. and E. proposal, it is not intended, and the proposal does not provide, that fireman A would work exclusively in the cab and fireman B exclusively in the engine room. On any run, the two men might alternate or both might be in the cab at the same time although both should not be in the engine room at the same time.

[11] Employees' exhibit 22, p. 17, shows that, as of December 31, 1947, 12,575 hand-fired locomotives were owned by class I railroads. As of the same date, it was reported in carriers' exhibit 49, p. 1, that these railroads owned or leased 39,764 locomotive of all types.

responsible for providing fuel for the firebox and, when not so engaged, for calling signals to the engineer, observing the right-of-way and inspecting the train on curves. He is immediately at hand to receive orders from the engineer or to stop the train in an emergency. On both stoker-fired, coal-burning locomotives and on oil-fired locomotives, the fireman remains responsible for supplying fuel to the firebox. Since this involves mainly the manipulation of valves, he can give far greater lookout attention than on hand-fired locomotives, but still not a constant lookout. And, of course, he, too, is readily available to carry out orders and to act in case of emergency caused by incapacity of the engineer. As already mentioned, in straight-electric service the engine-room work of the fireman (helper) is limited and consists mainly of attention to the steam boiler, but he does divide his time between the engine room and the cab.

In pressing its claims for an additional fireman, the organization sets a watching standard for road Diesels that is greater than for any other type of locomotive, despite the fact that visibility from the cab is far superior on Diesels to any other type of locomotive. And, as will be again noted later, the safety record of Diesels is notably better than that of steam locomotives.

In addition, and partially in consequence of its proposed watching rule, the brotherhood attempts to show that a full-time fireman is needed in the engine room. The evidence shows that the average time now spent by the fireman in the engine room is about 30 percent of the running time, according to brotherhood witnesses, and substantially less according to carrier witnesses. Of the total engine-room time, it is mainly required for making routine patrols. The engine-room tasks to be done en route are neither complex nor difficult.

The availability of a man in the engine room ready to act promptly to forestall or to overcome unforeseen difficulties is heavily relied upon by the organization to show the need for an engine-room fireman. Even though these difficulties occur with relative infreqency, and even though their imminence is, with few exceptions, announced by various alarms in the cab, the brotherhood urges that the assignment of a fireman to the engine room would constitute a good investment in the interests of economical and efficient operation. This claim is vigorously contested by the carriers, who also insist that they are solely responsible, legally and otherwise, for determining what furthers and what interferes with efficiency of operation.

A careful consideration of these various aspects of "the Diesel question" here at issue helps make clear the nature of the case. It is apparent that the underlying matter is a substantive question: Do the

peculiarities of Diesel-electric operation actually require an additional fireman? In other words, are there actually two jobs for firemen on Diesels which must be performed if this type of locomotive is to be safely and efficiently operated?

This is not the first proceeding in which the manning of Diesel-electric locomotives has been the subject of a dispute between the B. L. F. and E. and the carriers. There were earlier dealings with this matter that culminated in the 1937 national Diesel agreement. Again, the very question now before us was an important issue before the 1943 Emergency Board and in the subsequent negotiations during which the current agreements were formulated. The B. L. F. and E. insists, however, that Diesel developments since 1943 are so important as to make the present case an entirely new one. This could be so without affecting the pertinence of earlier considerations given to the question of manning Diesel-electrics. This Board believes that the evidence, presented by both parties in these proceedings, concerning such earlier attention to the Diesel manpower question should be briefly analyzed at this point in order that the nature of the present dispute may be more clearly perceived and in proper perspective.

THE EARLY DIESEL QUESTION—SHOULD ONE FIREMAN BE ASSIGNED?

With the introduction of the Diesel-electric locomotive in road passenger service about 1935, and with the increasing use of this power since then, numerous engine crew consist questions have been raised. The first question arose as a result of the intention of certain carriers to eliminate the fireman's job in the operation of Diesel-electric locomotives. These Diesels could be safely operated by an engineer unassisted by a fireman (helper) in the opinion of some carriers. In support of this view, Diesel-electric locomotives were compared to rail motor cars which have long been operated by an engineer without a fireman. It is important to note, however, that this carrier position was taken with respect to a not very powerful locomotive by present-day standards and to a one-unit locomotive used in passenger service to haul few cars. But, they were high-speed trains. As will be seen presently, no organization demand was then made for the employment of a fireman on these Diesels solely because of the need for two men in the cab at all times. The need for two men in the head end of passenger trains was stressed and the full crew urged.

Powered by internal combustion engines, the Diesel-electric differs markedly from the various steam types of locomotives. That part of the fireman's job which requires his direct and independent responsibility for the proper supply of fuel in the firebox on steam types is

eliminated on the Diesel.[12] A new kind of work incident to locomotive operation—attention to the engine room—came into being with the Diesel-electric. Attention en route to the Diesel-electric power plant, located in engine rooms behind the operating cab, was a new kind of job not readily comparable with any operating tasks on other types of power.

Some carriers reasoned, when Diesels were first introduced, that firemen were not equipped either by training or by experience to supervise and to make adjustments to the Diesel-electric power plant. Any required attention to engine-room machinery while the train was en route should be given, the carriers felt, not by a fireman but by employees with shop craft skill and experience. From the beginning of Diesel use, such employees have been assigned to this power on some roads while the train is en route. The record in this case discloses that a number of the early Diesel-electric passenger trains ran up considerable mileage while being operated by an engineer without a fireman (helper) but with so-called maintainers assigned to the engine rooms.[13] On-time performance and the safety record of these trains so operated were quite satisfactory on the evidence before us.

There was an obvious threat that the job of fireman would be eliminated on Diesels. The early manpower issue on Diesels centered about this threat. It is true that but a few road Diesels were in operation in 1935, and then only in main-line passenger service. The performance of the new type of motive power was almost immediately so outstanding, however, that many in the industry accurately forecast what has since been termed "the Diesel revolution" in railroading. Sweeping technological change with its typical benefits and with its typical problems had to be grappled with by the railroad industry. In particular, there was the complex problem of how to secure the benefits of technological change without forcing a crushing burden upon those employees whose jobs would be directly affected.

The B. L. F. and E. made firm moves in 1935 and 1936 to prevent the elimination of the job of fireman on Diesel-electric locomotives.[14] Agreements with the various individual roads which first introduced Diesel-electric power were concluded during those years. Each one specifically provided for the employment of a fireman (helper) on

[12] In this respect, the Diesel-electric has points of similarity with the straight-electric locomotive.

[13] When the first Diesels were operated, it appears that various persons were usually in the engine rooms to observe performance since the power was new, revolutionary, and experimental.

[14] Even earlier, by contract made in November 1933, the B. L. F. and E. secured the agreement of the Union Pacific R. R. and the St. Joseph & Grand Island Ry. Co. to employ a helper on those streamlined trains propelled by internal combustion engines which preceded the introduction of Diesel-electrics (carriers' exhibit 2, p. 14).

these locomotives. It is significant that, in each of these agreements, certain details of work to be performed by a fireman (helper) in the engine rooms of Diesel-electrics were specified. The clause outlining these duties, to take one agreement as an example, provided that the fireman would be responsible for "inspection of and attention to motor, generator, heating, lighting, and air-conditioning equipment during their trip and shall be subject in all respects not inconsistent with the foregoing to all rules and working conditions as set out in the existing schedule." [15] An emphasis was thus given to the engine-room duties that a fireman (helper) was to perform, although such work obviously meant that the fireman (helper) would not be in the cab at all times while the train was in motion.

At the same time, under practices then existing, the identical engine-room duties specified in the agreements as a part of the firemen's work were also being carried out by maintainers. There is even some evidence before us to the effect that a major part of the engine-room work had to be done by the maintainers because only they were adequately trained for this work. Although practices of the various roads differed, it is clear that engine-room work would be assigned both to firemen (helpers) and to maintainers. There is reason to conclude, moreover, that at least on some roads the fireman (helper) was initially assigned as an assistant to the engineer in the cab and a helper to the maintainer in the engine room.

That there would be a job a fireman on Diesel-electrics, however, was rather firmly assured by the early Diesel agreements. A job was mapped out for him as a fireman (helper), and he was to perform two main kinds of duties which can logically be appraised as roughly comparable to the kind of assignment he had on the steam locomotives. There is no doubt, however, that the fireman was given no exclusive or monopolistic right to engine-room work by these agreements.

The program of the B. L. F. and E. to guard against elimination of the fireman's job on Diesel-electric locomotives was gotten well under way by the individual agreements in 1935 and 1936. It was completed, for all practical purposes, by the National Diesel Agreement of 1937 which resulted from notices served by the B. L. F. and E. on all railroads late in 1936. These notices presented a request for a national rule requiring that "A fireman (helper) taken from the ranks of the firemen shall be employed on all types of power used in road, yard, or any other class of service." [16] Although the notice does not specify that Diesel-electrics were the type of power particularly in view, such was the case.

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[15] Quoted from the Chicago, Burlington & Quincy agreement of December 9, 1935 (carriers' exhibit 2, p. 57).

[16] Employees' exhibit 1–a, p. 571.

By the National Diesel Agreement dated February 28, 1937, it was agreed that:

A fireman (helper), taken from the ranks of the firemen shall be employed on the following locomotives used in road or yard service:

(*a*) Diesel-electric, oil-electric, gas-electric, other internal combustion, or steam-electric, on streamlined or main line through passenger trains.

NOTE.—The term "main line through passenger trains" includes only trains which make few or no stops.

(*b*) Diesel-electric, oil-electric, gas-electric, other internal combustion, steam-electric, or electrics, of more than 90,000 pounds weight on drivers.[17]

This agreement thus provided for the employment of a fireman (helper) on all Diesel-electric locomotives, regardless of class of service, weighing in excess of 90,000 pounds on drivers.[18] To this extent, it insured that any technological changes incident to Diesel development already achieved, or which might occur in the future, would not eliminate the fireman's job. In reporting the 1937 Diesel settlement to the local leadership of the B. L. F. and E., Mr. D. A. Robertson stated that, while the agreement will necessitate the immediate hiring of approximately 230 helpers, "the preservation of the employment of locomotive firemen on locomotives covered by the agreement which will be installed in the future is of greater significance."

In other words, the firemen received full protection against that most burdensome consequence of technological change—job elimination. In consequence, the advantages of dieselization to the carriers have been through more efficient operation and greater productivity which are achievable in the use of Diesels. Cost savings have not been as a result of job elimination, which is a common result of technological change.

Whether or not the total job opportunities for firemen are substantially unaffected by the dieselization of the railroads cannot readily be discerned. The years of dieselization have also been years when the railroads have been called upon to handle an unprecedented large volume of traffic. In this proceeding, the B. L. F. and E., insists that dieselization entails not only an immediate loss of jobs but a greater threat to work opportunity in the future. Diesel-electrics have unquestionably resulted in the elimination of some helper

[17] A definition of locomotives, for purpose of the agreement, was made by excluding from that designation certain types of power referred to in art. III of the 1937 agreement.

[18] The principal exclusion from the requirement that a fireman be employed was Diesel-electrics under 90,000 pounds weight on drivers. This exclusion was further limited, by the 1943–44 agreements, to certain kinds of yard service. In another issue involved in the present proceeding, the B. L. F. and E. seeks the employment of a fireman on the relatively few Diesels now used in yard service on which no fireman is assigned.

and servicing operations and the jobs that go with them. Diesel locomotives can haul heavier trains at a higher average speed even when, as is generally the case, maximum speeds are not increased. There may be fewer jobs for a given volume of traffic. Such a result, however, is not peculiar to dieselization. It has long been a concomitant of the steady development of more powerful and more effective steam locomotives. Nor are total job opportunities determined by the number of men employed to handle a given volume of traffic. Total job opportunities depend, more than anything else, upon the total volume of traffic the railroads are called upon to carry. In giving the railroads a means of securing economies necessary for any improvement of their competitive position, dieselization served to increase the total volume of traffic to be handled and thus tended to preserve jobs and maybe to create new ones.

One of the most notable aspects of the change brought about by the Diesel-electric locomotive is that the great technological advance it represents was made without eliminating any of the jobs of the locomotive operating crew. The jobs were, in many ways, made more desirable. At the same time the advantages of Diesel operation were sufficiently great to improve the railroads' competitive position and thus provide a basis for maintaining total traffic upon which total job opportunities are determined.

The lasting significance of the 1937 National Diesel Agreement, made at the very start of the so-called Diesel revolution, is in its assurance that the job of fireman would not be eliminated on Diesel-electric locomotives.

THE 1943–44 MANPOWER ISSUE—SHOULD AN ADDITIONAL MAN BE EMPLOYED?

Shortly after consummation of the 1947 Diesel Agreement between the carriers and the B. L. F. and E., the manning of Diesel locomotives again became a subject of controversy. Beginning on March 6, 1937, and extending until October 26, 1939, the Brotherhood of Locomotive Engineers served notices requesting the assignment of an assistant engineer on each Diesel-electric locomotive. The B. L. F. and E. later served notices on all railroads, as of May 10, 1941, including a request that: "In the multiple unit operation of other than steam locomotives a fireman (helper) taken from the seniority ranks of the firemen will be employed on each unit." It appears that the B. L. F. and E. later modified its notice and thereby requested the assignment of an additional fireman to each unit of Diesel locomotives.

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At the opening of this case before the 1943 Emergency Board, which made a joint investigation of the Diesel manpower claims filed by both organizations, the B. L. E. modified its request to provide that an assistant engineer be placed on single and multiple-unit assemblies up to and including four units. Thereafter, the B. L. F. and E. modified its request to provide that one additional fireman be placed on multiple-unit assemblies up to four units. The demand of the B. L. F. and E. before this Board differs from prior demands of this organization in that it contemplates the assignment of two firemen to single-unit Diesel-electric locomotives.[19]

As the Diesel dispute developed in 1943, then, it was the position of both organizations that the addition of a third member to the locomotive crew was necessary for the operation of Diesel-electrics. The B. L. E. and the B. L. F. and E. each claimed that the additional man should be taken from its roster.

The effect of the notices served by the two labor organizations was an assertion of claims that the operation of the Diesel-electrics required a larger engine crew than any other type of locomotive in service. One should not overlook the fact, however, that, as compared with 1937, the Diesel locomotives had become far more powerful. Multiple operations—up to four units—were a common occurrence and the use of Diesels had been recently inaugurated in freight service.

The manning problems which came to a head in 1943 unquestionably related to a very different kind of Diesel operation and service than had been dealt with in 1937. The nature of the "Diesel revolution" had become quite apparent by 1943. The Diesel question then raised by the organizations posed a rather unique question in the field of technological change. Both organizations claimed that the Diesel locomotive required more and not less manpower to operate than the steam locomotives it was rapidly supplanting. They maintained, in effect, that the technological benefits available through use of the Diesel-electric locomotive—such as those secured through lower fuel costs, greater availability of locomotive, and a greater average speed at a given maximum speed—were properly attainable only by an increased use of manpower.

The same point-of-view has again been advanced in the present proceeding. If it is recognized as meritorious, the net advantages of the Diesel over steam power will be significantly cut down. The issue thus raised by the organizations—certainly when carried to the extent it was in 1943 of claiming the need for an additional man on each unit—may even be looked upon as a claim that the Diesel-electric

[19] Except on the hooded-engine types.

locomotive represents no real technological advance at all in terms of providing the same or greater service at a total lower cost.[20]

Following negotiation and mediation with respect to the notices filed by the B. L. E. from 1937 to 1939 and those filed by the B. L. F. and E. in 1941, an Emergency Board was established on February 20, 1943, to deal with the far-reaching Diesel question which had been raised by the two organizations.[21] The report and recommendations of the 1943 Emergency Board were filed on May 21, 1943. In subsequent negotiations, agreements were reached by the B. L. F. and E. with the Eastern conference of carriers on August 13, 1943, with the Western conference on November 27, 1943, and with the Southeastern conference on May 11, 1944. Agreement with each of these conferences was also consummated by the B. L. E., but it is the B. L. F. and E. agreements which are here important.

The 1943 Emergency Board recommended, in general, against an increase of the standard two-man engine crew and accordingly against the mandatory assignment of an additional fireman on Diesel-electric locomotives.[22] A careful reading of the 1943 Board report [23] makes it eminently clear that a major argument advanced by the labor organizations in support of their claims for additional manpower was the reduction of any hazard incident to the absence of the fireman (helper) from the cab in the performance of engine-room work. The same argument has been urged in the present proceeding with an added insistence by the B. L. F. and E. that the facts of Diesel operations are quite different now than they were in 1943 and the need for an additional fireman much greater now.

The 1943 Board did conclude that "on multiple-unit Diesel, high-speed, main line through passenger trains, safety of operation demands, whenever the train is in motion, the presence of the fireman (helper) in the cab." To this extent, the safety contention of the labor organizations was recognized. In the judgment of the 1943 Board, however, the required presence of the fireman (helper) in the cab, on the one class of service, did not necessarily call for the employment of an additional fireman in the engine room. That the watching rule,

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[20] In this case, the carriers have suggested that the demands made by the two organizations over the years have been the result of an inter-union jurisdictional dispute and have thus implied that the basic considerations as here referred to did not motivate the labor organizations. Irrespective of any such contentions, the considerations mentioned become vitally important in evaluating the fundamental nature of the organization demands.

[21] A number of other important issues were involved in the 1943 proceeding, but they need not be discussed here.

[22] It also recommended against the required assignment of an assistant engineer on Diesel-electrics.

[23] Carriers' exhibit 1, pp. 76–133.

however, might require an extra fireman, under certain conditions, was recognized. In this connection, the 1943 Board recommended that "if compliance with this finding [the required presence of the fireman in the cab] requires the services of an extra man in the engine room to perform the work customarily done by firemen * * * an extra man shall be added." And it was further recommended that if such an additional man was required he should be taken from the ranks of firemen.

In other words, the 1943 Board recommended that, in one mentioned class of passenger service, the regular fireman should give his entire attention to lookout duties in the cab while the train was in motion. He could, however, presumably perform some engine-room work at regular stops.

As respects other classes of train service, the 1943 Board evidently concluded that operating practices then existing resulted in safe operations. At any event, it recommended no change in such practices and specifically did not extend the watching rule beyond the one class of service just discussed. The board pointed out that the rule it recommended for certain high-speed passenger trains was not called for in through-freight service where "the necessity of having a second man in the cab continuously is met by the presence of the head brakeman, who customarily does signal watching when the fireman (helper) finds it necessary to patrol the engine room." The 1943 Board also concluded that: "The evidence does not indicate * * * a need for an extra man on yard engines nor * * * for an extra man in single unit, local freight, and passenger locomotives, as requested by the engineers. These locomotives operate at slow speeds and under comparatively simple traffic conditions, with numerous stops, affording the regular firemen (helpers) opportunity to make inspections of the engine room."

In short, the 1943 Emergency Board recommended against the B. L. F. and E. with one possible, restricted exception. It was recommended that the fireman be required to remain in the cab at all times while the train is in motion but only on certain high-speed passenger trains. Employment of an additional fireman was recommended only if compliance with the watching rule just mentioned "requires the services of an extra man in the engine room to perform the work customarily done by firemen."

The words "work customarily done by firemen" embodied the test recommended by the 1943 Board for determining whether or not a second man would be employed in the multiunit, high-speed passenger trains. There is an inference in the 1943 Board report that "the customary work of firemen" was operational in nature including

such matters as inspection of gages, regulation of ventilating shutters, adjustment of oil filters, and operation of the steam generator in passenger service. It was noted in the Board report that automatic means were available to regulate the devices relating to such work, though there was some question about their effectiveness, and also that the carriers had suggested that "rather than put an additional man in the engine room a return may be made to the automatic system, thus allowing the fireman to remain in the cab the whole time the train is in motion."

In the present proceedings, note should be taken of the fact that the 1943 Emergency Board made such recommendations as it believed necessary to meet any safety hazards peculiar to the operation of Diesel-electric locomotives which were present at the time. Attention to these safety hazards was also given in the negotiations, following filing of the 1943 Board report, which resulted in consummation of the B. L. F. and E. 1943–44 agreements with the carriers which are presently in effect. The parties wrote into those agreements a clear rule that, on multiunit, high-speed, main line passenger trains, the fireman must remain in the cab at all times while the train is in motion. They also adopted other provisions relating to the hiring of an additional fireman under certain circumstances.

One of the main reasons for the claim now before us is the contention of the brotherhood that violations of the contract provisions just noted have occurred and continue to occur. A continuance of those provisions would inevitably mean, according to the organization's view, a continuance of the violations. In other words, it is maintained that the rules, and the operating practices related to them, designed in 1943–44 to meet the Diesel question have not fulfilled their intended purposes. On the basis of this experience, it is reasoned, the rules and practices will not meet the problems of Diesel operation in the future. New and more practical rules must now be worked out according to the brotherhood.

The contract provisions pertinent to the brotherhood argument, and allegations as to their violations—as well as the relevancy of these matters to the present case if they did occur or do occur—are all dealt within the following major section of this report.

Several aspects of the Diesel manpower dispute as settled by the 1943–44 agreements are of peculiar significance to this present proceeding. In the first place, the very same issue involved in the earlier dispute has been brought up again. The brotherhood now contends that the rules agreed upon in 1943 and 1944, as well as the practices that developed under them, to dispose of this Diesel manpower problem have been shown by experience to be grossly inadequate and, further,

that a greatly increased use of Diesels at higher speeds and to haul heavier loads has given rise to a Diesel manpower problem in 1949 that is substantially different from the one which had to be met in 1943 and 1944. In the second place, the B. L. F. and E. maintains that its rights for the employment of an additional fireman as specified by the 1943–44 agreements have not been recognized by the carriers. It is claimed that the carriers have consistently violated the terms of those argeements relating to the employment of an additional fireman and that a new rule specifically providing for such employment on all road Diesels is needed. In the third place, the issue before us arises out of the alleged inadequacies and shortcomings of rules agreed upon in 1943–44 to meet problems then existing which are generally quite similar to those now posed. The brotherhood proposition is basically that its proposed manning rule should be substituted for rules and operating practices now in effect. Accordingly, the relative effectiveness of alternative rules and practices is basically at issue.

Following this introduction, the two main parts of Diesel manning issue are discussed in this order:

A. The Claims of Contract Violation, and B. The Claims for an Additional Fireman for Reasons of Safety and Efficiency of Operation.

A. THE CLAIM OF CONTRACT VIOLATIONS

Following issuance of the report of the 1943 Emergency Board, clauses covering the manning of road Diesel-electrics were negotiated and included in contracts entered into by the Brotherhood of Locomotive Firemen and Engineers with each of the three regional conferences of carriers. The first was in the East where section 3 was adopted.[24] This same section, with a slight change in the opening sentence of the second paragraph, was also adopted in the West and the Southeast.[25]

When the Western agreement was being negotiated however, the carriers were concerned about the language of the section, especially about the words "to perform the work customarily performed by firemen (helpers)" which appear in both paragraphs. There was prolonged discussion which culminated in the adoption of a memorandum—the so-called Maintainer Memorandum—which was attached to the Western agreement and made a part of it. In the Southeast

[24] Only the first two paragraphs of sec. 3 dealt with Diesel-electric locomotives. Incorporated into sec. 3 in the form of a memorandum was a provision as to straight electric locomotives.

[25] This change was not intended to alter the intent or purpose of the Section as it was written in the Eastern agreement. The section was No. 4 in both the two later contracts.

the clauses in the section and the memorandum were adopted without such discussion.[26]

As noted earlier, the B. L. F. and E. urged before this Board the pertinency of violations of contract rights under foregoing settlements as a basis for its proposed new section 3. Even though such argument was made in the processing of a case under section 6 of the Railway Labor Act, in view of the importance evidently placed on the matter by the B. L. F. and E., this Board proceeded to hear testimony with respect to this contention. In going thoroughly into this matter, the Board even suggested a possible interpretation of the contract which has been designated as the "theory of quantitative rights in joint work" and which it was evident from the testimony was in the mind of neither party when the contract was made, was never before used or urged in the railroad industry, and which evidently would be impractical and undesirable to apply.

Under the provisions of the 1943–44 agreements discussed above there are three possible contract rights, claimed violations of which might be argued by the brotherhood to be relevant as to the issues in this case. They are as follows:

1. A right to have a fireman (helper) remain in the cab at all times when the train is in motion. This applies only to high-speed, streamlined, or main line through passenger trains.

2. A right, under certain circumstances, to compel the carriers to employ an additional fireman (helper).

3. A monopolistic right to the work in the engine room as "work customarily done by firemen (helpers)." This possible right might be interpreted as preventing the carriers from hiring maintainers or others to do such work.

The relevancy of these matters to the issues in this case are taken up seriatim.

1. The existence of the first of the three possible contract rights is undisputed. A fireman (helper) must remain in the cab of certain passenger trains while in motion. It is admitted, also, that violations of this provision have occurred in the past to some extent, especially on two or three roads. The B. L. F. and E. insists that violations of this rule are inevitable unless an additional fireman (helper) is employed. In other words, it claims that the watching agreed upon in the contract for the safety of these trains can obtain only if an additional fireman is employed. This claim is obviously relevant to the issues in this case.

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[26] The text of the clauses in each of the three agreements and the memoranda attached to two of them are reproduced in the first section of this report in which the issues of this case are stated.

a. It would have relevancy to the proposal to enlarge the scope of the present watching rule to compel the firemen (helpers) to remain in the cab "at all times," not merely "when the train is in motion" and to do so, not only in high-speed passenger trains but in all classes of service. That would constitute a more inflexible and a more inclusive rule and add to the problem of compliance unless an additional fireman were employed.

If high-speed passenger trains have been operated in the past with violations occurring, and if the continuance of such violations is inevitable, the question is raised whether such trains have been or can be operated safely under the present rules. The finding of fact on such a question would have relevancy, even though not necessarily decisive influence upon the proposal stated in the preceding paragraph. It would also have relevancy upon possibilities (i) of extending the existing rule, without enlarging it, to other classes of service so as to make presence in the cab mandatory at all times while the train is in motion. (ii) Of neither enlarging or extending the existing rule in high-speed service, but modifying it by agreement of the parties so that, without sacrifice of the essential safety sought to be achieved by it, the allegedly inevitable violations need not occur in high-speed passenger service.

The substantive problems raised by the brotherhood in making its contract violations of the existing watching rule is considered elsewhere.

b. The occurrence of such violations or their inevitability in the future also have an obvious relevancy to the claim that it is essential to hire an additional fireman to do work in the engine room. These factors, if true, may constitute evidence that there is a job to be done back in the engine room which can neither be eliminated nor performed in other ways and would, therefore, have a bearing on the claim that an additional fireman would be employed in this type of service at least.[27]

2. That the second possible contract right does not exist, or if it does, as a practical matter it is valueless, is clear from the following analysis of the contract provisions embodied in the section in all three existing regional contracts and in the memorandum in the West and Southeast:

a. The words "work customarily done by firemen (helpers)" were intentionally left undefined, at least as to specific tasks comprising that work. The detailed description of work done by firemen contained in

[27] Further, if the first part of the B. L. F. and E. proposal, i. e., to enlarge and extend the watching rule were adopted, it would have relevancy to those classes of service also.

the 1943 Emergency Board report[28] was specifically rejected as a definition.

b. Similarly, the work that "Diesel maintainers, instructors, or supervisory employees" might be employed to do without it being considered that they were being "used to perform the work customarily done by firemen (helpers)" was left indefinite as to specific tasks. The suggestion of the 1943 Emergency Board that in order "to prevent the development of jurisdictional dispute," a sharp line of demarcation be drawn between the duties of the fireman (helper) and shop craft maintainers[29] was definitely rejected by both parties. Both parties intentionally refused to draw any such sharp line of demarcation either by defining specifically the sphere of work of each or in any other way.

c. The words "work customarily done by firemen (helpers)" as used in each paragraph of the section and in the memorandum were intended to have the same meaning, undefined in each instance as previously stated.

d. Under the second paragraph in each section dealing with road Diesels in service other than "high-speed, or main line through passenger," there is, explicitly, no right by the B. L. F. and E. to have an additional fireman (helper) assigned to a locomotive under any circumstances.[30] However, if there should be added a "man to perform the work customarily performed by firemen (helpers)", then the organization does not have a contractual right to have the man so added taken from the ranks of firemen.

e. In "high-speed, streamlined, or main line through passenger service" it may be argued that the first paragraph of the section gives the B. L. F. and E. not only the right to have any man who may be added to do firemen's work taken from the ranks of firemen but, beyond that, a right to compel the carriers to put on such a man under certain circumstances. Those circumstances are present "if compliance with the foregoing [rule requiring the fireman (helper) to be in the cab at all times while the train is in motion] requires the services of an additional fireman (helper)" to do this undefined "work customarily done by firemen (helpers)." The organization is faced with difficulties in urging that this provision gives any contract right, or at least one of any value because: First, there is no criterion, or such an indefinite one, for determining when services would be required that it

[28] Report of 1943 Emergency Board, p. 48; carriers' exhibit No. 1, p. 104.

[29] Idem, p. 52; Idem, p. 106.

[30] That the difference in language in the East was not intended to have any different operative effect than the language used in the West and Southeast, see p. 58, note 2, ante.

would be practically impossible for anyone to tell when the condition is fulfilled.[31] Second, it is not specified who, if anyone, shall apply such a test even if it were possible for anyone to do so. Nor is there any provision for ascertaining such a person. There has been no practically enforceable contract right in the B. L. F. and E. to compel the carrier to hire anyone to do work of any sort on these high-speed, streamline, or main line through passenger trains any more than in any other class of service.

The Board believes the foregoing analysis and conclusion to be correct. If this is true, and the possible contract right therefore does not in fact exist, or is valueless there can be no violations of it to have significance on any matter. But whether or not there ought to be a mandatory duty imposed by contract upon the carriers to hire an additional fireman on all road Diesels, or on some classes of them, is another matter. This again goes to the substantive merits of such a request.

3. The B. L. F. and E. argue that the existence and claimed violations of the third possible contract right are pertinent to the issues in this case and can be and have been established.

Their contentions as to the pertinency of these matters may be summarized as follows:

1. There is work to be done in the engine room of Diesel-electric locomotives of the character that is "customarily done by firemen."

2. Such work is essential to the efficient operation of such locomotives, i. e., it is work which cannot be left undone while the train is in motion.

3. Since there is such work, if no one other than a fireman may do such work, and if the regular fireman cannot do it by reason of being required to stay in the cab, the logical consequence is that the carrier must then hire an additional fireman to do that work.

Implicit in the foregoing contention is the argument that if the carrier may rightfully hire maintainers or others to do that work, then there will be no work left undone in the engine room that would necessitate hiring such an additional fireman. If the B. L. F. and E. have a contract right that the carriers shall not hire these others to do such work, then to prevent it being left undone a fireman would have to be hired.

The B. L. F. and E. contend that they do have such a contract right. The organization insists that the intent and purpose of the 1943–44 settlement agreements was to stop the existing practices by the carriers, not of employing maintainers, Diesel instructors, super-

[31] The character of the work that must be required, i. e., "work customarily done by firemen (helpers)" is left, as has been pointed out, intentionally indefinite. The test of what will require this or any other sort of work to be done is left undefined.

visory employees or others, but of using them, if employed, to do the work in the engine room "customarily done by firemen." In order to operate sucessfully multiple-unit, high-speed, streamlined, or main line through passenger trains, one or the other of these contract provisions has been violated according to the brotherhood. Where no one else is employed to do the work in the engine room, the fireman, in violation of the watching rule, is knowingly permitted or "pressured" into leaving the cab to do essential work in the engine room while the train is in motion. Where the fireman obeys the rule and remains in the cab, maintainers, spot checkers or others violate the contract by doing this work.

It will be noted that the complaints of violation of this claimed contract right are concentrated on the multiple-unit locomotives used in high-speed, streamlined, or main line through passenger trains. The watching rule does not apply to locomotives used in other service so there could be no violations of it on them. This third claimed contract right, as spelled out by the B. L. F. and E., does apply to locomotives used in other classes of services and consequently the organization claims it could be violated in them.

However, the general practice in such other classes of service now seems to be to use the fireman to do whatever is necessary to be done in the engine room when the train is in motion. There may be some use made of others than firemen on some roads on some trains which might be regarded by the B. L. F. and E. as a violation. However, the amount of it apparently has not been sufficient to make such possible violations of the claimed contract right of any great importance. While this is true, perhaps it should not go unnoted that the B. L. F. and E. argue strongly that safe and efficient operation demands, regardless of contract obligation, that a fireman be in the cab of all Diesel-electric locomotives operated in road service of any kind.

The carriers' position in regard to the contract-violation clause made by the B. L. F. and E. settlements may be stated as follows:

1. The 1943–44 settlement agreements were not intended to force the carriers to stop any then existing use being made of maintainers or other supervisory employees or to prevent any carrier not then employing them from inaugurating the employment of such persons to do the same sort of work.

2. The practice as to the maintainer existing at the time of the agreement was that he was invariably responsible for work done in the engine room of locomotives in road service. He had operating as well as repair and maintenance duties and work. He had the duty to do all the work himself or to see to it that the fireman, who was only his helper while in the engine room, did it.

3. At the time the 1943–44 agreements were entered into there was no "work customarily done by firemen" either as to kind or amount to which they could claim a monopolistic right. The concept of "production of power" which was valid on steam locomotives had no application on Diesel-electrics any more than on straight electrics. The work in the engine rooms of Diesel locomotives was completely new work to which no class or craft had any rights either by custom and usage or by existing contracts. The practices as to the use of firemen on Diesels were not uniform, but where maintainers were used on them the firemen served merely as maintainer. The term "work customarily performed by firemen" consequently would be meaningless unless accompanied by a definition of what was meant by it as used in any particular provision. Since the organization both rejected the definition of the term contained in the report of the 1943 Emergency Board, steadfastly refused to explain in what sense the term was used, and insisted upon leaving its meaning undefined, it followed that, so far as the contract is concerned, the term must be regarded as having no meaning so as to give a contractual right as to them. This is true, contend the carriers, because in order to have a contract in regard to anything, it must be shown that the parties reached an agreement upon that matter. Here there was no meeting of the minds as to meaning of these words.

All of this testimony and argument has been carefully examined by the Board. We conclude that it is not necessary, in order to arrive at a recommendation on the issues before us, to make an interpretation of the contract as to whether it does or does not prevent the continuation of the use made by the carriers of maintainers and other supervisory employees in 1943–44 or the later inauguration of such use on other roads which did not then use them. It is emphasized again that it is important that this is the case because no authoritative interpretation of the contract could be made by this Board. That function is reserved to the Adjustment Board.

Our reasons for reaching this conclusion are that, even if the interpretation proposed by the brotherhood is the proper interpretation of the contract, and even if the alleged violations occur, it still does not provide any reason for compelling all railroads to employ an additional fireman on all Diesel locomotives for each four units or less used in every class of road service.

As was noted, the contention of the organization respecting violations of a contract provision as to the interpretation of which there is a dispute could apply with any substantial importance only to one class of service—multiple-unit, high-speed, streamlined, or main line through passenger trains. Even in such service violations could

occur only upon certain roads and, in some cases, to certain trains on those roads. The general use of full-time maintainers is confined to two roads. The use of spot checkers or others whose work may in part be claimed to be violations of the organization's interpretation of the contract is more widespread.[32] But, granting that the total of possible violations is considerable,[33] they would still pose the problem of adding another fireman to the crew consist in only this one type of service. Even here the addition of another fireman is not an inevitable solution of the problem of violations of this third possible contract right. One answer which the carriers are now giving in operating practice is to make the engine room machinery almost wholly automatic and to stop the train when any trouble develops that requires the attention of someone in the engine room. This method of operation, while apparently possible, is not desirable. It is dictated only by the inflexibility of the present contract watching rule. This would indicate, as a possible solution, the modification of the rule in high-speed, streamlined or main line passenger service by agreement between the parties themselves. They could, it would seem, work out a rule to permit the firemen to do whatever was necessary to be done en route without requiring any other persons to be employed in violation of this claimed right. But, to repeat: Whatever possible significance alleged violations of the claimed contract [34] right may have in that one class of service gives no reason whatsoever to make it mandatory for all railroads to employ an additional fireman on such locomotives for each four units or less. Whether or not such a rule should be adopted depends upon questions of the intrinsic merits of the proposition apart from the question of whether there may be, on any interpretation of it, violations of the existing contract merits which are dealt with elsewhere.

CONCLUSION

This examination of contract provisions and alleged violations, regardless of their relevancy as such to the issues in this case, does indicate that there is a substantive problem, particularly directed to the case of high-speed passenger trains, as to the need for continuation or expansion of the watching rule in that or other classes of service, and whether, if it is continued or expanded, there is need for an additional

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[32] Carriers' exhibit 29.

[33] The extent of possible contract violations by the use of maintainers and others is considered in more detail in the following portion of the report. So, too, is the question of whether there exists a monopolistic right apart from contract which might be similarly violated.

[34] Violations of the claimed right not to have others do firemen's work would seem to have no relevancy as to whether the watching rule should be extended. The Board does not understand that they were so urged.

fireman to do work in the engine room. The merits of these substantive problems, as was stated separately in connection with each of the three discussions above, are considered in other parts of the report.

B. CLAIM FOR ADDITIONAL FIREMAN—SAFETY AND EFFICIENCY OF OPERATIONS

In addition to using the contract violation allegation to support its claim for an additional fireman on all road Diesels, the B. L. F. and E. has advanced a second main contention. Safe and efficient operation of road Diesels requires, it is urged, such an increase of the crew consist.

Out of this second contention arises the critically important substantive question as to whether or not there are, in reality, two necessary and useful jobs for firemen to perform on Diesels.[35] What would be done by each fireman? Would there be sufficient work to keep each one reasonably occupied? Is it unsafe not to separate the traditional combined job of fireman into two specialized jobs on Diesels?

This second main contention involves two chief considerations: (1) Claim that a fireman should be in the cab of all road Diesels at all times and (2) claim that an additional fireman is needed in the engine room of all road Diesels. Each of these claims will be taken up in this section but following an introductory consideration of several related matters.

INTRODUCTORY CONSIDERATIONS TO SAFETY AND EFFICIENCY OF OPERATIONS ARGUMENT

Preliminary to considering the two basic claims for an additional fireman on all road Diesels for reasons of safety and efficiency of operation, the general "theory" of the organization's argument in this regard should be clearly in mind. In addition, attention should be given to the claim that the issue here is a new one since so much was said on this point by the brotherhood. To deal with these matters is the purpose of this introductory section.

Theory of organization argument.[36]—The B. L. F. and E. general argument runs as follows: (*a*) Safety considerations require the presence of a fireman in the cab of all road Diesel locomotives at all times; (*b*) there is also essential work in the engine room that must be done by a fireman; (*c*) it follows that a second fireman is required to perform the engine-room work; (*d*) the greater productivity of the Diesels, as compared to steam, has enabled the carriers to effect sub-

[35] There is at least one exception to this general statement of the case as it is based upon safety and efficiency. As will be noted subsequently, the brotherhood claims, as a part of its argument, that employment of an additional fireman in the engine room is required because there is work to be done there which is exclusively fireman's work. This claim is made regardless of whether or not there is a full-time job to be done. It is also independent of any claim of monopoly by contract right.

[36] See B. L. F. and E. brief, pp. 42 and 43.

stantial savings through dieselization but only at the expense of some firemen whose job opportunities have decreased or have been eliminated; (*e*) under these circumstances, firemen displaced as a result of the introduction of Diesel power should be employed in other new jobs created by the Diesel.

In this argument, the point about increased productivity [37] and the contention based upon alleged technological unemployment [38] are both subsidiary. Their relevance depends upon the validity of the preceding steps in the argument since, as we understand it, the brotherhood does not ask for an additional fireman if there is no useful job for him to perform.

The general theory of the brotherhood case, as just summarized, applies to all road Diesel-electric locomotives irrespective of class of service. Essentially the same claims were made, and as respects essentially the very same issue now under review, before the 1943 Emergency Board.[39] Such a close similarity of issues and of claims in the 1943 and in the 1949 proceedings naturally raises these questions: Wasn't the very issue now before us ruled upon by the earlier Emergency Board? Wasn't the issue finally settled by agreement of the parties as embodied in the 1943–44 contracts? [40]

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[37] For *many* purposes, but not for all, the Diesel locomotive admittedly provides marked advantages over the steam locomotive. In consequence, Diesels are rapidly supplanting steam power. The extent of the net advantages of Diesels—especially as respects cost savings in operation—cannot be measured entirely satisfactorily through the data presented to us by the B. L. F. and E. Because the Diesel does possess substantial net advantages, however, it can be logically said that this type of power is "*more* productive" than steam power for many services. This could not be said with as much certainty, however, if an additional fireman had to be assigned to all road Diesels and if a new kind of manpower policy was thus introduced. Firemen on Diesels would then undoubtedly be less productive than firemen on steam locomotives. The reference to increased productivity is certainly no argument in itself for increasing manpower to cut down the productivity. The most that can be said for the argument is that, if an additional man is actually needed for other reasons, his assignment should not be withheld for lack of ability of the Diesel locomotive, in comparison with steam, to carry the added cost.

[38] It is not shown in the evidence before us that any significant technological unemployment has resulted from dieselization. Elimination of some helper service, made possible by substitution of Diesel for steam, has also eliminated some helper jobs in some districts. The capacity of Diesels to haul more cars and heavier tonnage indicates that fewer firemen are needed to handle a given volume of freight. These two tendencies are emphasized by the brotherhood. On the other hand, the total number of firemen needed depends primarily upon the total volume of freight to be handled and the total volume of passenger travel. If Diesels provide a needed means of placing the railroads in a competitive position, they may be responsible for a greater volume of traffic than would be forthcoming without dieselization. Dieselization has unquestionably improved the competitive position of the railroads and may very well prove to be a program providing for greater job security instead of employee displacement. It may bring about what might be termed technological employment.

[39] Certain differences between the claims made in 1943 and in 1949 have been noted elsewhere.

[40] The carriers raised these questions before us and urged that affirmative answers should be given to both questions.

Considerable testimony was presented by the brotherhood for the purpose of showing that the Diesel question of 1949 is materially different from that which was dealt with in 1943. Developments since 1943 have been so sweeping, it is claimed, as to require first a discard of the earlier established rules and then an altogether new determination of the Diesel question.

CONTENTION THAT PRESENT CASE PRESENTS A NEW PROBLEM

Some of the developments since 1943, referred to by the brotherhood as creating an altogether new Diesel problem, are a vast increase in the number of Diesel locomotives in operation,[41] more extensive use of Diesel power in passenger service by many more railroads,[42] the rapid growth in use of Diesels in freight service from very small to very substantial proportions,[43] and a reduction in the percentage of Diesels used in yard switching service.[44]

Among the various exhibits relating to the growth and to the present extent of Diesel operations, one factor stands out in principal importance—the relatively small use of Diesels in road freight service in 1943 as compared with an extensive and growing use in 1949. This growth of dieselization in road freight service has understandably been stressed strongly by the organization. In the B. L. F. and E. brief, this comment is made:[44a]

> It is in freight service today that the need for the protection proposed by the brotherhood is greatest and the impact on the man is greatest. It is the widespread and intensive use of multiple-unit Diesels in high-speed, heavy-tonnage, through-freight movements that today spearheads the Diesel problem, distinguishes it from the 1943 problem, and that makes it one of the most serious problems encountered by railroad enginemen since the inception of this industry.

A more extensive present use of Diesel-electrics than in 1943 is, in itself, no compelling reason for concluding that operating rules, negotiated when a lesser number of Diesels was in use, are necessarily

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[41] Employees' exhibit 38 shows that, on class I railroads, there were 1,713 Diesel locomotive units in place in 1943 as compared with 8,890 units on April 1, 1949.

[42] Employees' exhibit 34 shows that 20 railroads used Diesels in passenger service in 1943 as compared with 49 railroads in 1949. It appears from this exhibit, along with other related employee exhibits, that a large number of the leading railroads now use Diesel-electric locomotives to power a large proportion of their main-line passenger traffic.

[43] As shown by employees' exhibit 35, a total of 155 Diesel locomotive units were used in road freight service by 11 railroads in 1943 as compared to over 3,500 units used by 66 railroads in 1949. In this connection, it was also pointed out that, whereas only one type of road Diesel was used for road freight service in 1943, there are 10 types in use today.

[44] Employees' exhibit 30 reports that 1,282 Diesel units (about 75 percent of the Diesel units in all service) were assigned to yard switching service in 1943 as compared to 3,854 units (constituting approximately 44 percent of the Diesel units in all service in 1949. This decrease in relative importance of Diesel switchers is referred to as showing that, unilke 1943, the Diesel problem now preponderantly centers about road operations.

[44a] B. L. F. and E. brief, pp. 38 and 39.

inequitable to the firemen or inevitably inadequate for safe and efficient operation. To be sure, the assignment of more firemen to Diesels has doubtless resulted in more widespread interest in the way these locomotives are run [45] and in more intensive scrutiny of the rules. Adequacy or inadequacy of the operating rules has to be appraised, however, in terms of how they work out in practice and not on the basis of how widely applicable they are.

Only one important conclusion derives from the brotherhood data respecting the extent of Diesel operation in 1943 as compared to 1949. Since relatively few Diesels were assigned to freight service in 1943, it can be logically reasoned that operating experience with this service might then have been insufficient to enable the parties to establish sound, workable rules for freight operations on a fully informed basis. This is not to say that operating rules applicable to Diesel freight service are necessarily in need of revision. But it is reasonable to conclude that these rules especially should not be carefully reexamined. This has been done in a later part of this report.

Validity of claims, grounded upon the changed-conditions argument, for a similar reexamination of Diesel operating rules presently applicable to passenger and yard services, depend upon factors [46] other than an increase in number of locomotives in use. Data submitted by the brotherhood show that these services were relatively well established in 1943 and sufficiently so to provide a wide and a varied experience upon which to build a set of operating rules.

Changes in Diesel operations since 1943 referred to by the organization were not confined to increases in the number of Diesel locomotives in operation. In addition, the claim was made that speed of locomotive operation has increased to a marked degree for both steam and Diesel types, but especially in Diesel operation. High speeds, heavier tonnages, and greater traffic congestion have created what the brotherhood terms "an increased tempo of operations." [47] It is said that the tempo increase has created a safety problem in the operation of all road Diesel locomotives. Job requirements have become more exacting and the risk of accidents has increased, in the opinion of brotherhood representatives. They claim that, in consequence, the

[45] In this connection, it should be noted that, whether because of the attractiveness of Diesel runs or of Diesel operations, most firemen consider Diesel assignments as highly desirable ones. Any inadequacies of operating rules on Diesels, as claimed by the brotherhood, do not cause firemen to shun assignments to this service.

[46] These other factors, such as the claims relating to increased speed and greater "tempo of operations," will be dealt with presently. Attention will also be given to the question raised by the carriers, as to whether or not the watching rule on multiunit, high-speed passenger trains is unduly inflexible.

[47] For a general discussion of what is covered by this term, see employees' exhibits 52 and 53.

services of an additional fireman are far more necessary now than they were in 1943.

This brings the present discussion to a vital part of the case. The organization's entire general theory of its case, as earlier outlined, grows out the one basic contention that consideration of safety require the presence of a fireman in the cab of all road Diesels at all times.[48] Later parts of the interrelated argument depend largely upon the status accorded to this particular claim.[49]

NEED FOR FIREMAN IN CAB AT ALL TIMES—SAFETY ARGUMENT

It is unsafe not to have a fireman in the Diesel cab at all times, avers the brotherhood in the first place, because prevalent high and increasingly high locomotive speeds, along with an increased "tempo of operations," [50] have created hazards which must be overcome by the greater lookout attention that would result from the continuous presence of the fireman in the cab. In support of this position, data respecting length and tonnages of freight trains were submitted but particular emphasis was placed upon speed of operation.

A part of employees' exhibit 52 [51] was introduced to show the miles of track that are subject to various maximum authorized speed limitations. These data are of small value for the purpose intended. Only maximum authorized speeds are shown and not the speeds at which locomotives are actually operated. Nor does the table, or any other data submitted by the organization, provide a picture of average speeds or the proportion of trains running at various speeds, although such data would clearly be pertinent as respects a claim based upon speed and affecting all Diesel trains, whatever their speed of operation. And, of course, the limitations as to maximum speeds as shown in the exhibit apply not only to Diesels but to steam trains as well.

We are quite aware of the brotherhood argument that the high-speed operation of some trains, either Diesel or steam, creates a hazard

[48] It has been noted earlier but reemphasized here that the organization claim is for the presence of a fireman in the cab at all times—when the train is in motion and when it has been stopped. No particular reason has been advanced by the B. L. F. and E. as to why considerations of safety require the fireman to be in the cab while the train is not in motion, and especially when it has made a scheduled station stop.

[49] Some of the arguments, as will be noted later, are built up outside of this main thesis. But they are not numerous. Mention, even at cost of repetition, may again be made of the two general claims made by the brotherhood on grounds of safety and efficiency of operation. They are: (1) Need for a fireman in the cab at all times and (2) need for an additional fireman to perform engine room work. These matters are now to be reviewed.

[50] Linked to the speed aspect in this argument are the "impact" of longer trains, heavier tonnages, and greater traffic congestion.

[51] Reference is to that part in which order No. 29543 of the Interstate Commerce Commission, dated June 17, 1947, was reproduced. Particular comment by the brotherhood witness was made as respects table 1 of that report, to which reference is here made.

for all trains operating in the same territory. But that argues implicitly for looking upon any speed and tempo hazard that might exist as an over-all railroad problem rather than primarily as a Diesel problem if the central concern is safety and not solely the employment of a second man on road Diesels. In other words, while there is undoubtedly a need for constant improvement of safety measures, on the data submitted it is not possible logically to argue that reduction of speed hazards calls for a singling out of Diesels for individual and far-reaching attention of the kind proposed, especially since the safety record of Diesel operation is far superior to that of steam operation.

Reference was also made in employees' exhibit 52 to that part of an address by W. J. Paterson,[52] Interstate Commerce Commissioner, which reads: "The development and introduction of Diesel-electric locomotives and streamline trains were accompanied by substantial increases in maximum authorized speed." But, in his address, the Commissioner immediately thereafter pointed out that "During this period there have also been important developments in other types of motive power and one of the results has been a general increase in the speed at which trains are operated." This evidence is typical of other submissions which, on examination, show that the speed problem referred to by the brotherhood is not primarily a development of the last several years nor solely a Diesel matter.[53]

The very same speed problem described in these proceedings has already resulted in protective measures. It was the danger of high-speed operations which accounted, probably more than anything else, for the recommendation of the 1943 Board, subsequently embodied in the labor agreements, that the fireman must remain in the cab of certain high-speed passenger trains while the train is in motion. Because of the speed and tempo matters here brought up, most railroads have also placed certain watching responsibilities upon brakemen on freight trains to insure the presence of two men in the cab of these trains. Attention to the speed problem has also been given, in an over-all way, by the Interstate Commerce Commission which has restricted the operating speeds of all locomotives to certain maximum permissible speeds, depending upon signal and automatic train control installation.[54]

In other words, the speed and tempo problems are not new and unattended ones. On the contrary, they are better attended to now

[52] Given on January 15, 1948.

[53] As a matter of fact, speeds were quite generally reduced during World War II by Government order and in the postwar years have been brought back to prewar levels or perhaps but slightly higher.

[54] By the order quoted in employees' exhibit 52.

than they were in 1943. Certain rules and operating practices have been inaugurated to insure a two-man lookout on certain Diesel trains, and the Interstate Commerce Commission has acted to require the installation of safety controls.

It may be argued that the protective measures referred to are inadequate, but that is quite a different matter than contending that high speeds are per se a reason for requiring the fireman on all road Diesels to be in the cab at all times. In connection with any consideration of the adequacy of present watching rules, note should be taken of the evidence showing a slight increase in average operating speeds during the last several years.[55] But, they only bring the average about on a par with prewar speeds. Reductions of speed were made during World War II for various reasons. Substitution of Diesel operation for steam service has, moreover, sometimes resulted in higher average speeds at the same, or even lower, maximum speeds because of fewer stops required for servicing en route.

The issue here under discussion, then, is not whether speed and safety considerations call for an inauguration of watching rules on Diesels. There are such rules that were formulated to guard against the very hazards referred to by the brotherhood. The issue is whether present watching rules are defective and, further, whether their defects can best be eliminated by making sure that a fireman, and only a fireman, is available in the cab at all times.[56]

There is, thus, a notable lack of relevance to quite a number of general contentions made on behalf of the organization. Reference is made, for example, to the assertion that "At the speed these trains are being operated * * *, it is a matter of elementary common sense that it is unwise to rely upon one pair of eyes and upon the judgment, discretion, and ability to act of but a single man." However, in order to avoid one-man reliance, the fireman is now held to the cab on certain high-speed passenger trains and, on most roads, the brakeman has been given certain lookout responsibilities.

In line with the foregoing, investigation of the B. L. F. and E. contention next entails an appraisal of the safety that has obtained under

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[55] See, for example, employee exhibit 55, p. 9. There have been slight increases in average speed in recent years. In 1945 the average speed of freight trains was 15.7 miles per hour as compared with 16.1 miles per hour in 1948. For the same years the average speed of passenger trains increased from 35.7 to 38.1 miles per hour. But the speeds being operated in 1948 averaged less for freight than in prewar years, while the 1948 speed of passenger trains was but slightly in excess of the prewar figure.

[56] Somewhat apart from its arguments to show the need for a fireman in the cab for safety reasons but closely related thereto, the brotherhood in its brief (pp. 43 and 44) expresses a number of reasons why there should be two men in the cab at all times and why one of these men should be a fireman. The kind of job such a fireman would perform is summarized. These arguments are considered in more detail in the later discussion of freight operations because of their close relationship to this service.

present lookout rules. One important way of making this appraisal is to examine the accidents which have occurred and which the rules have not averted. In such a procedure, it is not of very great significance, in evaluating the brotherhood claim, to single out high speed, or any similar factor, as being a fact in the accident. Accident reports need to be analyzed to determine if any accidents, whether related to high speed or to any other factors, would likely have been averted had there been in effect a rule that a fireman must be in the cab of all road Diesels at all times instead of the present watching rules.

We have been provided with complete information necessary to make the analysis just referred to. Employees' exhibit 75A, B, C, D, is a collection of reports represented by the organization witness who prepared it as covering "the bulk of the accidents in which Diesel-electric locomotives have been involved." [57] The exhibit includes inspection reports made by two bureaus of the Interstate Commerce Commission—the Bureau of Safety and the Bureau of Locomotive Inspection. The accident investigation reports of both bureaus, as shown in the exhibit, total 196, approximately one-half of the total having been reported by each bureau.[58]

For the period of approximately 14 years covered, the Bureau of Locomotive Inspection reported a total of 94 accidents, out of the total of 196, plus reports on a number of collisions. An analysis of these 94 accidents [59] discloses that in 24 of them an employee slipped and fell; there were 26 crankcase explosions; injuries were directly caused by engine or electrical system in 20 cases; while there were 23 miscellaneous accidents. An examination of these cases indicates a very low incidence of the types of accidents reported [60] and makes it quite apparent that these accidents, about one-half of those reported in employees' exhibit 75, have little or no bearing upon the contention that a second fireman is needed in the cab at all times to insure the safety of locomotive operations.[61]

Accidents totaling 96 were reported by the Bureau of Safety (including collisions, derailments, and grade-crossing accidents) as reproduced in employees' exhibit 75A, B, C, D. Whether or not the continuous presence of a fireman in the cab would have averted any

[57] Tr., 2884.

[58] The brotherhood has referred to these accidents not merely as evidence of unsafe operating conditions but also to show speed of operation at time of accident and to show that there is substantial work to be done in engine rooms.

[59] As made in carriers' exhibit 59*b*.

[60] The rate of occurrence of these accidents for the period is shown to be 6.7 per year in carriers' exhibit 59*b*.

[61] They can only possibly bear upon the contention considered later that a fireman is needed continuously in the engine room for safety and efficiency of operation there.

or all of these accidents is at the nub of the question under discussion. It should be noted, however, that primarily those accidents occurring since 1943 are of central importance. Those which occurred before the present Diesel watching rules were put into effect are of somewhat less significance. Reference to certain of the accidents included in employees' exhibit 75 evidently prompted the 1943 Emergency Board to formulate its recommendation requiring the fireman to be in the cab on certain high-speed passenger trains.[62]

At any event, the fireman was in the cab when 77 of the total 96 reported accidents occurred. He was in the cab at the time of occurrence of 24 of the 27 accidents reported for 1948 and 1949, and also in 24 of the 27 accidents occurring in the 2 years 1946 and 1947. In other words, the present methods of operation seem to insure that the safety of the train is not dependent upon the eyes and the judgment of one man. When danger has arisen, the fireman has typically been in the cab. It may be presumed that the fireman was also in the cab on many occasions when dangerous conditions arose but were dealt with so as to avoid accidents. The fireman's presence doubtless often contributed to this result. Such incidents are, as the brotherhood has pointed out, not a matter of record.

The presence of a fireman, of course, is no guarantee against accidents. Some few accidents have occurred when the fireman has been in the cab as well as some few during his absence from the cab. It is more than likely, too, that some accidents have been averted by the action of someone in the cab beside the fireman or engineer.[63]

An analysis of the accident reports cannot possibly support a conclusion that the present operating and watching rules applicable to Diesels are woefully defective. The safety record of Diesels is outstandingly good, and it follows that the safety rules now applicable have produced good results. At the same time, it is of moment to determine whether or not the particular rule now proposed by the brotherhood would likely have averted some or all of the accidents that did occur despite the protection of the existing rules.

Attention is directed, therefore, to the relatively few accidents which occurred since 1943 at times when the fireman was not in the cab. These cases have been carefully studied. As respects some of them, we are convinced that the presence of the fireman could not possibly have prevented the accident. In a few cases it is possible,

[62] Other accidents included in the exhibit were doubtless taken into account by the Interstate Commerce Commission in formulating its order No. 29543, dated June 17, 1947.

[63] The brakeman or supervisors might have called the engineer's attention to a danger he failed to perceive. It doesn't necessarily follow that only a fireman can properly perform such a service or that a fireman can do it better than anyone else—a brakeman, for instance. The separate discussion of freight service deals with this matter as respects a brakeman at considerable length.

though not at all certain, that a fireman might have been able to take steps to avert the accidents had he been in the cab.[64]

Whether or not the very slight reduction in hazard, that could be claimed as achievable from the employment of an additional fireman on all Diesels, indicates a need for the brotherhood proposal depends, among other things, upon the availability of alternate approaches. It is possible that other precautions might be more practical and more effective than the remedy proposed by the brotherhood. We have no way of dealing with this question and, moreover, we lack the experience and authority for doing so.

Without in any way minimizing the importance of averting every avoidable accident, it can properly be said that the accident reports and records submitted to us show that Diesel operations have been notably and comparatively safe operations.[65] The accidents which have occurred in Diesel operation, however, are ample reason why continued efforts should be expended to bring about still further improvement. If this observation applies to relatively safe Diesel operations, it applies with far greater force to steam operations. One may be excused for pondering the question as to why, in an effort to create greater safety, Diesels have been singled out for such concentrated attention, including the establishment of such a far-reaching proposition as is involved here. There is something of a gap between the problem and the proposed remedy.

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[64] We have particularly noted the several cases in which the investigating agency expressed itself about matters here pertinent and to which the R. L. F. and E. especially directed our attention. For example, accident No. 39 which occurred on June 28, 1945 (employees' exhibit 75B) and involved a freight train while operating in yard limits. There is no evidence that the engineer was unaware of signal indications, and although, in accordance wtih the rules, the firemen should have been in the cab within yard limits, the Commission stated "If the fireman had been required to subordinate the duty of inspecting the motor to the duty of maintaining a lookout ahead, it is probable he would have seen the preceding train in time to take necessary action to avert the accident." We have a doubt about the significance of the observation to the issue before us since, in yard limits, there was a rule requiring the fireman to subordinate engine room duties to lookout duties. Because of the emphasis placed by the organization upon the case, there has also been a careful study of accident No. 2 (employees' exhibit 75A) where it was noted by the investigating agency, "Because of the disastrous results which may follow even the temporary disability of the operator of a train that runs at times up to and in excess of 100 miles per hour, the greatest degree of care should be exercised to see that all parts of the equipment are maintained in perfect condition and that all possible protection is provided to guard against accidents of any character." That observation was made, however, in connection with an accident which occurred on October 22, 1937, and, incidentally, while the fireman was in the cab. We also note that the fireman is by rule now required to be in the cab of all such trains while they are in motion and it is not unfair to assume that accidents of this character were among the reasons behind issuance by the Interstate Commerce Commission of order No. 29543.

[65] An exhaustive analysis of accident statistics from 1923 to June 1949 were presented through Carrier Exhibits 22, 23, and 24. The safety record of the postwar years, especially as related to fatalities, is outstandingly good. They are the years of greatly expanded dieselization. Note especially the comparison between casualties and other accidents incident to Diesel and to steam operation shown in Carriers' Exhibit 22, Tables 13 to 26. The comparison is highly favorable to Diesel operation.

While the right of the B. L. F. and E. to represent its members in matters affecting their own safety has not been contested, the organization has strongly urged an institution of the fireman-in-the-cab rule as also being in the interests of the general public. The brotherhood claimed a right to speak for the general public on the ground that its members are a part of the public. As respects this contention, it would seem to us that other agencies, such as the Interstate Commerce Commission and the various legislatures, are conceived as agencies to represent the whole public interest. Of course, B. L. F. and E. members are a part of the public, and their organization may, and does, state their views before the various public tribunals. Other segments of the public will be similarly represented as respects questions affecting the general welfare. That is unquestionably basic to our system of government. It is also sound procedure in that it avoids piecemeal consideration of separate proposals, made by groups whose own interest could readily conflict with the general need. On the positive side, the formulation of an over-all, integrated policy is facilitated.

The considerations just referred to are of moment here. On the basis of past experience, it can be said that occasionally there is an accident involving Diesels that might possibly be averted by the rule proposed by the brotherhood as a substitute for the watching rules and practices which are now in effect. As a result of adopting the brotherhood rule, safety standards would be very slightly increased for the general public but there would be a vast gain for the B. L. F. and E.—an increase of nearly 100 percent in Diesel jobs for its membership. Such an approach to the solution of safety problems would mean—and not theoretically—that there would be virtually no limit to the manpower demands that could be made and that would have to be approved.[66] The basic rule would be: If added manpower can be said to even remotely increase safety, such manpower should be provided, regardless of cost. The consequences are too obviously unreasonable to require a discussion. Can there be any reasonable doubt that careful attention to alternate ways of increasing safety—and possibly more effective ways—should be given before adding

[66] A variation of the same approach was developed by one of the witnesses in these proceedings. Reference is to the testimony of Mr. Jesse Clark, president of the Brotherhood of Railway Signalmen (tr. 995–1077), who noted that, while railway signal systems have given outstanding performance, on relatively rare occasions they do give incorrect indications. From this, it was reasoned that a second fireman should be employed in order to be available in those rare cases of signal failure, on the chance that he might be able to see any unsignaled danger conditions that might be present and which neither the engineer nor anyone else who might be in the cab failed to detect. It seems to us that an argument for such a far-reaching rule which would be of value only in rare cases and then when there was a remote combination of circumstances lacks proportion and reasonableness.

additional manpower extensively in order slightly to increase safety? [67]

Upon careful analysis of the data submitted on safety, we have concluded that no valid reason has been shown as a support for the brotherhood proposal under which a fireman would be required to be at all times continuously in the cab of all road Diesels. The proposal must be rejected. This does not mean that two men will not be continuously in the cabs in all service while the train is in motion. It has already been noted many times that, on certain high-speed passenger trains, the fireman is required under present rules to be in the cab while the train is in motion. On most freight trains, either the fireman or the brakeman is presently available at all times to call signals. We have had to consider whether or not safety considerations call for the substitution of the rule proposed by the brotherhood. They do not.

NEED FOR ADDITIONAL FIREMAN IN ENGINE ROOM—SAFETY AND EFFICIENCY OF OPERATIONS

In addition to claiming that a fireman should be in the locomotive cab at all times, the brotherhood also maintains that an additional fireman should be assigned to the engine room of Diesel-electrics. To a large extent, but not entirely, this second claim is dependent upon and grows out of the first. The fireman is now expected to do both cab work and engine-room work.[68] If he should be restricted to the cab, then the work he had been doing in the engine room, it is argued, should be assigned to another fireman. We do not recommend that a fireman should be in the cab at all times on all road Diesels. There is, therefore, no necessity for any discussion about the need for an additional fireman in order to complement the watching rule proposed by the brotherhood.

The argument about the need for an additional engine-room fireman because the regular fireman is restricted to the cab applies, however, to the operation of certain high-speed passenger trains under existing rules. After emphasizing the existence of work in the engine room for which the fierman is held responsible on these trains, the brotherhood maintains that an additional fireman must be assigned to perform engine-room work on these trains in order to make it possible for the regular, fireman to stay in the cab while the train is in motion. Otherwise, it is argued, in many instances, the regular fireman will have

[67] For a discussion of the problems here involved as set forth by a carrier witness, see tr. 5339–5341.

[68] This applies even to multiunit, main line, high-speed passenger trains on which the fireman may be called upon to engage in some engine-room work at station stops, infrequent though they be. The rule sought by the brotherhood in these proceedings would prevent such engine-room work.

no alternative but to violate the watching rule because work must be done in the engine room. It is also contended that improper steps have been taken by the carrier to avoid the employment of a second fireman on these trains, and these steps are referred to as evidence of the need for an additional fireman. They include the rule for stopping the train when attention to the engine room is required and the practice of having engine-room work done by others than firemen. These contentions arise out of the relationship between the watching rule and the need for an additional fireman in the engine room. They are given further consideration in a later section dealing with the multi-unit, high-speed passenger trains, the only service where this interrelated argument now has pertinency.

There are, however, three other principal arguments advanced by the brotherhood to support its claim for the assignment of an additional fireman to the engine room. These arguments are not dependent upon a watching rule which restricts the regular fireman to the cab, and they apply to all services. It is contended:

(*a*) Safety of operation requires such an assignment.

(*b*) There is fireman's work to be done in the engine room of all road Diesels, and a fireman should be assigned to it, i. e., the firemen have an exclusive right to engine-room work.[69]

(*c*) The employment of an additional fireman in the engine room would increase the economy and efficiency of operations. These three general contentions will be separately dealt with.

SAFETY OF ENGINE-ROOM OPERATION [70]

Brotherhood witnesses have pointed out that crankcase explosions are an operational hazard encountered exclusively on Diesel-locomotives. It may be noted, however, that there is no boiler-explosion hazard on Diesels. That is exclusively a steam-locomotive hazard.[71] Witnesses for the organization also referred to the danger of fires

[69] Through this argument the brotherhood seeks the assignment of an additional fireman whether there is much or little work to be done in the engine room. From one point of view, it can be said that this argument in itself is not related to safety and economy of operations. In discussing the argument here, however, we have looked upon efficiency of operation in a broad manner. There is reason to believe that operations which involve jurisdictional disputes, or which would give rise to them, are not likely to be efficient.

[70] Crankcase explosions and fires are the main hazards stressed here. Although the claim for a second fireman to minimize such hazards emphasizes safety considerations, it is also urged that the effects would include more efficient and more economical operation. The extent of property damage and the out-of-service time of locomotives would be reduced, states the brotherhood. Data before us show that net "dollar and cents" advantages would not accrued (tr. 5808–5813). Since possible savings would be very slight in comparison with the cost of employing an additional fireman, it has seemed reasonable to discuss these accidents in relation to the safety factor.

[71] Tr. 3237. A carrier witness has testified that "A crankcase explosion is nothing like as disastrous as a boiler explosion."

in Diesel engine rooms as a significant hazard. Crankcase explosions and fires are the principal matters referred to by the organization in support of its contention that an additional fireman is needed in the engine room of road Diesels for reasons of safety.

In employees' exhibit 75A, B, C, D, 3 fires and 28 crankcase explosions resulting in accidents were reported for the 14-year period covered.[72] Other fires and crankcase explosions occurred, but they caused neither personal injuries nor appreciable property damage and hence were not investigated.

The brotherhood makes a point of the fact that total crankcase explosions were many times greater than those which resulted in accidents. A high potential risk of accidents is thus claimed. In making this claim, however, the organization also concomitantly emphasizes the fewness of the explosions and fires that have had serious consequences. It is admitted, furthermore, that even with a constant patrol, which an additional fireman might make, would not avert all crankcase explosions. The brotherhood claims, nevertheless, that the ever-present possibility of explosions and fires represents a substantial risk that would be materially reduced by continuous patrol.

The carriers' position is that crankcase explosions occur most infrequently and that those which do occur rarely have serious consequences. Since the imminence of practically all of them cannot possibly be detected, the carriers argue, the presence of a fireman would not serve to avert them. They even suggest that the continuous presence of a fireman in the engine room would actually increase the hazards of crankcase explosions. It is reasoned that the few crankcase explosions that occur involve significant hazard only if a person is in the immediate vicinity. As respects crankcase explosions, then, the carriers assert that an additional fireman could do nothing to prevent virtually all of them but would be unnecessarily placed in a position of possible injury from them.

The evidence provided to us by the brotherhood in employees' exhibit 75 shows conclusively that accidents from fires or crankcase explosions have been very infrequent—averaging but slightly over two a year for the 14-year period covered by the reports. Each one of these occurrences has been analyzed by the carriers.[73] Their witnesses testify that such analysis convinces them that few, if any, of the explosions reported could have been prevented by the presence of an additional employee in the engine rooms of Diesels. Admittedly, all of them could not have been averted by prior observation of symptoms. In view of the infrequency of such accidents, the

[72] The B. L. F. and E. counts 28 such explosions in the exhibit (employee brief, p. 86). The carriers state that 26 such explosions are reported (carrier brief, p. 88).

[73] Carriers' exhibit 59. Note particularly pp. 10–16.

usefulness of an additional fireman to prevent crankcase explosions is, at best, extremely limited.

Worthy of note, too, is the fact that the crankcase explosion risk has evidently not been a universal problem in Diesel operations. On a number of leading roads, explosions have occurred most rarely or not at all during the past 14 years.[74] The carriers testified, furthermore, that the chances of crankcase explosions, and especially of fires, have been materially minimized on the more modern Diesels.[75] They have stated that past fires occurred largely on one class and one make of locomotive on which the causes of fires, faulty wiring and fuel pipes, have since been corrected.

In view of the infrequency of crankcase explosions and fires—especially of those which cause accidents—and of the certainty that an additional fireman could do little or nothing to avert a significant proportion of those crankcase explosions which do occur, the claim for an additional fireman on road Diesels as an appropriate remedy for the difficulties under discussion is devoid of merit.

This is not to say that other steps should not be taken to reduce the hazards of fires and crankcase explosion on Diesels. On the evidence before us, other steps are being taken. Engineering changes have been made to reduce the fire hazard, and they have apparently been effective. Similar plans are under way, we are told, to decrease the risk of crankcase explosions. Such action, rather than the employment of an additional fireman, is clearly the appropriate way of minimizing these hazards.

EXCLUSIVE RIGHT OF FIREMEN TO ENGINE-ROOM WORK

That there is some work to be done en route in the engine room of Diesels on most roads is not disputed. At the very least, and although the need for action might be relatively infrequent, engines have to be isolated when certain difficulties develop. In addition, where practicable, periodic patrols are commonly required.

Additional duties to be performed en route vary widely with variations of locomotive construction. Some Diesel locomotives lack the full number of available automatic control devices, and personal attention to such equipment as ventilating shutters, purolators, and steam generators is then required. The incident work may, on occasion, account for a considerable amount of time. About nine roads have equipped their Diesels with dynamic brakes and, as respects some of these locomotives, resistor grids must be inspected while the dynamic

[74] Experience of Burlington: Tr. 3234–3247; Reading: Tr. 3496–4397; Santa Fe: Tr. 4205; Southern: Tr. 4514.

[75] Tr. 4205.

brake is in operation and hence while the train is in motion.[76] The present tendency, however, is toward use of automatic controls and cab indicators to eliminate the operating functions from the engine-room work.

Not very much in the way of repairs or machinery adjustment can be done in the engine rooms en route. What can be done is not to be classified as difficult or complex work. On some roads, maintainers or spot checkers have been assigned to the engine rooms primarily to inspect the equipment in order to lay out any repair work for later attention in the shops or in order to give concentrated attention to some piece of equipment that has accounted for persistent trouble.

Altogether, the total amount of work to be done in the engine room of Diesels is not large—from data submitted by both parties there is no doubt that it is considerably less than a full-time job—and, it has, moreover, tended to decrease both in volume and complexity with the more extensive use of Diesels.

Some rough idea of the volume of work to be done in the engine room can be obtained from the evidence submitted in these proceedings to show the time customarily spent by firemen in the engine rooms. Operating men, testifying as brotherhood witnesses, stated that from their personal experience about one-third of the fireman's time is required on the average to perform engine-room duties. A similar allocation of time, approximately 30 percent, was shown as the average of a large number of reports made in a survey conducted by the brotherhood.[77] Of course, the time spent in the engine rooms varies, depending upon such factors as the difficulties which arise, maintenance practice of roads, type of locomotive, and number of Diesel units. But no claim is made that, as an average, the time exceeds 33⅓ percent. It is significant to note, moreover, that, of the total time out of the cab reported by the firemen in the survey, about 70 percent was for routine patrol and inspection.[78] About 6 percent of the absences from the cab were in response to alarms and 0.3 percent to give attention to the steam-heat generator, according to the survey reports.

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[76] Several roads have installed dynamic brakes on Diesels used in passenger service but it seems that each road has a rule specifically prohibiting the fireman from going to the engine room while the dynamic brakes are in use. In freight service, on some Diesels the inspection incident to use of dynamic brakes must be made while the train is in motion, but in such service the head brakeman may be in the cab during the fireman's absence.

[77] Employees' exhibit 74. This exhibit presents an analysis of 802 records of individual trips compiled by the men on the job.

[78] Tr. 4667. Since 14 percent of the absences were incident to use of the dynamic brake, and since there are relatively few locomotives on which observation during use of these brakes is required, the sample of trip reports appears to be heavily concentrated in certain areas and on certain roads.

The time required for the performance by the fireman of his engine-room duties, as shown by the trip reports, does not indicate anything like a full-time job to be done in the engine rooms. Such a conclusion is borne out, too, by the so-called time studies of engine-room work which were made by the carriers.[79] In these carrier studies, 311 freight runs were observed with a total operation in excess of 37,000 miles. According to this study, firemen were absent from the cab, while the train was moving, for an average of 13.8 percent of the running time. Similar observations were made during 526 passenger runs, of which only 31 were slow speed, with the finding that the fireman was absent from the cab for less than 2 percent of the running time while the train was in motion. Results of the study made by the carriers are similar to those in the brotherhood study in that most of the fireman's time out of the cab is shown to be used for routine patrol and inspection. We conclude that the division of fireman's work between the cab and the engine room does not constitute a difficult or unreasonable assignment.

But, there is some work to be done in the engine rooms. By the nature of its claim, the B. L. F. and E. cannot stop at this point.[80] It goes on to claim that the work to be done, or part of it, is exclusively *fireman's* work. In support of this contention, the organization maintains that firemen have an exclusive right to the engine-room work because of the manner of its traditional performance and also because carrier rules hold the fireman responsible for its proper execution.[81]

In explanation of this particular contention, the brotherhood avers that the carriers require firemen to acquire the ability to do the work in question and then hold them fully responsible for its proper performance. Incident to this argument, reference was made to oral instructions issued by the carriers,[82] bulletins respecting care and operation of equipment, and instruction manuals.[83]

A number of employee exhibits were introduced and considerable testimony was given concerning standard investigations conducted by the carriers to fix responsibility for delays to trains and for failures of the locomotive.[84] This material was submitted for the purpose of showing that the fireman has commonly been "held accountable" for

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[79] Carriers' exhibit 26.

[80] Its witnesses have described the engine-room work to be done by firemen in great detail, directly and through exhibits. See, for example, employees' exhibit 66 and discussion of it (tr. 2058–2164). See also tr. 2462–2471, 2478; tr. 2452, 2618, 2622–2630.

[81] The more limited claim of such a monopolistic right by virtue of contract was considered earlier and will be mentioned again.

[82] Some point is made of the alleged practice of some roads issuing oral instructions to firemen covering their engine-room and responsibilities but refusing to put them in writing. (See B. L. F. and E. brief, p. 52.)

[83] Employees' exhibit 68 is a summary of some of these manuals issued by major railroads.

[84] Employee exhibits 69 to 72, inclusive.

the operation of the Diesel engines and for other appliances in the engine room. Examination of these investigations reveals only that the fireman is held responsible for carrying out the duties assigned to him and for complying with the rules. Certain engine-room duties are sometimes assigned to the fireman, and he is expected to perform them properly.[85] By no stretch of the imagination can such investigations be interpreted as showing that the fireman has an exclusive right to perform the work in question.

We are unable on any basis to interpret the material relating to bulletins, manuals, and investigations as showing need for an additional fireman on all road Diesels on the ground that firemen have an exclusive right to do the work or because it is impossible and impractical for one fireman to do the engine-room work in addition to carrying out his responsibilities in the cab. The suggested solution doesn't follow from the evidence. Firemen are classed as skilled mechanics, as they should be. It is not surprising that the fireman's task involves the exercise of skill and judgment. As the brotherhood has pointed out, these became the essential ingredients of the present-day fireman's job in marked contrast to his work on hand-fired locomotives. The evidence being discussed shows there is work for a fireman to do and that involves some knowledge of Diesel machinery and the exercise of certain skill and judgment in the performance of it. That's why the fireman is a valued member of the locomotive crew.

The fact that the fireman's work is performed in two places is of no particular significance here. That division would be important only if the conflict of duties made a complete performance impossible. As will be noted later, moreover, the rules and instructions do not require action in two places at the same time.[86] Nor do the investigations show any instance of a fireman being held responsible for any failure of duty because of conflicting instructions.

It is repeated that firemen on most Diesels are given engine-room duties in addition to their responsibilities in the cab. Inasmuch as the manuals, bulletins, and investigations provide no reason whatsoever for concluding that the engine-room work exclusively belongs to the fireman, how can it possibly be contended that this work must be assigned to firemen?

As one possible answer to this question, it is suggested that the work performed in the engine room is exclusively fireman's work

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[85] B. L. F. and E. witnesses testified that the performance of these duties conflicted with the possibility of the fireman performing other assigned duties in the cab. None of the investigations bears out this testimony. The question of a possible conflict in duties is further discussed elsewhere in our report.

[86] For evidence submitted by the B. L. F. and E. to show the impossibility of performing dual duties, see tr. 2293, 2349, 2359.

because of the traditional manner of its performance. The facts simply do not bear out any such contention. From the very beginning of Diesel use in road service maintainers and others have been assigned to do the same work which the firemen also perform in the engine rooms. To begin with, on some roads, at least, the fireman was an assistant to the maintainer, and each did whatever work he could. That is a far cry from a traditionally established right.

It has further been suggested that the exclusive right to do the work was guaranteed under present contracts. Without going into the question of how the contracts should be authoritatively interpreted,[87] one particular observation bearing upon this point can appropriately be made here. In negotiations preceding the 1943–44 agreements the carriers were given ample reason to believe, through assurances of the president of the brotherhood, that past practices with respect to the use of maintainers would not be disturbed. In other words, it was indicated that firemen did not have and would not be given the exclusive right to the engine-room work. Thus, it was said,[88] "These firemen go back and mingle in the motor rooms with machinists and do everything that needs to be done * * *." And again:[89] "So far as I know, the fireman is helping the maintainer on all of this work." And also:[90] "We have never made a claim on the Santa Fe all these years at any time because the maintainer is doing work in the motor room. * * * There is no more ground now than there has ever been." It is also of interest to note:[91] "* * * You wanted to know what you were going to do with the maintainers. Well, my answer to that is, do with them what you are doing today. You have no line of demarcation between the maintainers and us drawn with our approval today."

Reference may also be made to similar assurances of no intention by the B. L. F. and E. to prevent supervisors from continuing their work in the engine rooms as in the past. Note for example:[92] "* * * I think any time you want to put a man on the motors you think are running badly, or that need inspection or need to be watched, I don't see where we can interfere with your power to do that, and we have no desire to interfere with it. * * * I don't see anything to interfere with your putting a travelling fireman, maintainers,

[87] See the discussion on this in the preceding part of the report dealing with contract violations.

[88] Carriers' exhibit 16, p. 36.

[89] Carriers' exhibit 16, p. 46.

[90] Carriers' exhibit 16, p. 64.

[91] Carriers' exhibit 16, p. 72. Also see additionally p. 92, second full paragraph; p. 93 last paragraph; p. 95, second full paragraph and last paragraph.

[92] Carriers' exhibit 16, p. 98. See additionally, p. 99, first paragraph.

inspector, or anybody else if you have reason to fear you should put a man on to see if the motors are running."

There can't be the slightest doubt that the firemen lack any exclusive right to do the engine-room work on road Diesels by virtue of traditional method of operation or as a result of current agreements. And, with one or two exceptions,[93] no claim has been filed under existing agreements that work performed in the engine room by others than firemen constituted a violation.

At any event, the claim of the firemen for the exclusive right to perform the engine-room work has a possible bearing on the issue immediately before us only as respects the performance of such engine-room work by others.[94] Only then could there be a possible claim that the exclusive right of firemen to perform the work has been infringed. Very limited significance thus attaches to the contention here being discussed. That contention has to be considered in relation to the roads that use maintainers or spot checkers and to the assertion that various named supervisors have taken on engine-room responsibilities that should be assigned to firemen.

As of May 16, 1949, only a relatively few railroads used maintainers or spot checkers. They employed a total of 180 maintainers and 173 spot checkers.[95] On January 1, 1943, there were 208 maintainers and 34 spot checkers employed in Diesel operation. No credible evidence has been submitted to show that these employees are doing anything now that they have not always done since Diesels were first used in road service. It is likely that their engine-room responsibilities have even tended to decrease with the wider use of automatic operating devices.

A claim that the few roads using maintainers or spot checkers have, in some way, violated current agreements provides a most tenuous basis for arguing that an additional fireman should be employed by all railroads on all road Diesels. As previously noted, moreover, with but one or two exceptions, claims that the use of maintainers has been in violation of existing contracts have not been filed even though those contracts have been in effect since 1943 and 1944.

In addition to maintainers and spot checkers on a few roads, employees other than firemen have duties to perform in the engine rooms

[93] Tr. 4892, 5845.

[94] The B. L. F. and E. does insist that, even if the engine-room work is assigned to no one, an additional fireman should be employed because that would contribute to the economical and efficient operation of the locomotive. This is a separate contention which is considered later.

[95] Carriers' exhibit 29. Data concerning the number of maintainers, spot checkers and supervisory employees as reported in this exhibit have been used in the discussion which follows.

of all roads. Reference is to employees variously classified as road foremen, electrical supervisors, Diesel supervisors, and others. The brotherhood contends that carriers are expecting employees in these various classifications to do firemen's work in the engine room and thus improperly avoid placing an additional fireman on these locomotives. A great increase in the number of supervisory employees, the organization contends, has created a serious problem.

There are more persons employed in these job classifications in Diesel service now than in 1943. The number has increased from 768 to 955 but during a period of extensive dieselization. Whether or not the number of supervisory employees per Diesel is relatively large as compared with steam is the subject of a difference between the parties. Varying interpretations have been placed by them upon the same statistics. Without attempting to resolve this difference, we believe it is entirely clear that the work performed by these supervisors on Diesels is quite comparable to their work on steam locomotives when regard is given to the inherent differences between these types of power. Nor is the work of the supervisors any different now on Diesels than it has always been. It may be observed that, if the engine-room work en route can be satisfactorily performed by a relatively few supervisory employees on Diesels as an addition to other various duties on the train, there can scarcely be a need for a full-time fireman on every road Diesel to work in the engine room.

On most roads, then, there is work to be performed en route in the engine rooms of Diesels. From the beginning of the use of Diesels, that work has been assigned both to firemen and to others. It is simply not possible to show that by traditional practice the fireman has an exclusive right to perform such work. Whether or not the effect of current contracts was to require a change in the established practice of assigning engine-room work to employees in the various noted classifications was discussed earlier and found unnecessary to decide. As was observed there, the organization's argument for an additional fireman, on the ground that firemen have an exclusive right to certain engine-room work, could only relate to the few roads that still employ maintainers or employees doing similar work. At best, that would be an entirely inadequate reason for requiring the employment of an additional fireman by all carriers on all the road Diesels they operate. Nor is the organization argument strengthened by the contention that, especially on nonmaintainer roads, the work of firemen is being done by a relatively few supervisors in addition to their other duties. As noted above, we believe the supervisory employees are, in general, performing supervisory duties comparable to the work they do on steam locomotives. They are not numerous, and the

amount of engine-room work they can perform cannot possibly be large.

No validity attaches to the B. L. F. and E. contention that the exclusive right of firemen to perform work in the engine room supports its demand for the employment of an additional fireman on all road Diesels.

ECONOMY AND EFFICIENCY OF OPERATIONS

One final contention of a general nature has been brought to our attention. The brotherhood contends that the assignment of a second fireman to perform whatever work there is to be done in the engine room would contribute significantly to the economy and efficiency of Diesel operation. Its representatives say, more specifically, that such a method of operation would result in substantial cost savings, as a result of decreased damage to machinery and less disablement of locomotives. They believe that prompt attention in general to necessary work in the engine rooms would be advantageous to economical operations. It is urged that these various savings would go far to cover the cost of the additional fireman.[96]

In response to this general contention, the carriers not only express their belief that the employment of a second fireman would be quite uneconomical, but also their unalterable opposition to the concept that questions of this sort are proper subjects for collective bargaining. They point out (1) that responsibility for efficient and economical operation of the railroads is placed exclusively upon management by the Interstate Commerce Act,[97] (2) that questions of economy and efficiency of operation are not included within those subjects that can be made the subject of a labor dispute under section 6 of the Railway Labor Act, and (3) that management must not be prevented by bargaining on such subjects from carrying out its recognized and inherent duties and responsibilities.

Without relinquishing their position, as above summarized, the carriers have, however, given us certain evidence to show why railroad management came to the conclusion that employment of an additional fireman would constitute an uneconomical and inefficient method of operation. Studies of the work available in the engine room of Diesel locomotives were made in the Burlington,[98] the New York Central,[99] the Atlantic Coast Line,[1] and other roads. Summaries of

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[96] The organization presented no over-all cost figures with respect to this argument.

[97] Tr. 5802, 5818, 5904, 5339–5350. Note should also be taken of the carriers' position that responsibility for the safety of operations similarly rests solely with management. It is recognized by the carriers, however, that questions specifically relating to the safety of its members may properly be raised by the organization.

[98] Carriers' exhibit 5.

[99] Carriers' exhibit 10.

[1] Carriers' exhibit 9.

these studies were submitted in evidence to show that little useful work would be performed by an additional fireman. Additional data, comparing the expense of the extra fireman with the possible cost savings he could provide, indicate that management has come to no unreasonable conclusion in determining that employment of an additional fireman is unjustifiable on a "dollar and cents basis," which is fundamentally the economy basis under discussion.

There is cogency to the carriers' argument about the limit to matters that can properly be dealt with collectively, since the management is held solely and entirely responsible for the results of certain decisions. Even more broadly, management has its own job to fill and its own functions to perform in our system of production. The definition of those subjects that can properly be dealt with in collective bargaining has been the center of much controversy and of considerable negotiation in many industries during the past several years. The matter has even been given legislative consideration and, to some extent, has been dealt with in the application of the Taft-Hartley Act. It would be wholly inappropriate for this Board now to take up such a vital subject incidentally to consideration of the issures more directly before us and upon which there is evidence in the record.

Nor is there any need for us to do so as a necessary step in the formulation of recommendations as to the issues before us. The evidence leaves us with no conviction that the employment of an additional fireman would result either in lowered costs of operation of road Diesels or in any significant offset to the cost of employing an extra fireman. It is quite obvious that such a manning of these locomotives would substantially increase the total costs of operation.

SUMMARY

In this part of our report, consideration has been given to the B. L. F. and E. contention that an additional fireman should be employed on all road Diesels for reasons of safety and efficiency of operation. The two major parts of this contention have been examined. In the first place, it was maintained by the brotherhood that, to increase the safety of operation, the fireman should be required to remain in the cab at all times. As pointed out earlier, the claim in its essence is that the rule as proposed by the brotherhood should be substituted for present rules and operating practices. Our analysis has led us to the conviction that no such substitution is justified and that the claim of the brotherhood lacks merit. In the second place, it was maintained by the brotherhood that an additional fireman should be assigned to perform engine-room work on all road Diesels because of safety considerations, of the exclusive right of firemen to perform

such work, and of the economical and efficient operations which would ensue. Upon analysis, these contentions are shown to be devoid of merit.

Therefore, we cannot recommend approval of the general request of the brotherhood that an additional fireman should be employed on all Diesel locomotives operated in road service.

The conclusion here reached is against recommending the general all-inclusive rule proposed by the brotherhood. There remains the responsibility for determining whether or not existing operating rules effective as to particular types of locomotives or classes of service should be changed in any way to take account of specific claims made by the brotherhood with respect to their inadequacy. This aspect of the case is considered in part 2 of the discussion of the Diesel issue, which follows.

Part 2

Up to this point in our discussion of the Diesel question, attention has been focused upon the general contention of the brotherhood that an additional fireman should be assigned to all road Diesels irrespective of service. Our conclusion is that no such general rule can be recommended. Separate consideration must still be given, however, to the principal classes of service in order to determine if the rule proposed by the brotherhood should be recommended for any one of them, or if existing rules and practices should be changed on grounds of safety and efficiency of operations.[1]

Questions raised as they relate to particular classes of service are dealt with in part 2 of the report on the Diesel issue. The branches of service considered are: (*a*) Freight; (*b*) Multiunit, main line, high-speed pasenger; (*c*) single-unit passenger; (*d*) conventional passenger; (*e*) multiunit, hooded-engine types. Each of these mentioned services will next be considered.

A. FREIGHT SERVICE

"Today—not overlooking or minimizing the significance of developments in the passenger field since 1943—the Diesel problem in its essence is a freight problem."[2] This statement appears in the brief of the B. L. F. and E. Its own analysis has lead the Board to the same conclusion. Consequently, the Board has given careful attention to the organization's proposal as it specifically relates to freight service. The treatment here, however, does not purport to cover again all aspects of the organization's argument which was developed as to the general problem of Diesel manpower. That has been thoroughly dealt with in the preceding part of the report. This section supplements and applies that to the specific case of freight service.

[1] Technically speaking, all contentions and arguments of the brotherhood were directed to the general proposition that an additional fireman should be employed on all road Diesels in all classes of service. It might be argued that denial of a recommendation on that general issue makes unnecessary any further consideration of the Diesel question here. On the other hand, many arguments—and some of those most energetically advanced—related solely or principally to specific classes of service. They should be analyzed, it has seemed to us, in relation to the particular service to which they were directed. Such analysis is essential to a complete examination of the Diesel question.

[2] B. L. F. and E. brief, 38.

At the present time on Diesel-electric locomotives used in freight service, the general practice is for the fireman to patrol the engine room, answer alarms, and do whatever work is necessary in the engine room while en route.[3] Although maintainers were originally used in freight service, and to some extent still are on at least one road,[4] the extent of such use today is of little or no importance for the railroads as a whole.

The amount of time spent by the fireman in the engine room, and therefore out of the cab, is the subject of some controversy. The brotherhood claims that the amount of time varies according to a variety of factors, will average from a third to one-half of the time en route, and occasionally will be more.[5] Time studies made by the carriers on 12 of the largest users of Diesels in such service indicate that the fireman was absent from the cab while the train was in motion only 13.9 percent of the time.[6] Another factor that minimizes the need for any additional man to do work in the engine room in this class of service, as contrasted with passenger service, is the great number and longer time of stops that may be and are made. The lack of pressure to meet set schedules provides greater opportunity to patrol and do other work in the engine room while the train is not in motion than is true in passenger service. Even in the "fast" freight service the same is true, although not to the same extent.[7] There is no showing that under this practice the operation is not satisfactory or that, in addition to the time now spent in such work by the fireman, it would be necessary to assign an additional fireman to the engine room.

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[3] E. g., tr. 4873, 4889.

[4] B. L. F. and E. exhibit 823. See tr. 4895, 4911–4920.

[5] See B. L. F. and E. exhibit 74; B. L. F. and E. brief, pp. 48–51. An analysis of the trip reports of B. L. F. and E. exhibit 74 upon which the organization placed great reliance showed that the fireman was out of the cab the following percents of the total time in motion in freight service:

	Percent
2 unit locomotives	23.9
3 unit locomotives	28.9
4 unit locomotives	32.0

The average percent of time for all was 29.5 percent. For additional testimony as to the time spent in the engine room, see tr. 2166–2186; 4500 et seq.

[6] Carriers' exhibit 26, p. 2, column 29.

[7] Carriers' exhibit 67. On a scheduled overnight run the estimated time at intermediate stops ranges up to 5 hours, with stops of 1 and 2 hours being usual.

In a study made of the scheduled Diesel freight runs on the Atlantic Coast Line from 4 to 7 hours were consumed in stops on runs that ranged from 20'13" to 27'30" in total elapsed time. On a few of such runs there were only one or two stops, but on a majority there were from five to nine stops. Carriers' exhibit 9, p. 6.

In carriers' exhibit 19, pp. 7, 8, the average speed of scheduled through freight trains on the Seaboard ranged from 20.07 to 35.54 miles per hour for actual running time but dropped to a range from 16.18 to 29.82 miles per hour for over-all time between terminals. The difference indicates that a very considerable amount of time was spent at stops en route.

The only argument advanced for breaking the job in two and hiring an additional fireman under existing rules is that of undue burden upon the fireman in having to decide which of two possibly conflicting duties, one of which would require him to be in the cab, the other that he be in the engine room, he would perform. There is no substance to the argument. There was no showing whatsoever that existing rules demand anything impossible, unreasonable or unduly burdensome upon anyone capable of assuming modest responsibilities. Firemen are highly paid employees, earning only somewhat less than an engineer, and the organization insists that the pay is justified today, not on the basis of physical labor, but because of the knowledge and skill they must possess and the responsibilities they must assume. The responsibility of making such decisions as they are called upon to make between performing work in the engine room and in the cab is neither beyond the capabilities such employees should have nor unfair or unduly burdensome.

It is quite true that some of the fireman's job is to be performed in the cab and some of it in the engine room and that he cannot do both at the same time. But no rules demand such an impossibility. The fireman, along with every other employee, always has had a variety of duties which could not all be performed simultaneously and which require both a knowledge of operating rules and some exercise of judgment in choosing the one applicable to the situation at the time. Thus, on hand-stoked engines the fireman had and has the task of shoveling coal and of watching, and he must know when he must do one rather than the other. He has the duty of looking forward to observe the road and looking back to observe the train and be can't do both at the same instant. He must decide when he should do one and when he should do the other. For the most part the operating rules give clear and simple guidance in making choices in these and similar cases. It would be remarkable if there were not occasional conflicting rules and ambiguous ones. There is not, however, any evidence that a fireman would be disciplined in such cases if he exercised reasonable judgment in making his choice or interpretation. If any carrier should attempt to impose discipline under such circumstances the employee could have the fairness and reasonableness of the action reviewed by the adjustment board.

Although the Board asked the organization for proof of the claim that such impossible and burdensome demands were being imposed upon the fireman by the carriers, only two cases were cited specifically,[8] neither of which supports the claim. In one, the fireman, who admitted that he knew and understood the clear rule that the fireman

[8] Tr. 4694–4696, 5008, 5489, 5483, 5494.

must be in the cab when the train was approaching yard limits, went back in the engine room, at such a time, not in response to any alarm or any conflicting rule requiring him to do so but only in accordance with an unauthorized practice which he knew violated the rule. Counsel for the B. L. F. and E. argued before this Board that the fireman, because of fog, did not know that the train was approaching yard limits. There was fog but it did not prevent other members of the crew from knowing where the train was and the fireman himself stated that he also knew it. No claim of unfair discipline or undue hardship was made by the fireman's representative, who, incidentally, was one of the B. L. F. and E. witnesses before this Board [9] and at the time had been a local chairman of 16 years' experience. Instead, the only plea made for the fireman was that leniency might be shown because of the offender's inexperience. He had been a fireman for 4 years and 8 months.

The second case [10] is even less in point than the first. The fireman was disciplined for going back into the engine room to pick up a train order which, under the rules, should have been caught from the door of the operating cab. The result was that he was not in his proper lookout post when he had no valid reason for being away from it, and missed signals which he should have seen. There is not the slightest evidence or even claim that there was anything in the engine room itself that required his presence there. It was solely a question of whether he would be excused from failure to observe signals by reason of the fact that he was not in a position to observe them because, in violation of another rule, he was performing a duty in the engine room which could be and was required to be performed in the cab. The only argument made was, not that there was any necessity for him to do this in the engine room, but that, because an alleged unauthorized practice to do it there had grown up, both the breach of this second rule and the failure to observe signals caused by its breach should be condoned.

Although no justifiable claim for an additional fireman can be made under the existing operating practice, this practice is made possible because there is no rule requiring the fireman to remain in the cab at all times. Should a rule making such presence mandatory be adopted, the situation would be changed and a problem similar to that which now exists in respect to high-speed, streamlined, or mainline through passenger trains would arise. The B. L. F. and E. request in this case to extend the watching rule includes all road Diesels used in freight service. If acceded to, therefore, it would create such a similar problem in that service. It should be noted

[9] Mr. J. L. Shepard.

[10] Tr. 5483; B. L. F. and E. exhibit 69, p. 1; carriers' exhibit 68, p. 77.

particularly that the requested rule, as was pointed out earlier, goes beyond the watching rule now in force as to high-speed, streamlined, or main-line through passenger trains. The rule there applies only while the train is in motion. The requested rule would make it mandatory for the firemen to stay in the cab at all times. In other words, in freight service where there are frequent and long stops, at which time there is clearly no need for his presence in the cab regardless of whether the brakeman is there, and is or is not qualified to observe and call signals and do other lookout duties, the fireman would have to stay in the cab. Such a rule would effectively prevent the fireman from patrolling even at stops in freight service. Since, as was seen above, stops in freight service are frequent and of rather long duration, normally affording an opportunity for the fireman to do a considerable amount of work in the engine room, the serious effect upon existing practice can readily be seen.

In arguing that the watching rule should apply in freight service, the organization's position [11] may be stated as follows:

1. In addition to the engineer, safety demands that there should be a second man in the cab of all roads' freight Diesels of four units or less used in freight service at all times.

2. That second man must be a fireman. The presence of the head brakeman at such time as the fireman may be absent is not sufficient. And, to justify the proposed rule, this second proposition must be taken to include the times when the freight engine is standing still, on a siding, or anywhere else.

In considering these arguments certain facts should be borne in mind. In the first place, although some freight trains now operate on scheduled runs and those schedules as well as, perhaps, the actual running speed, are somewhat faster than formerly, freights still operate at comparatively slow speeds. In a B. L. F. and E. exhibit, the average speed of freight trains in the first 8 months of 1948 was

[11] In the brief of the B. L. F. and E., pp. 43–45, six reasons are listed as to why there should be two men in the cab at all times, and eight reasons why one of these should be a fireman.

The Board has attempted in its discussion to cover all of the arguments embodied in these 14 points. This is true notwithstanding the fact that the discussion does not attempt to state specifically in all instances to which of the particular arguments it is addressed.

It should be noted that there is a misstatement of fact in No. 7 of the eight reasons. The 1943 Emergency Board did not find, as stated in the brief, that the presence of a fireman in the cab of high-speed passenger service is required at all times. It found that his presence is required in such service only "when the train is in motion." This error raises the possibility that the organization did not intend that the proposed rule should go beyond the scope of the rule now existing in high-speed passenger service. It seems incredible, however, that the proposal, which must have received the most careful and intensive scrutiny by the B. L. F. and E. before it was submitted was not intended to mean exactly what it says. Nevertheless, the Board, as it stated elsewhere that it would do, has considered possible merits the brotherhood claim would have if the narrow rule were in question, in addition to evaluating the claim as it reads and as it must have been intended.

stated to be only 16.8 miles per hour.[12] In an exhibit prepared at the request of the Board, the speeds of all the fastest freight trains, "Thoroughbreds of the Freight Fleet," were listed.[13] On only two runs, one of them powered by steam, the other by Diesel, did the average speed for running time exceed 40 miles an hour. The speeds of the others ranged downward to 20.4 miles per hour, with most of them around 30 miles per hour. The speeds of the trains powered by steam were about the same as those of Diesels with the two types of power being used interchangeably on some runs and making the same schedule. Such actual running speeds as well as the authorized maximum speeds are far below those in passenger service.[14]

Even if speed were, per se, a factor in safety,[15] that factor would not be present in freight service to any appreciable degree. Certainly it would not exist to an extent sufficient to compel the fireman to remain in the cab even while the train is in motion. And, of course, it would provide absolutely no reason why he should be in the cab while the train is standing still. The demand which would extend in freight service the watching rule beyond its present applicability to high-speed passenger service is completely indefensible and entirely unjustified on grounds of safety or any other valid reason.

The safety record of Diesel-electric locomotives used in freight service under the present operating rules and practices discloses no need for any change of them so far as the manpower consist is concerned. The safety performance of Diesels in freight service as compared with steam is an impressive and significant one. This is particularly true since in steam not only is the fireman in the cab at all times, but so is the head-end brakeman as well as the engineer. Statistics[16] for the

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[12] B. L. F. and E. exhibit 55, appendix to B. L. F. and E. brief, 122. See also carriers' exhibit 26, p. 25. In this exhibit an analysis of the trip reports on freight Diesel-electrics, compiled by the B. L. F. and E. and embodied in the organization's exhibit 74, showed the average running time to be 30.6 miles per hour. Aside from one single-unit freight, a rarity since the great bulk of them are three and four units, the speeds ranged only from 29 to 32 miles per hour.

[13] Carriers' exhibit 67. See also tr. 3555, 3707 et seq., 442–52. In carriers' exhibit 9, p. 5, a study of scheduled Diesel freight trains on the Atlantic Coast Line showed average speeds between 19 and 39 miles per hour, with most of them in the middle 1920's.

[14] Although B. L. F. and E. exhibit 52 is cited as showing that carriers operate freight trains over a total of 75,716.6 miles of track at speeds of 50 or more miles per hour (appendix to B. L. F. and E. brief, 117), the table referred to does not prove any such statement. It shows only authorized maximum speeds and does not give any proof that any of them are actually operated at the authorized maximum speed, or, if they are, what percent of the run is at such speed. Nor does it show the operating conditions under which the higher speed is attained, or any other factors that would make the figures significant on the question of safety. Further, the impression sought to be given by this exhibit is in sharp contrast to that of B. L. F. and E. exhibit 55 showing the average speed of freight trains to be only 16.1 miles per hour in 1948. In neither table is any distinction drawn between types of power of locomotives. Because of these defects and inconsistencies the Board has found no assistance in either table on the question of the speed factor as an element of safety in the operation of freight Diesels.

[15] A discussion of this factor as a general proposition has already been made.

[16] Carriers' exhibit 22, tables 18, 20.

3-year period from 1946 to 1949 show that in freight service on 23 representative railroads there were 73 trainmen on duty killed and 535 injured in steam service by reason of train accidents as against 3 killed and 59 injured in Diesel-operated trains. Translated into casualty rate per million locomotive-miles, there were 0.06 killed and 0.41 injured in steam as against 0.02 killed and 0.32 injured in Diesel-power operations.

Looking at only casualties to firemen on duty on the same roads in freight service during the same period of time, there were 20 killed and 128 injured in steam power by reason of train accidents as against 1 fireman killed and 12 injured in Diesel service. This one fatality to a fireman occurred when the boiler on a steam locomotive exploded, killing the fireman on the Diesel.[17] Again translated into terms of casualty rates per million locomotive-miles, in steam the rate was 0.02 killed and 0.10 injured as against 0.01 killed and 0.07 injured. Although they have little relevancy on the question of the need for an additional man in the operating cab, examination of the statistics supplied by the brotherhood of casualties caused by train-service accidents to trainmen and to firemen on duty on the same 23 roads for the identical period tell the same story. There were 153 trainmen killed and 11,040 injured in steam as against 10 killed and 1,029 injured in Diesel. This represented a casualty rate per million locomotive-miles of 0.12 killed and 8.57 injured as against 0.06 killed and 5.62 injured on Diesels. Taking firemen alone, there were 10 killed and 1,734 injured in steam as contrasted with 1 killed and 80 injured in Diesel. Here the casualty rate per million locomotive-miles was 0.01 killed and 1.35 injured on steam as against 0.005 killed and 0.44 injured on Diesels.

A similar striking record of safe operation has existed on specific roads. For example, the president of the Reading Co. testified that, during a period of 42 months of Diesel-road freight operations on his railroad, involving an accumulation of 3,750,000 locomotive-miles, only 16 accidents could be said to involve the operation of Diesel locomotives. Only three members of the Diesel train and engine crews were injured in these accidents and none was killed.[18] Although the statistics were not segregated as to freight, they show the same general picture on the Pennsylvania [19] and the Santa Fe.[20]

In addition to the remarkably low casualty rate on Diesels, especially when compared to steam operations, it is important to note further that only a small percentage of the accidents that do occur

[17] Tr. 4625.
[18] Tr. 3486–3491.
[19] Tr. 3273–3279.
[20] Tr. 4194–4212. See specifically as to freight 4209, 4211.

have any relationship whatsoever to the presence or absence of a fireman or head end brakeman in the cab.[21] Thus, in analyzing the accidents relied upon by the organization in their extensive exhibits 75A, B, C, D, it appears that between the years 1943 and 1949 there were a total of 21 collisions and derailments in which freight Diesels only were involved.[22] In 17 of these cases the fireman was in the control compartment. In two others he was shown to be in the engine room, and in two it was not stated where he was.[23] Consequently, in only two of the total number was it definitely established that the fireman was out of the cab at the time of the accident. In one of these the fireman was in the third unit. In the control compartment at the time of the accident, which occurred while the train was moving at only 12 miles per hour, were the head end brakeman and the road foreman of engines.[24] In the other, the head brakeman was in the cab and had he been more alert he might have prevented the accident, which occurred while the train was running at 35 miles per hour.[25]

It is argued that the safety record in regard to how many accidents occurred does not disclose how many were averted by the presence of the fireman in the cab. The same, however, can be said about the presence of the head brakeman. And on the other side, while there may be instances of accidents occurring which a more alert head brakeman might have prevented,[26] there are other cases in which the same could be said as to the fireman who was in the cab.[27] However, what the figures do show overwhelmingly is that safety of freight Diesel-electric operations under present rules is such that no claim for an additional man could be justified on grounds of safety. This is true even if it were admitted that the addition of another man is the proper way to eliminate or minimize such hazards. As is pointed out elsewhere, such a solution has not been established to the satisfaction of the Board as the proper one to adopt. Or, to put it more accurately: Even if there were hazards of operations in freight serv-

[21] Thus, on the Reading Co., of the 16 accidents that occurred in Diesel road freight service President Brown testified that none could have been prevented by the assignment of an additional fireman to the Diesel locomotive (tr. 3491). Witness Symes in discussing the excellent safety record on the Pennsylvania, and President Gurley, in reference to the showing on the Santa Fe, which has been cited elsewhere, made similar statements. In these last two, no distinction was drawn as to class of service.

[22] The collisions and derailments before 1943 have not been investigated because the B. L. F. and E. rests its case upon what has happened since 1943. The accidents derived from reports of the Bureau of Locomotive Inspection have not been considered because they so obviously have no relevancy to the question of whether an additional man in the cab is required at all times on Diesels used in freight service.

[23] Carriers' exhibits 59, 59A.

[24] B. L. F. and E. exhibit 75B, table 46.

[25] B. L. F. and E. exhibit 75C, table 47.

[26] E. g., B. L. F. and E. exhibit 75C, table 47, mentioned above.

[27] E. g., B. L. F. and E. brief, 83. And in the 17 cases discussed in which accidents occurred while the fireman was in the cab his presence there did not prevent the accident.

ice that urgently needed some remedy, to determine the proper solution would demand an investigation of the various possible measures that might be taken, together with some appraisal of their relative effectiveness and costs. No such information was presented or available to this Board, and it is not the proper tribunal to make such an investigation and determination. As to freight, this is immaterial because of the Board's conclusion on the evidence which was submitted to it that there is insufficient evidence to warrant a finding that the addition of another fireman or extending the watching rule to compel a second man to be in the cab at all times, or while the train is in motion, would contribute in any material degree to an already admirable safety record.

Although, as was indicated in the preceding discussion, the Board does not believe that there are sufficient grounds in safety of operation to justify adopting the proposed new and more drastic watching rule in freight service, there is an additional question involved in the proposal that will be considered. That is granting for purposes of argument that some additional person should be in the cab at least while the train is in motion,[28] is it essential that such person be a fireman? Would the need be satisfied if the head-end brakeman were in the cab when the fireman was not? The organization insists strongly that the presence of the head brakeman in the cab in the absence of the fireman does not satisfy requirements of safety of operations.[29] The Board is convinced that it does for several reasons.

1. Although it is urged that the duty of the head brakeman to look back to observe the train prevents his being an effective lookout forward, the argument is not valid. If it were, it would similarly disqualify both the fireman [30] and the engineer, for the duty to look back is common to all three. The fact that it is the primary duty of the head brakeman is not a sufficient difference upon which to ground a distinction. Further, the observation of the train, which can be done only on curves, never presents making sufficient observation forward on slow-moving freight trains.

2. The head brakeman is as well qualified to perform the watching duties as the fireman. He receives the same training and instructions and passes the same examinations as firemen. The duty to observe and

[28] Since the proposal is, as has been stressed several times, that someone in addition to the engineer must be in the cab at all times, even while the train is stopped, strictly speaking a discussion of a more limited rule may be unnecessary. Because of the utter lack of merit to the more drastic proposal when applied to freight service, it seemed especially important here to examine the merits of the proposition of a more limited rule. A finding that it is without merit, of course, would establish a fortiori that the broader rule asked should not be recommended.

[29] B. L. F. and E. brief, pp. 44–48, 74, 83, 85. See tr. 2169–2176.

[30] See tr. 2420. See also carriers' exhibits 51 and 57; B. L. F. and E. exhibit 76.

call signals and perform the other functions of a lookout, regardless of the presence of the fireman, has existed for decades. On hand-fired locomotives he perforce did most of the watching because the fireman's shoveling job kept him on the deck of the cab a great deal of the time.[31]

3. The 1943 Emergency Board recognized and approved as sufficient for safety the practice of having the head brakeman observe and call signals. It said, "The necessity of having a second man in the cab continuously is met by the presence of the head brakeman, who customarily does signal watching while the fireman (helper) find it necessary to patrol the engine room." [32]

4. The qualification of the head brakeman to observe when the fireman cannot do so on steam locomotives was vouched for by Mr. Robertson, the president of the B. L. F. and E.[33] If the brakeman is qualified as an observer on steam, there is no reason why the same should not be true on Diesels.

5. There is no violation of any monopolistic right of the fireman to observe and call signals by the head brakeman doing it. The National Railroad Adjustment Board squarely so held.[34] Nor, apparently, is any such monopolistic right now claimed by the organization.[35]

6. While it is doubtless true that the head brakeman is not so well qualified as the fireman to take over the mechanical operation of the locomotive in case of incapacity of the engineer, no such ability seems necessary. All that is essential is that he know how to stop the train in case of emergency. That is a comparatively simple operation which any member of the crew, including the head-end brakeman, could perform even though not too experienced. The fireman could be called upon to take charge after the train was halted.

7. Beyond mere assertion, there is no proof that the head brakeman is less well qualified than the fireman to appraise the judgment of the engineer. As previously pointed out, his beginning training and instructions are no different from that of a fireman. His duties as

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[31] For testimony as to the qualifications of the head-end brakeman to perform all necessary operating duties in the cab which safety demands in the absence of the fireman, see tr. 3596–3602, 4365, 4452–4454, 3441–3496. The last reference makes a comparison of the work and duties of both fireman and head-end brakeman on steam and Diesel-electric locomotives.

[32] Carriers' exhibit 1, p. 107.

[33] 1943 Emergency Board hearing transcript, 796.

[34] Award No. 11,644, carriers' exhibit 52. See tr. 5327–38.

[35] No such right is urged among the eight reasons listed in the organization's brief in this case (pp. 44–47, 74), and it was disavowed during negotiation of the Western agreement in 1943 (carriers' exhibit 16, pp. 107–108). A statement by Mr. Robertson in the present hearing may possibly have constituted such a claim. This is not entirely clear, however, and, if so, the basis of it is obscure. Apparently it is not founded upon a contract right but upon tradition. The Board finds no tradition justifying such a claim.

lookout and required knowledge of operating rules and conditions are fully adequate to make him sufficiently well qualified to make any such appraisals as are necessary. The same is true as to judgments of speed and distance.

8. The mechanical stoker case [36] was urged as decisive authority that the head brakeman is not qualified to perform the watching duties in the cab. This is not true. Installation of the stoker in order to permit the fireman to devote more of his time to his watching duties was only one of several reasons relied upon by the Commission. Peril to the fireman by reason of firebox explosions or backfires, injury to their health caused by the performance of duties which exposed them alternately to extremes of heat ranging from 1,800° to 2,500° and the winter cold, and the excessive fatigue caused by the tremendous expenditure of energy necessary to do the job were heavily emphasized.

Lack of visibility by the engineer was stressed as the chief reason for requiring the fireman to watch. "If the engineer from his position in the cab could have a view of all the signals and conditions which affect safety of his train, the fireman's value as a lookout might be lessened." [37] The difference in visibility on large locomotives and small ones was given as the reason for exempting the latter from being required to install stokers. On large locomotives the Commission pointed to the width of the boiler which left room for only "very narrow front cab windows—little more than vertical slits,"[38] the length and diameter of the boiler which prevented the engineer looking through such windows from having a view of the left rail or any object on it for a considerable distance ahead even on straight track and none at all on track which curves slightly to the left, and trailing smoke which obscured vision. On smaller locomotives the comparatively wide front windows and short, narrower boilers which on straight track gave a view to the left at a relatively short distance ahead was deemed sufficient to exempt from the order locomotives used in freight service with weight on drivers of less than 175,000 pounds. When one compares the complete visibility on Diesels of the entire track in front and to either side, not only on straight track but on curves, together with complete absence of trailing smoke to blot out vision and fewer duties in the cab which the engineer in a Diesel-electric enjoys as compared to his position on even small coal-burning steam locomotives, it is obvious that the reasoning of the Commission in the stoker case is inapplicable to it or applies to such

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[36] *A. Johnston et al.* v. *Atchison, Topeka & Santa Fe Railway Co. et al.*, Interstate Commerce Commission No. 24049, December 27, 1937.

[37] Idem, pp. 538–539.

[38] Idem, 539.

a minor extent that it is not controlling. Indeed, the reasoning of the decision constitutes an argument against requiring anyone in addition to the fireman, rather than in favor of it.

In discussing whether the fact that the head brakeman was in the cab to assist in watching would make any difference, the Commission did not, as contended, hold or even suggest that he did not have the requisite ability to do the job. It pointed out that there was no head brakeman in passenger service and that his duty to observe the train and other duties would prevent him maintaining the constant lookout that was demanded on large locomotives because of the adverse visibility situation of the engineer. On smaller locomotives, apparently, his presence would be sufficient because of the better visibility by the engineer. In fact, given fairly good visibility by the engineer, constant lookout by either the fireman or the head brakeman apparently was not considered necessary. At least this Board is convinced that, with the complete visibility possible to the engineer on freight Diesels, that is the case. The automatic stoker decision therefore is not binding or persuasive authority even if the majority opinion in that case be agreed with. And it should not go unnoted that Mr. Eastman dissented and Chairman Miller joined him in that dissent.

9. The only argument that raises any real question is that in his line of duty the brakeman is not always in the cab, and on some roads he is ordered by the carrier to ride in the cab of trailing A units,[39] and therefore there would be occasions when the engineer would be alone in the cab. On most roads it is either the rule, or regardless of rule, the actual practice, that he must be in the cab at times when the fireman is out of it while the train is in motion. In some it is left to the discretion of the engineer who may call him to the cab by ringing a bell, blowing the whistle or giving some other signal. On only two roads does the head brakeman ride elsewhere than in the cab without there being some provision by rule, order or practice for calling him to the cab in the engineer's discretion or otherwise when the fireman is absent from it. Even those two are willing to change the practice and require him to ride in the cab, at least when the fireman is absent, if that is thought necessary, although both believe it is better operating practice on their roads to have him ride elsewhere.[40]

[39] On one road, the Lehigh Valley, this is true only because the B. L. F. and E. objected to the seat he occupied in the cab when assigned to it by the carrier. The B. R. T. are protesting the rule and demanding that his position and seat in the cab be restored to him. B. L. F. and E. exhibit 76 and carriers' exhibits 51 and 57 contain operating rules and other information dealing with the requirements and the practice as to the head brakeman duty to be in the cab or elsewhere when the fireman is either present or out of the cab. They also contain data as to the duties of the head brakeman as a lookout and his other reponsibilities. See also tr. 5319–22, 3330–3301, 3391.

[40] See tr. 3294, 3330–3331, 3391, 4526.

In considering whether a rule should be adopted that a fireman should be in the cab at all times the Board is convinced, as was the 1943 Board, that the presence of the head end breakman in the cab of freight Diesels while the train is in motion satisfies all possible safety requirements in freight service so far as manpower is concerned. It further believes that a rule leaving the necessity of his presence under such circumstances to the discretion of the engineer would be sufficient to satisfy that demand. Even where the head end brakeman is not in the cab when the fireman is absent, the Board is not convinced that there is sufficient reason to adopt the inflexible rule proposed or even the narrower one limiting it to when the train is in motion. There is no requirement at present in straight electric service, in single-unit, high-speed passenger trains, or in multiple-unit conventional passenger service that the fireman be in the cab at all times even while the train is in motion. As indicated elsewhere, the Board does not believe the proposed rule should be adopted in the last two, and the organization has not even asked that it be put into effect on the first. The speeds of freight trains are not fast, and visibility is perfect. There are times and places and operating conditions where it would be safe to operate trains that run much faster than the fastest freight with only the engineer in the cab.[41] The same is true in freight.

This is certainly true so far as the need for an additional man to perform lookout duties is concerned. But it is urged that the chance of sudden incapacity or death of the engineer requires that someone be in the cab with him at all times. Whether the head-end brakeman, if he were in the cab, would be competent to bring the train to a stop should such an emergency develop, and would be as qualified to observe the existence of such an emergency has already been discussed and the Board has answered the question in the affirmative. The question here, however, is whether the possible or certain absence of the head-end brakeman from the cab at the same time that the fireman, by reason of duties in the engine room, might also be absent is sufficient reason to require the fireman to stay in the cab at all times, including times when the train is stopped on a completely safe siding. That the answer to this is "no" is so clear that no discussion seems necessary. Whether the same would be true if the rule only required the fireman's presence when the train is in motion may be considered in two cases: First, those in which the head brakeman may occasionally absent himself from the cab but ordinarily, either by rule or practice, rides there. Second, those in which the head

[41] See, e. g., tr. 3589–3594, 3663–3665. The fact that this is true is, as is developed elsewhere, a reason for believing that even the present rule in high-speed, streamlined, or main line through passenger trains is too inflexible and impractical in operation.

brakeman either is required to be in another part of the locomotive or train at all times or is required or by practice remains in such other part except when called to the cab by the engineer.

In the first of these cases, in order for the suggested danger to occur and result in an accident the following five circumstances must all be present at the same time.

First: Both the head-end brakeman and the fireman must be absent from the cab at the same time.

Second: The engineer must suddenly become incapacitated or die.

Third: In this event either:

a. He must fall or slump in such a way that the "dead man" pedal would not be released, or

b. The safety mechanism of the "dead man" pedal would have to fail to operate because it was defective or disconnected.[42]

Fourth: The train must not be operating in territory where there is automatic train control system.

Fifth: There must exist a hazard on the road that would cause an accident before the head brakeman or fireman returned to the cab and discovered the situation and acted.

The probability of all of these factors being present at the same time is so remote that the mere statement of the facts should make it apparent that it would not be sufficiently probable as to justify the rule contended for, even if limited to times when the train is in motion.

In the second of the two possible situations, the probabilities of the first and third being present is very considerably increased. However, when in addition the other three circumstances must all occur at the same time, again the possibility is too slight to warrant the adoption of the rule, even so limited. Hazard cannot be eliminated from even the simplest of daily operations. A very large percentage of serious accidents occur in the supposedly safe area of homes. The problem is a practical one of whether the probability and degree of danger is sufficient to warrant a proposed remedy. The Board is convinced that, even in this second case, the probability and degree of danger is not sufficient even if the proposed remedy were admitted to be the appropriate solution.[43]

Even if the Board had arrived at an opposite conclusion in the second of these cases, and if, in such cases, safety demanded that an

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[42] On at least one railroad, the Board understands that the "dead man" pedal has been disconnected at the demand of the B. L. E. See Emergency Board No. 58.

[43] Again, see other discussions as to whether an additional man is the proper solution of such safety hazards as exist or are claimed to exist. Here instead of adopting the proposed rule, one possible solution would be for the carriers to adopt rules that would bring practices into conformity with the first situation. As indicated, the Board does not believe there is any necessity for this sort of change, although it believes that, from the standpoint of safety, such a rule and practice probably is preferable to the present one.

additional man should be in the cab while the train is in motion, the fact that some railroads do not make provision for the head-end brakeman to take and keep his station in the cab when the train is in motion is not sufficient to force all roads to require a fireman to be in the cab at all times while the train is in motion, much less to adopt the infinitely more drastic rule that would require him to be there at all times en route, even while the train was standing safely for long periods of time on a siding.

CONCLUSION

The Board's conclusion is that no valid reason exists as to freight services [44] for adopting the B. L. F. and E. proposal embodied in the requested new section 3.

B. PASSENGER SERVICE—MULTIUNIT, HIGH-SPEED, MAIN-LINE TRAINS

Multiunit, high-speed, main-line passenger service is unlike any other service in one important particular—the fireman must presently remain in the locomotive cab at all times while the train is in motion. In consequence, any engine-room work that is done en route is performed either (*a*) by the fireman at the regularly scheduled but infrequent station stops, or at unscheduled stops made for the purpose of permitting the fireman to give necessary attention to the engine room, or (*b*) by maintainers, spot checkers, or other variously titled service or supervisory personnel. A further distinguishing factor has been suggested by the brotherhood, namely, that in this class of service especially, necessary work in the engine room tends to be left undone because of the impediments to dealing with it en route.

Numerous arguments advanced by the brotherhood were directed specifically to the above-described practices followed in the operation of multiunit, high-speed, main-line trains. It has been argued that the present watching rule does not adequately provide for safety needs because required attention to the engine room in fact results in the absence of the fireman from the cab while the train is in motion, even though in violation of the watching rule, and because the use of unscheduled stops to enable the fireman to "go back" is not only unsafe but impractical as well. It is further argued that the assignment of engine-room work to others has infringed upon the work of firemen in violation of traditional assignments of this work and of current

[44] The Board's discussion has been directed almost exclusively to through-freight trains. The conclusion applies a fortiori to local freight trains. The 1943 Emergency Board specifically states that an additional man is not needed in local freight service. Report of 1943 Emergency Board, recommendation E (2), 63, carriers' exhibit 1, p. 112.

contracts. Under these circumstances, the organization urges that an additional fireman is needed on these trains to enable the regular fireman to remain in the cab at all times and also to insure that necessary attention to the engine room will be properly given.

The brotherhood contentions particularized as respects this service require answers to these questions:

(1) To further safe operations, should the present watching rule be modified so as to require the fireman to remain in the cab at all times?

(2) If the present watching rule is either so modified or continued as at present, does compliance with the watching rule depend upon the assignment of an additional fireman to perform engine-room work en route?

(3) Do the firemen have an exclusive right to perform engine-room work en route which is violated by assigning such work to others? [45]

SAFETY CONSIDERATIONS INCIDENT TO PRESENT WATCHING RULE

Does the present watching rule adequately provide for safe operations? Along with its negative answer to this question, the brotherhood submits these contentions:

(*a*) The rule is commonly violated, and inevitably so, which means that there is not, in fact, a lookout in the cab at all times the train is in motion.

(*b*) It is accompanied by the stop-when-necessary practice, which is unsafe. Such unscheduled stops are said to increase the hazard of rear-end collisions. They are also claimed to be impractical since trains frequently cannot be stopped quickly enough to permit timely attention to the engine rooms either because of high speed or because grades and curves require a continuous forward movement. These contentions are next examined.

1. *Violations of present watching rule.*—The evidence shows that the present watching rule has been violated. Such violations have been more prevalent on two or three roads than on others, and it appears from the evidence that the violations have not been numerous for the railroads as a whole. Shortly before the hearings in this case were commenced, a survey of time spent by the fireman out of the cab was made on the carriers' behalf.[46] The survey disclosed the violations just referred to on several roads. Immediate notice of the find-

[45] The argument that firemen have an exclusive right to perform engine-room work has been evaluated generally elsewhere in this report. Particular mention is made of the point here, however, since it is in multiunit, high-speed, main-line passenger service that the carriers most extensively use the services of that group of employees which includes maintainers, spot checkers, and variously titled supervisory employees.

[46] Carriers' exhibit 26, tr. 4670 to 4672.

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[46] Carriers' exhibit 26, tr. 4670 to 4672.

ings was transmitted to the carriers on whose roads violations occurred, and they thereupon issued special instructions demanding compliance with the watching rule. A later check of these roads showed a high degree of compliance with the watching rule. In this connection, the chief operating official of one of the carriers stated that, in his opinion, the watching rule is now being observed as well as any other similar operating rule in force.

The carriers have unquestionably taken firm steps designed to secure full compliance with the watching rule. These steps include special bulletins admonishing train crews to obey the provisions of the rule and specifically requiring the fireman to stay in the cab while the train is in motion. In several instances, these bulletin instructions have been framed and posted in the locomotive cabs where they are in full view of the engine crews at all times.

The carriers are thus acting in good faith to secure compliance with the rule. That much is clear despite the claim of brotherhood witnesses that supervisors expect, and even require or pressure, firemen on these trains to leave the cab while the train is in motion to give attention to the engine room. The evidence respecting this contention, however, shows no more than isolated incidents that require considerable doubtful interpretation to arrive at any conclusion of deliberate violation by carrier representatives. It has also been suggested by organization witnesses that, in the railroad tradition, engine crews naturally place important emphasis upon maintaining the operating schedules—and are expected to do so by the carriers—so that firemen are expected by the engineer to "go back" even in violation of the watching rule, to avoid delays which might be followed by investigations.

In addition to the on-time tradition, however, there is another railroad tradition and one that takes precedence—safety. It may be well to mention that the watching rule under discussion was negotiated in agreement with the recommendation of the 1943 Diesel board. The recommendation of that board in urging such a rule was made with a view to contributing to the safety of operation of the train. Although a duty rests upon the employees to conform to any operating rule, it would seem that an added desire might well be expected of them in carrying out any safety measure adopted for their own protection as well as for the protection of the train. This is especially so since they now urge safety of operation as a principal cause to support present demands.

The carriers have suggested that violations of the present watching rule may not actually have resulted in unsafe conditions. In their

view, the rule is unnecessarily restrictive and inflexible.[47] Nevertheless, they say, it can and is to be fully enforced, since it is a requirement of the labor agreement. In explaining the violation problem, the carriers advance quite different reasons than the B. L. F. and E. The carrier view of the matter is that the engine crew sometimes decides on its own initiative that at slow speeds being traveled or under particularly favorable road conditions, no safety hazards are created by a brief absence of the fireman from the cab. The men themselves decide, therefore, contend the carriers, that the watching rule is too inflexible to be practical and so they violate it. It is the carriers' contention that the brotherhood acts entirely unreasonably in seeking to use violations by firemen of any agreement term which the carriers are able and willing to operate under, as a reason for adding an additional fireman.

The fact of some violations of the present watching rule provides no solid foundation for the claim of the brotherhood for a more rigorous watching rule and for the added requirement that an additional fireman be employed in the engine room in order to effectuate the watching rule. Violations that have occurred rather give rise to a number of other questions. If safety is the primary consideration here, and we have been assured that it is, the violations might reasonably indicate the need for a better concerted effort of the carriers and the firemen to secure a more complete compliance with the present watching rule. Such a course is indicated because successful efforts along these lines would eliminate the factor of safety from consideration in this class of service, certainly from the head end of the train. At any event, a lookout, admitted by the brotherhood to be adequate, would be always present while the train is in motion. We arrive at this conclusion without regard to the admittedly possible absence of the fireman from the cab while the train is standing. We know of nothing, and no evidence on the point was submitted to us, to show that the fireman might contribute to the safety of the train by being restricted to the cab while the train is standing.

If the firemen are to persist in going back to the engine room while the train is in motion, however, and if the rule proves to be no more enforceable in the future than it has in the past, it becomes proper to consider the hazard of such conduct in the light of past performance. The exhibit of the brotherhood,[48] covering reports of accident investigations for the years 1937–39, made by the Bureau of

[47] The B. L. F. and E. has also found the present rule defective. It says (B. L. F. and E. brief, p. 95): "* * * the rule is so completely unworkable in an intensely practical industry as to make breach of it a necessity under everyday operating conditions." This observation is made, however, in connection with the argument that the rule could be made workable through employment of an additional fireman.

[48] Exhibit 75 A, B, C, D.

Safety of the Interstate Commerce Commission shows that but one accident involving multiunit streamlined passenger trains was reported by the Bureau where the fireman was not present in the engine cab at the time of the accident.[49] As before stated, the brotherhood witness who prepared the exhibit represented it as being fully comprehensive.

It is thus seen that, with the present watching rule rigidly enforced, or with it more or less casually disregarded, the matter of safety of operation from the head end of the train presents no problem for solution. The violations of the watching rule, as with any rule, raise in the first place the problem of why it is being violated and then what should be done.

In connection with the requirements of the present watching rule, with its relation to safety of operation, one may observe that these multiunit, streamlined, through trains are not always operated at high speeds with a potential danger calling for especially intent lookout. Such trains sometimes move at relatively slow speeds in territory characterized by low ground and by many long bridges and trestles. They also move at greatly reduced speeds in ascending long grades. Furthermore, in level terrain, such as is found generally in the region of the Great Plains, the visibility is so much greater than elsewhere and is a factor adding to safety of operation.[50] It could be that the existence of violations reflects an opinion held by the working fireman, as well as by the carriers, that the existing watching rule is unnecessarily rigid and inflexible even when full regard is had for the need of unusual attention to safety precautions in the high-speed passenger service. At any event, negotiations on this subject as one way of arriving at a possible answer to the problems of getting a safe, workable, and efficient watching rule might at least be considered.

2. *Unscheduled stops.*—The brotherhood asserts another factor of safety of operation to support its demand for an additional fireman in this service. It maintains that unscheduled stops, to enable the fireman to quit his cab for the purpose of attending an alarm in the engine room, are unsafe and impractical as well. Reasoning that such stops are necessary in the enforcement of the present watching rule,[51] the practice of stopping trains at unscheduled points along the line of the road is dangerous in any case, say the firemen, and especially dangerous on the main trunk lines with their density of traffic where

[49] The one accident, involving such a Diesel, was a derailment resulting from a false flange caused by a flat driving wheel. No advance indication of the impending danger was given. Had there been some advance warning, however, it is difficult to see how the fireman could have done anything about it.

[50] Tr. 3590; 4350 to 62.

[51] And also necessary, unless provision were made for an additional fireman, should its proposal be adopted that the fireman be in the cab at all times.

this class of trains operate. Need for such stops could be eliminated, it is claimed, only by the placing of an additional fireman on the train to devote his entire time to engine-room duties. The safety insured thereby justifies the hiring, according to the brotherhood view.

With respect to such hazard, there is in evidence a study made during a recent 3-month period and covering an aggregate of 6,000 trips by this class of passenger trains on one railroad.[52] During that time, 11 unscheduled stops were made. On an average, 1 stop was made for every 545 trips. The total delay occasioned by all 11 stops was 1 hour and 25 minutes; the longest single stop being 1 of 15 minutes. There is no evidence of any hazard nor of any inconvenience by reason of any stop, other than delay.

Over another railroad, in a 6-month period, a fleet of Diesels, being run in comparison with a fleet of steam locomotives for a like period, made 1,042,651 miles in 18,424 hours and 22 minutes with a loss of 1.1 percent, in hours, due to road trouble. The compared steam locomotives with 14,099 hours 54 minutes on runs lost 13.2 percent due to disabling road failures.[53]

On the evidence before us, there can be no doubt that the unscheduled stops made by high-speed, main-line, passenger trains in order to permit the firemen to go to the engine room, almost always for the purpose of attending to alarms, are not a frequent necessity or occurrence. Nor can it be said, with any reason, that the few stops that do occur should be classed as hazardous. Examination of the accident statistics reveals the occurrence of no rear-end collisions as a result of the stopping rule.

Mention may also be made of the contention that the unscheduled stop rule is impractical because stops frequently cannot be made in sufficient time properly to meet the need for engine-room attention or because grades or curves preclude the stopping. These are remote contingencies. As shown in carriers' exhibit 10, moreover, the unscheduled stops of Diesels is low as compared to steam so that the stop problem, in Diesels generally cannot, by any means, be considered as acute.

The infrequency of unscheduled stops with their accompanying lack of accidents or damages, coupled with the reported rigid enforcement by carriers of the rear-end flagging rule,[54] working in conjunction with the automatic train stops which are in use as required by the Safety Bureau of the Interstate Commerce Commission, all combine

[52] Tr. 3563.
[53] Carriers' exhibit 10, p. 15. See also tr. 3716 to 3722.
[54] Tr. 3582.

to render the hazard of the unscheduled-stop rule entirely negligible.[55] The contention certainly does not in any way indicate the need for an extra fireman either to diminish unscheduled stops or to eliminate them in whole.

3. *Summary—Safety considerations.*—Appraised from any standpoint of safety of locomotive operation, the proposal of an additional fireman to meet the particular problems of main-line, high-speed passenger service falls far short of any worth-while contribution to that end. The contentions of the brotherhood with respect to violations of the existing watching rule and to unscheduled stops do not add up at all to any reason for employing an additional fireman. Nor would safety be served by an extension of the watching rule so that the fireman wuold be required to be in the cab while the train is standing. On the contrary, the evidence indicates the possibility, for exploration in negotiations, that a relaxing modification of the present watching rule might eliminate the violation problem complained of without any sacrifice of safety.

NEED FOR ADDITIONAL FIREMAN AS A COROLLARY OF PRESENT WATCHING RULE

It is conceded that there is some engine-room work to be done en route on high-speed, main-line passenger trains. Performance of the engine-room duties on these trains, however, is different than on other road Diesels because of the watching rule. In contrast to freight, the fireman does not make periodic patrols and inspections of the engine room. An alarm is not a mandatory signal for the fireman to go back but the announcement of an engine-room difficulty, the engineer being responsible for determining whether or not the train should be stopped to enable the fireman to attend to any difficulty.[56] To a much greater extent than in freight service or any other service, maintainers and spot checkers ride in the engine rooms of the high-speed passenger trains. And the brotherhood has suggested that supervisors of various classes do a considerable amount of fireman's work particularly on these trains and thus take over work which belongs to the fireman by tradition and by contract. All of these matters have been referred to by the brotherhood as contributing to the Diesel manpower problem on these trains under the present watching rule. They all would be present, in some respects to a great extent,

[55] This conclusion is strengthened by a comparison of the percentages of time consumed in unscheduled stops by Diesel and by steam locomotives (carrier exhibit 10). No additional fireman is proposed on steam locomotives—or no particular rule—although the stops in steam service are much greater than in Diesel.

[56] The engineer may determine to continue operation if the next terminal is not far off and if the alarm seems to indicate a none too serious condition. It may be noted that the alarms generally are given well in advance of conditions of urgency. In most cases, this is definitely so.

under the proposed watching rule that would require the fireman's presence in the cab at all times.

In the preceding part of this discussion, the safety factors advanced in support of the claim for an additional fireman in this class of service were found to be without merit. It is also claimed, however, that the work that can and should be done by firemen in the engine rooms warrants and calls for the employment of an additional fireman. The principal grounds for this demand are the right to do the work and the contribution to be made by an additional fireman to economical and efficient operations. The latter point is particularly urged in regard to this class of service because of the limited availability of the regular fireman to do engine-room work.

1. *Claim of fireman to exclusive right to engine-room work.*—This claim made as respects all Diesels has been considered generally elsewhere in this report. Some particular attention of the claim in relation to high-speed passenger service is, nevertheless, of value since it is in such service that the contentions involved particularly apply. In this service, maintainers and spot checkers are most widely used as compared with other service. And when they are used, the claim in question arises.

As noted earlier in this report, along with other reasons which show a lack of validity of the B. L. F. and E. contention, the engine-room work in question has traditionally been assigned to others in addition to firemen. No strict line of demarcation has ever been drawn between engine-room work to be performed by firemen and such work to be done by others. Recognition of, and acquiescence in, the assignment of such work to other employees is found in the statements of the brotherhood president made during the negotiation and preparation of the so-called maintainer memoranda attached to, and forming a part of, the agreements between the Firemen's Brotherhood and the Carriers' Conference Committees representing the Western and Southeastern Carriers, consummated in 1944, after, and in light of, recommendations of the so-called first Diesel board that sat in 1943. Although no such memorandum is appended to the Eastern agreement made shortly theretofore, the three agreements were, as stated by the representative of the brotherhood, designed to effect the same practices and results. Impliedly, therefore, such recognition and acquiescence was national in scope.

This lack of any exclusive right of firemen to engine-room work is tacit in the report of the 1943 Diesel board. There the board remarks upon the fact that employees other than firemen sometimes not only do maintenance and repair work but also engage in work of operational character. The board suggested that harmonious relationship between

the parties could be best maintained by such other employees not performing operational duties. This suggestion was not accepted.

Proof of an exclusive right to any work in the engine room—a prerequisite to its preemption by any craft—is wholly lacking in the case presented.

It may be noted that operational duties in the engine room most frequently mentioned are the regulation of the puralators, shutters, and grid blowers, as well as the operation of the steam generator. With the exception of the steam generators, these devices have been made automatic by recent improvements and do not require regular attention while the train is en route. In this respect, the operational work to be performed in the engine room is less at present than it was when the manpower question of Diesel locomotives was examined by the 1943 board.

With continued and extended use of Diesel locomotives, the lack of need for maintenance employees to ride the engine rooms has become apparent to most carriers. A marked decrease has consequently occurred in the proportionate number of such employees so used, and the work heretofore done in the engine room while the train was en route has been transferred to the shops as shop work for the shop crafts. Thus, the maintenance duties, which have never been more than the joint work of the firemen and other employees from the early inception of Diesels, have been also appreciably reduced on all carriers and entirely eliminated on most. This lessening of engine-room work has been so universally practiced by the carriers that but two of them continue the general use of regular maintainers as such.

Only one question raised by the brotherhood in this connection remains unconsidered. Under existing agreements it is provided that if compliance with the watching rule requires the employment of an additional man in the engine room to perform "work customarily done by firemen," such additional man shall be taken from the ranks of the firemen. It is contended, presumably with greatest pertinence as respects periodic patrols and the answering of alarms, that the assignment of such work to maintainers, spot checkers, or others or its performance by supervisory employees, has been done for the purpose of avoiding the responsibility of adding an additional fireman under existing agreements.

This argument is no proper claim at all to make in these proceedings. A procedure is available to the B. L. F. and E. to process any claimed violations of its agreements with the carriers. It is significant to note that no claim based upon the argument in question has gone to the adjustment board. And, according to the evidence before us, only a very few claims were presented to the carriers for settlement. This record

is at least an indication that there were no violations on most roads. As noted previously, those other than firemen who are assigned to the engine room are doing no more than what they have always done and which the carriers have every reason to assign to them. It may also be noted that regular and periodic patrols of the engine room cannot be made by employees who are given intermittent assignment to these locomotives.

There are no valid reasons to support the demand of the B. L. F. and E. for assignment of an additional fireman to the engine rooms of high-speed passenger trains on the ground that firemen have an exclusive right to perform all or some of the work done in the engine rooms en route.

2. *Economy and efficiency of operations.*—Although the claims for an additional fireman based upon reasons of economy and efficiency of operations have been generally dealt with elsewhere, the claim may be briefly but particularly referred to in relation to high-speed passenger operations. This is because the peculiarities of operation in this service under existing rules would likely give the additional fireman in the engine room more to do in this class of service than in any other.

In dealing with this subject, we do not overlook the carriers' contentions that questions of judgment as to what constitutes economical methods of operation are not proper matters for collective bargaining. The significance of this contention to these proceedings has already been developed and need not be repeated here.

It is to be noted, however, that under present rules and practices, the operation of high-speed passenger trains has been marked by a highly efficient performance. Data submitted by the carriers as respects the good on-schedule performance of these trains, the infrequency of delays caused by engine-room failures, the relatively low costs of keeping these trains in operation, the high availability of the locomotive, the outstanding safety record—all make it apparent that the carriers have come to no unreasonable conclusion in deciding that the employment of an additional fireman would increase costs of operation rather than decrease such costs.

SUMMARY

The safety consideration, the reasons based on efficiency of operation, and the claim of exclusive jurisdiction over engine-room work [57]

[57] The only other significant general contentions made in support of the B. L. F. and E. proposal are the increase in number of locomotives on the rails of more carriers as compared to 1943 and the increased speed and tempo of operation since 1943. The figures altered by any development of this nature have been taken into account in the conclusions arrived at.

do not in any way justify a substitution of the more rigid watching rule proposed by the brotherhood for the watching rule presently in effect on multiunit, high-speed, main-line passenger trains. Neither do these reasons support the contention of the B. L. F. and E. that a second fireman should be employed on these trains for engine-room work. On the contrary, it is our conclusion that there presently exists no need for an additional fireman in this class of service upon either the ground of safety or that of efficiency and economy of operation.

C. SINGLE-UNIT, STREAMLINED TRAINS

A second classification of passenger service in which Diesels are used is that of single-unit, streamlined trains. These trains are characterized by relatively high average speeds for short distances between frequent station stops. Such schedules are made possible by reason of the rapid acceleration characteristic of the Diesel locomotive. It can rapidly get under way after a stop. The limited power occasioned by use of a single unit restricts this class of trains to comparatively light, and, consequently, to short trains.

The watching rule requiring the presence of the fireman in the engine cab at all times while the train is in motion does not apply to this class of service. Permissive absence of the fireman from the cab makes it possible for him to visit the engine room for patrol and inspection at regular intervals, or as needed. Need for patrolling while the train is in motion is much reduced, as compared with the previously considered passenger service, by reason of the frequency of stops when inspections may be made. Since but one engine room is involved, the time required to patrol is reduced proportionately.

The quite limited duties of the fireman in the engine room on these locomotives reduces the consideration of need for an additional fireman in this class of service to a question of safety.

Diesel locomotives have been in general use a sufficient length of time to permit a comprehensive appraisal of their dependability, as well as their safety of operation. From both aspects, the Diesel has established a remarkably good record since the inauguration of its use in railroad service in single-unit, streamlined operation. The reliability and dependability of the Diesel is essential in determining the safety of its operation with respect to engine crew consist and duties.

It is significant that the first trial run of a Diesel locomotive was made nonstop from Denver to Chicago. Over the intervening years its performance has been similarly outstanding, and its engine failures have been extremely few and far between. Proof was submitted to this Board showing that a single-unit Diesel locomotive had traveled

just short of 5 million miles, doing more than 800 miles per day at a rate of more than 60 miles per hour without a single delay caused by mechanical trouble. Incidentally, this is a longer continuous performance than any other land-operated machine. Engine-room failures that could conceivably require the presence of a fireman to avoid are extremely small. Performance records of Diesels in the service of carrier after carrier after carrier were submitted at the hearings, and all told the same story. The actual need for anyone's presence in the engine room was no oftener than once for each several hundred thousand miles.

From such a formidable record of performance we must conclude that need for constant, or even frequent, patrolling of the engine rooms is not needed. Certainly such is the case where frequent station stops are made, giving opportunity for any necessary patrolling. Relief from need to patrol more frequently while the locomotive is in motion affords the fireman added time in the engine cab to attend to his duties there.

Safety records covering Diesel operations are not provided separately for single-unit, streamline operation. But, the over-all data reveal that, like Diesels generally, these Diesels are extremely safe in operation. The four-volume exhibit, containing a study of the Bureau of Safety Interstate Commerce Commission reports of accident investigations for the years 1937 up to and through March 1949, inclusive,[58] was submitted by the brotherhood. That study showed that but one accident involving a single-unit, streamlined passenger train was examined by the Bureau where the fireman was not present in the engine cab at the time of the accident, and in that case the train was standing on a siding in a yard.

The exhibit also contained a study of the investigation reports by the Bureau of Locomotive Inspection of the Interstate Commerce Commission for a like period. A total of 29 accidents on all classes of Diesel passengers at a time when the trains were in motion was found, investigated, and reported on. Fifteen of such accidents were directly related to other than engine or electrical equipment (such as pinching hand in door, etc.). Six were cases where the employee slipped and fell, while 12 were crankcase explosions, with the remaining 12 caused by the engine or electrical system. Since these cover all Diesels, it follows that the record of the single-unit, streamlined type has been good.

A study of steam and Diesel casualty statistics covering 23 class I railroads involving 71.94 percent of the Diesel locomotives with 78.04 percent of the Diesel units on 66.17 percent of the miles of road oper-

[58] Employee exhibit 75A, B, C, D.

ated, for the 3-year period of 1946, 1947, and 1948, shows a casualty rate of 0.004 for firemen in Diesel passenger service, killed, and 0.02 injured, per million locomotive miles as compared to a casualty rate in steam passenger service of 0.04 killed, and 0.07 injured, per million locomotive miles.

On the carrier having the largest Diesel service, both in miles run and number of units operated, its computation shows a possibility of injury to firemen in Diesel service of once every 56 years.

The record upon which these overwhelming figures rest, viewed from any consideration, forecloses any possible need for an additional fireman in this class of service.

D. CONVENTIONAL PASSENGER SERVICE

A third class of Diesel passenger service is designated by the industry as "conventional" trains. These trains consist of ordinary standard passenger cars, powered by Diesel locomotives. The locomotive may be a single or a multiunit plant, depending upon the requirements of the particular train. By reason of the added weight of the kind of cars used, these trains are more sluggish, less maneuverable and, consequently, assigned to slower schedules with more station stops than the multiunit, streamlined trains. This class of trains symbolizes the transitional period of changing from the older type of trains, formerly powered by steam locomotives, to the newer type, made up of streamlined cars and Diesel locomotives. As this older equipment is worn out, it is replaced by the newer type of cars and, it is supposed, within the reasonably near future this class of service will entirely disappear.

This class of Diesel trains has contributed its proportionate part to the accomplishments of Diesels generally and is included in all statistical computations affecting safety of operation, as well as dependability and reliability.

By reason of their speeds, schedules, and stops, what we have said with respect to the need for an additional fireman on single-unit, streamlined trains is equally applicable here except for the possibly longer time necessary to patrol the engine rooms in case of the employment of a multiunit locomotive. However, this probably added time is of such inconsequence that the brotherhood ignores it in its request, in that but one added fireman is asked for in locomotives having as many as four units. Passenger trains rarely, if ever, have more than three units.

No justification for adding an additional fireman in this class of service exists.

E. MULTIUNIT, HOODED ENGINE TYPES

It was explained by the brotherhood president that the organization proposal for the employment of an additional fireman (helper) on each Diesel locomotive of four units or less when used in road service contemplates that group of Diesel locomotives termed "hooded engines," except that it does not require a second fireman (helper) on single units of such locomotives.

This machine gets its designation by reason of its power units being protested by an encasing covering resembling somewhat the hood covering an automobile engine, rather than by being stationed, exposed, inside an enclosed car. Existence of this equipment was touched upon in the testimony upon as many as six occasions. An equal number of exhibits were submitted to the Board and commented on.

The facts adduced with respect to these locomotives are that they are a class of switchers, used most generally in yard service. As stated by the brotherhood witness, their use in road service "is not a thing established as a going affair" since they are not a road-type motor. This statement is amplified by the showing that there are but 6 railroads using a total of 24 such locomotives in road service, 16 of these being in service of one carrier.

Need for an additional fireman (helper) on this class of power is claimed upon the ground that the fireman cannot attend a trailing unit should anything go wrong with its motor. Being hooded, no repairs can be made while the locomotive is in motion, and the sole function a fireman could perform under such circumstances is to stop the motor. This duty, when performed, could have no other purpose in view than that of safety for, and protection of, the machinery.

The other claimed need is in passenger service in cases where a heating unit would be installed to supply heat for the passengers in the coaches.

It is maintained by the organization that a fireman (helper) cannot go from the cab in the leading unit to the trailing units at all, for lack of walk-ways, platforms, etc., or, if at all, only by subjecting himself to great danger. Example of the hazard the fireman (helper) is subjected to in the discharge of such duty was cited in the case of the use of such locomotive in a mine run on the Southern Railroad where it was claimed by the brotherhood that the fireman (helper) is required to make regular patrol of the trailing unit locomotive at regular intervals while the train is in motion.

The requirement to patrol, or to go back to the trailing units for any purpose, while the train is in motion was flatly and categorically denied by the general manager of the carrier, with the added assertion

that if the fireman (helper) were seen doing such patrolling, such employee would be called in for an investigation for violation of instructions. It was stated by this witness and by the road foreman of engines that no more than a limited inspection as to the condition and supply of lubricating oil and the battery-charging indicators made only when the train is standing still is required.

Five separate photographic views of this locomotive, showing the facilities afforded for passing from one unit to the other were placed in the record as exhibits. Each picture shows a catwalk between the units, guarded by hand-rail, and a steel hand-rail guarded passageway along the trailing, or B unit. This installation has the approval of the Bureau of Safety of the Interstate Commerce Commission. It was further stated that the engines shown in the exhibits can all be stopped from the operating control cab. Thus, the only need claimed by the brotherhood for the fireman (helper) to visit the trailing unit in freight service is actually not present on the engines shown.

There is proof that on some of the older engines, it is necessary to go to the switch on the individual motor to start and to stop it, an operation that is common to all other Diesel locomotives. It was also shown that on the older types, no catwalk is provided, but that the requirements of the Bureau of Safety will have to be met in such cases.

In this connection, the carrier having the largest number of these locomotives in road service, 16 of the total of 24, has 8 locomotives that are not supplied with the catwalk and 8 that are equipped with it. The rule on that carrier is that should employees wish to pass from one unit to another for any reason the train must be stopped.

It was stated by the brotherhood president that he understood that the firemen have an agreement with one carrier—the Atlanta & St. Andrews Bay Railroad—providing for a second fireman when such units are used in multiple service. The named carrier is not a party to these proceedings and this understanding was not enlarged upon by either party, with respect to operating rules of the road, safety walks, or automatic start or stop controls on the locomotives. From the exhibited photograph of the operation on this road, three units are shown. These 3 units, plus the 3 units pictured as used on the Southern, plus the 16 mentioned that are, in fact, operated by the Chicago, Indianapolis & Louisville Railroad, accounts for 22 of the 24 road service hooded locomotives.

The other two units have not been directly accounted for unless they be charged to the Milwaukee road. Mr. Robertson said he thought this road used two units coupled together in passenger service. If this assumption is correct, all hooded locomotives covered by the requested rule are accounted for. No proof whatsoever with respect

to this supposed passenger service is submitted. Mr. Robertson said that "if you use two of them together in passenger service, you have got to have a heating unit in one of them." And further: "* * * it is back in the second motor because there is no way of coupling them up together * * *." We must understand this testimony to mean that Mr. Robertson assumes that if the passenger service is provided on the Milwaukee as he thinks, a heating unit would have to be placed in one of the units, and he further assumes such unit would be placed back in the second motor, although his reason assigned for such second assumption is somewhat obscure. Here again the Board was not advised as to the operating rules covering this service, nor with respect to the presence of walks and passageways as required by the Bureau of Safety, nor as to the automatic stop and start equipment in the operating cab.

From the foregoing we find that on 19 of the 24 hooded locomotives used in road service, the rule complained of, requiring the fireman (helper) to visit the trailing units while the train is in motion, is simply not in existence. Positive rules to the very contrary are in force. Upon the remaining five such engines, no proof of the existence or lack of existence of such rule is made or attempted to be made. Of the 19 about which we were advised, 11 are already equipped with passage ways and catwalks in compliance with the safety requirements of the Bureau of Safety, and the other 8 are being required to meet such safety provisions.

Thus, it is clear that the very reason relied upon for an additional fireman is nonexistent in every case where the facts were submitted to the Board. Furthermore, no instance is shown of damage to the trailing unit by lack of an additional fireman, nor is a case of a cold passenger presented that the attention of an additional fireman to a heating unit in the second locomotive would have prevented or alleviated. In any case, such situations would properly address themselves to management as problems for solution rather than to the brotherhood for organizational handling.

Finally, the lack of sound reasoning, resulting in a glaring inconsistency, in forwarding the claim for a second, and only a second, fireman (helper) on this class of locomotives, lies in the fact that if it were as impossible to get from one unit to another as claimed by the brotherhood, the placing of but one extra fireman (helper) on four-unit locomotives would in no manner correct the evil complained of, since there would still be two other units left unmanned and equally unapproachable.

The demand has no merit.

SUMMARY AND CONCLUSIONS

ISSUE NO. 1. DIESEL MANPOWER QUESTION

The Diesel manpower issue here considered was raised by the B. L. F. and E. by its request for a change in contracts to provide for the employment of an additional fireman on all road Diesel-electric locomotives of four units or less.[1]

Investigation of the Diesel manpower issue raised by the B. L. F. and E. in these proceedings has entailed the evaluation of a great volume of evidence and testimony. A considerable number of interrelated contentions also had to be evaluated.

In the interests of a complete and orderly review of this complex issue, the Board considered in part 1 of this report on the Diesel question, the broad, over-all contention of the B. L. F. and E. that an additional fireman should be employed on all road Diesel-electric locomotives irrespective of class of service. Two principal general arguments were adduced in support of this proposition. One was that the requested increase in the crew consist was justifiable on the ground that the provisions of existing contracts, relating to conditions under which an additional fireman would be employed, had been violated. Careful examination of this argument convinced the Board that such violations as might have occurred in the past or as might occur in the future would be no basis for making it mandatory for all railroads to employ an additional fireman on all road Diesels. The second general argument bore upon the substantive questions in the case, and the B. L. F. and E. contended that considerations of safety and of efficiency and economy of operation necessitate the employment of an additional fireman on all Diesel-electric locomotives used in road service. The numerous contentions in this regard which were advanced by the brotherhood have been carefully appraised and, for reasons noted in the body of the report, the Board has found them to be lacking in merit. It is our conclusion, therefore, that no adequate reasons have been advanced in support of the B. L. F. and E. proposal that an additional fireman be employed on all road Diesels.

Many of the arguments, and much of the data, presented by the

[1] Excepted from the definition of road Diesel-electric locomotives were such power used in transfer service; in work and construction trains; and in single-unit hooded engine types.

brotherhood related to particular classes of service. After consideration had been given to the broad, over-all contention just referred to, it became necessary, to a complete examination of the Diesel manpower question, for us to determine whether or not the request of the brotherhood, denied for general application to all Diesels, should be approved as to one or more classes of road service. In addition, the adequacy of present operating rules in the several classes of service, with respect to which testimony and argument had been offered, had to be investigated in order to determine whether or not there were reasons for modifying those rules. In part 2 of this report on the Diesel manpower question, consideration has been given to these particular classes of service: (*a*) Freight service; (*b*) multiunit, mainline, high-speed passenger service; (*c*) single-unit, streamlined passenger service; (*d*) conventional passenger service; and (*e*) multiunit, hood-engine Diesel operation. Upon a careful consideration of the facts in each case, it is quite apparent to us that in none of these branches of service is it necessary or desirable to require the employment of an additional fireman. Nor is it necessary or desirable to require changes in operating rules presently effective in the several services.

It is our conclusion, then, that the B. L. F. and E. claims arising out of the request for a change in contracts to provide for the employment of an additional fireman on road Diesels should not be recommended, but should be denied in all respects.

ISSUE NO. 2. THE YARD DIESEL ISSUE

CLAIM FOR ELIMINATION OF THE 90,000-POUND EXCEPTION

The proposal to eliminate the 90,000-pound exception to the definition of what constitutes a "locomotive" to which a fireman or helper must be assigned under existing sections 4 of the contracts in the East and West and section 3 of the contract in the Southeast [2] involves two problems: One is the use of "Diesel-electric, oil-electric, gas-electric, or electric" under 90,000 pounds "weight on drivers in service performed by yard crews within designated switching limits." This is known as the yard Diesel issue. The other is the effect upon the operation of what are known as rail motorcars. There are additional changes asked as to the latter, and therefore the two will be treated separately. This latter is designated as the rail motorcar issue and is discussed in the next section of the report.

[2] For the exact contract clauses sought by the B. L. F. and E. to effectuate its proposal as respects the 90,000 pounds exception in the case of yard switchers, see material in the first section of this report relating to the issues in dispute.

Prefatory to that, an explanation of the origin of the precise figure of 90,000 pounds as a line of demarcation is in order. It was fixed as to both by agreement of the parties. Apparently the parties during negotiations had agreed in principle to the exemption of light-weight engines [3] in both classes of service.[4] There was, however, controversy as to the exact weight on drivers which should be set. The 90,000-pounds figure, a compromise,[5] seems to have been set somewhat arbitrarily, apparently because neither party believed at the time that much motive power would be involved at that line.

This probable explanation is interesting, if not particularly important, in view of a reason now advanced for and against the elimination of the rule as to switchers. The B. L. F. and E. urged that the total number of them is small [6] and the total cost of assigning a fireman to them therefore would be small. The truth is otherwise as to cost. Estimates based upon assigning firemen to these engines, assuming that they would continue to be used as at present, would cost the carriers $577,000 a year. If they were removed from those on one road where there is a controversy as to whether their employment should be discontinued should this Board find against the organization's request in this case, the additional savings would be $430,000, or a total of over $1,000,000 annually.[7] Although the amount of money involved in the question as to the manning of these little switchers

[3] As to small switchers, the agreement to such principle of exemption found justification in sound reason. Many small switching yards and much industrial switching involving the movement of few cars, removed from congested traffic points, did not require, and could not economically support, standard switching units with full crews. The shorter cuts and slower speeds together with ease of operation of the smaller power units, reduced switching hazards accordingly, and warranted reduction in the engine crew.

Somewhat similar considerations were present as to rail motor cars. They were used in a type of service that did not require and could not economically justify standard passenger or freight train service. Because they could not pull many cars and did not serve very productive areas, there was little danger that they would take any substantial amount of business away from trains that employed firemen. There was, therefore, no serious threat to jobs. Possibly as important a factor as any was that they had a long history, going back to their first introduction in 1905, of having been operated successfully without anyone other than the engineer.

[4] Before the 1943–44 settlement agreements, the 90,000-pound limitation as to other than rail motors applied to road service as well as service within yard limits. These settlements eliminated the road service exemption as to such other engines. This was done by agreement after the 1943 Emergency Board had expressed its opinion that the provision should not be stricken out. See carriers' brief, p. 54.

[5] For a history of the provision, which was adopted in 1947, see the report of the 1943 Emergency Board, carriers' exhibit 1, p. 108, which denied a request to eliminate the limitation. See also, statements by Mr. Robertson as to the negotiations and agreement. Carriers' exhibit 1, pp. 28, 33–34. In addition, see the testimony of Mr. Gurley in this case, tr. 4235.

[6] At the present time there are approximately 206 in daily operation. Carriers' brief, p. 54.

[7] Carriers' exhibit 50, p. 3. See carriers' brief, p. 65.

is small compared to that in the road Diesel issue, it is nevertheless a substantial sum and is more than is at stake in any issue before this Board other than that of manpower on road Diesels. There should be, therefore, some substantial justification for approving the asked-for rule.

The organization asserts that safety and efficiency of operation demand the assignment of a fireman to these switchers of under 90,000 pounds operating within yard limits. The Board is convinced that no good safety reasons exist for altering the existing practice and that no increased efficiency, even if that is relevant,[8] sufficient to justify compelling the assignment of a fireman to these switchers, has been shown. The Board bases its conclusion in part upon its own observations, having ridden on, and observed the operation of, one of the type of switcher around which the controversy centers and which seems to have been assumed by both parties to be either the only kind involved or at least typical of all. Furthermore, both the yard, the work done by the switcher, and the method of performing it were typical of the use of such switchers [9] which are known as 44-tonners. The reasons impelling the Board to this conclusion are the methods of operation, the character of the work performed, the type of yard in which they can be and are used to advantage, and the persuasiveness of a prior decision of an Emergency Board which had before it, in part, aside from the size of the locomotive which was somewhat larger, the same question as is presented here.[10]

These 44-ton switchers are limited in their use in several ways. The maximum number of cars they can move is small, not to exceed 12 or 13, depending on their load; the normal number is closer to 6 or 7, and much of it involves only 1 to 3 cars.[11] They operate at very slow speeds with a maximum of not over 8 to 10 miles per hour; a considerable part as slow as 3 and 4 miles per hour; and probably an average of between 6 and 8 miles per hour.[12] They are used almost exclusively in small yards, or remote parts of larger yards. In some such yards they move only a very small total number of cars each day and are worked only one shift. In others they may work around the clock and handle a fairly large total number of cars. Whichever is the case,

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[8] See the earlier discussion of the relevancy of efficiency of operation in relation to the B. L. F. and E.'s manpower claims.

[9] The yard was at Norwich, Conn., and our observations were made on August 22, 1949. The Board was accompanied by Mr. Gilfoil, general chairman of the B. L. F. and E. on the New York, New Haven & Hartford, and a road foreman of engines on the same road.

[10] The Steelton & Highspire Railroad Co. case, December 30, 1944, reproduced in carriers' exhibit 33. Since it is clearly pertinent on this point to the extent indicated, it will not be referred to further.

[11] Tr. 4736, 4786–8, 3338. Carriers' exhibit 32.

[12] Tr. 3338, 4748, 5192. Carriers' exhibit 32.

the operation is properly classified as relatively light. Moreover, it has been accomplished with an almost perfect safety record.[13]

Where there are no cars ahead of the switcher in the direction in which it is moving, the visibility from the cab is so complete[14] and the movement is so slow, that there is no need for safety or any other reason to have a fireman as a lookout.[15] In passing, it may be stated that there is absolutely nothing else for a fireman to do on these small switchers except to act as a lookout and to relay signals.

When one of these 44-tonners is working with one or more cars ahead of it in the direction in which it is moving, safety depends entirely upon that member of the ground crew who is acting as lookout at the front of the cut of cars. That man not only performs the lookout duty and directs the operation of the locomotive by the engineer by means of hand signals but has the duty and ability to stop the train in an emergency by a brake located there. The engineer operates entirely by hand signals from this man which he either observes directly or which are relayed to him by another member of the ground crew. When the engineer is unable to see members of the ground crew who thus direct his movements, it is a universal rule on all roads, insisted upon as being inviolable, that the engineer must stop.[16] This rule reinforces the safety inherent in the ability of the ground crew member at the head to stop the movement in case of danger. Where there are several cars ahead of the switcher on straight track, or when there is only one or two on track that curves to the left, the man at the head of the cut cannot be seen by the engineer. In such cases the signals are relayed to the engineer by another member of the ground crew who can see the man at the front and be seen by the engineer. If the cut is a very long one, there might have to be a second relay. The "stop" rule mentioned above operates here to give the ground crew time to take stations so that the signal may be relayed to the engineer. Where the signal has to be relayed by a second man, this man either walks along the right, or engineer's side of the cars, or if there is a left-hand curve or the cut is a long one, stations himself on the middle of the top of a boxcar where he can see the signaler and be seen by

[13] See tr. 4240, 4741–2, 5192–3; carriers' exhibit 18, p. 8; carriers' brief, pp. 58–60.

[14] Photographic exhibits intended by the carriers to prove, and by the B. L. F. and E. to disprove, that visibility from the cab is excellent were submitted by both parties. The Board's finding is based upon personal observation.

[15] In carriers' exhibit 32 giving a record of the signals called by firemen on the Pennsylvania Railroad which now employs them on these 44-tonners, shows that during an average time on duty of 7 hours 19 minutes during which the locomotive was working 5 hours 20 minutes on average, a fireman had occasion to call signals only an average of 10.16 times. This includes calling signals received from yardmen as well as calling traffic conditions or light signals.

[16] Tr. 4737–4740.

the engineer. When the first practice is used, a fireman could not see the relayer. When the second situation occurs, a fireman usually could not see the man at the front any more than could the engineer. He, like the engineer, would depend on the signal from the ground crew man on top of the boxcar, and his only possible utility would be to check with the engineer to be sure that the latter had accurately observed the signal. Even if he could observe the signal giver directly, his function then would be only to relay it, thus duplicating a function already being performed by a member of the ground crew. Rarely, if ever, would there be any necessary case where the fireman, instead of a member of the ground crew, would be able both to see the front-end man and be the only one who could see and relay the signal to the engineer. There is no claim that the members of the ground crew are not competent to act as front-end lookout and signaler or to relay signals from him to the engineer.

It is apparent from the foregoing that usually the only possible job for a fireman on these small switchers in this sort of operation would be to check with the engineer part of the time the correctness of the engineer's observation of the signal or its relay. Also, once in a while a situation would arise in which the engineer could not see a ground crew man, either the signaler or the relayer, and a fireman from his station could and thus would be in a position to relay it on to the engineer without the latter having to stop the locomotive until he could see a ground crew man who could give or relay the signal to him directly. The first of these possible duties certainly would not justify his presence on such slow-moving operations under the conditions existing where they occur. If the engineer did not correctly understand and obey the signal, the yard men would realize the fact and give additional signals. Nor is the second function sufficient to justify any additional man. When a situation develops where it would be possible to perform it, the basic "stop" rule comes into effect and gives the ground crew time to station themselves so as to relay the signal directly to the engineer. Again, the possible extra time required for this seldom-occurring opportunity [17] in such slow operations affords no justification for employing an additional man. Further, since the task is purely one of seeing and relaying a signal, it would appear that, were another man needed, he should be added to the yard crew. In contrast to a fireman who would have to remain fixed at one place in the cab and has no especial qualifications for relaying signals, such a man would be mobile and be free to move

[17] There was testimony before the Board that ground crews, on switchers carrying firemen, do not avail themselves of opportunities to signal to the fireman who, in turn, would then relay it to the engineer. Instead they move to where they can signal the engineer directly. Tr. 4772.

into positions better adapted for seeing and relaying signals, a task in which he is thoroughly experienced.

The Board's conclusion from the above is that there is no reason for eliminating the 90,000 exception which refers to the assignment of firemen (helpers) on locomotives operating in yard service

ISSUE NO. 3. RAIL MOTORCARS

The B. L. F. and E. proposal respecting rail motorcars is designed to require the assignment of a fireman to certain power which is excepted from the definition of what constitutes a locomotive to which a fireman must be assigned under existing section 4 of the contracts in the East and West and section 3 of the contract in the Southeast.[18] It would do two things:

1. It would eliminate from the present exception the 90,000 pounds limitation (*a*) as to existing rail motorcars installed before March 15, 1937, that are made more powerful,[19] and (*b*) as to all new rail motorcars installed after March 15, 1937.

2. It would alter the exception as to rail motorcars installed prior to March 15, 1937, in another respect. At present such rail motorcars which have not been made more powerful would fall within the exception even though they sometimes handle other cars. Further, such existing motorcars as have been made more powerful would still be within the exception unless the added power enabled them to pull more trailing units than they could with the power plant which were in them on March 15, 1937. The proposed rule would withdraw from the exception any rail motorcar that handled any other cars, regardless of its weight; and similarly, any existing rail motorcar that was made more powerful, regardless of whether the added power would enable it to handle more cars.

One important thing to note is that the proposal does not eliminate from the exception all existing rail motorcars. If they have not been made more powerful since March 15, 1937, and if they handle no other cars, they may still be operated without a fireman. They may run as fast as they can be run anywhere the carrier wishes to use them, on the main line or elsewhere, regardless of whether they operate under train

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[18] For the exact contract changes sought by the B. L. F. and E. to effectuate its proposal as respects rail motorcars, see material in the first section of this report relating to the issues in dispute.

The 90,000-pound line of demarcation which the brotherhood seeks to eliminate in this type of power as well as in yard switchers, is discussed at the beginning of the preceding section dealing with the yard Diesel issue.

[19] There is also a change in the language as to how they may not be made more powerful without being considered a "locomotive" within the meaning of proposed sec. 4 and existing sec. 4 in the East and secs. 3 in the West and Southeast. The proposed language is "by any method." The existing provisions read, "by alteration, renewal, replacement, or any other method." This change seems to make no change in substance.

orders only, and regardless of whether they do or do not always operate under block signal protection.

The chief argument advised in the B. L. F. and E. brief for demand that a fireman be placed on rail motorcars is that a fireman is required on "practically all of the motive power in use on our railroads" and therefore "it follows that the motorcar should not be excepted from like manpower requirements." [20] If this reason does not apply to these existing rail motorcars, as the failure to ask that firemen be put on them clearly implies, it is difficult to see why it should apply to the ones that are now asked to be excluded from the exception unless some specific and substantial reason for the distinction is offered.

The inconsistency of the B. L. F. and E. position on this issue was noted by the brotherhood's counsel, and counsel did not attempt to justify the exclusion.[21]

Such an admission, with no explanation offered as to the reason for the inconsistency, can scarcely be regarded as an argument in favor of a demand that is alleged to be grounded upon the need to end an inconsistency. This is especially true when the inconsistency is in a fresh demand which the parties were perfectly free to frame as they wish. Such an inconsistency is different from those of which a party can properly say that they were not of his making or choosing but came to him as a legacy of the past.

Even if the matter of inconsistency is not pressed, there are difficulties in the argument. The reasoning is that because firemen are on other types of power they should also be on this one. Whether that is true obviously depends upon why they are on the other types and whether those same reasons are present in this type. It is stated that safety is the reason in the case of the other types, ind the implication is that safety is the one and only reason that justifies and requires them to be there. And when safety is talked about here it can only refer to the watching duties performed. Otherwise it would miss the mark in the case of the rail motorcar. However, in other issues in this same case the brotherhood has laid great stress upon the fact that there was a job to be done other than watching that justified the hiring of a fireman.

Indeed, in all other forms of motive power where a fireman is employed, with the single exception of the high-speed, through-passenger trains, the firemen have other duties than that of a lookout to justify their hiring. On a rail motor car there is nothing else for

[20] B. L. F. and E. brief, p. 30.
[21] B. L. F. and E. brief, p. 29.

him to do, and most of these cars are so constructed that there is no place for him to do any work.

Looked at in this way, it would seem that the question here involved really is this: Do requirements of safety demand that an additional man, a fireman, be hired to do nothing except keep a lookout on this type of power? Or, to spell it out a little more: Does safety demand that such a man be hired when these rail motor cars in question pull any other cars or are made more powerful in any way than they were on March 15, 1937, but does not require his services when they do not pull any cars and have not been made more powerful in any way since March 15, 1937?

To answer the question just propounded requires more than the mere assertion that a fireman is employed on most other types of motive power, and that in some aspects of their operation these motor cars are little different from other small locomotives that do require a fireman. After all, the present rule was entered into by agreement. Therefore, there should be a showing of some change in conditions or other understandable reasons for changing an existing rule in order for the Board to be justified in recommending it be altered.

In examining possible reasons for the proposed rule the Board was impressed by the emphasis in the proposal on the pulling of other cars. Just precisely why the fact that they do not pull other cars should affect the question was never made entirely clear. It obviously has little or no relevancy to the matter of safety which is stressed by brotherhood counsel as the chief reason for the demand. It may be connected, although not so stated, with some idea of an employee, in this case the fireman, sharing in the productivity of the particular machinery on which he works; or, in this case, upon which he seeks to be employed. If this is the point intended, it is disposed of elsewhere in this report. Possibly it was based upon the idea that there was danger of their being used on a wide scale as a substitute for other power with a consequent loss of jobs for firemen. If so, no proof was presented to establish any foundation for such a fear or claim. As is noted later, the use of such cars instead of increasing is diminishing. With their present power they are incapable of pulling many cars and if they are made more powerful they fall outside of the exception.

In probing further into the possible merits of the proposal the following matters seem relevant. Rail motor cars have been operated successfully without a fireman since their first use in 1905. There never has been anything on these cars for a fireman to do that cannot be and is not done by the engineer.[22] That includes the job of look-

[22] Tr. 4263–4, 4950–5.

out, for the visibility is excellent. In most of them there is, as was stated above, no place in the front end for the fireman to sit. Contrary to the allegations of the organization, they do not operate at high speeds.[23] They make relatively short runs with many stops.[24] They are used for the most part on secondary and branch lines and on a few of the lighter runs on main lines.[25] Both the ownership and use of such cars is steadily declining. The peak was reached in 1931, and in December 1948 the railroads had in service a total of only 293—considerably fewer than half of the number owned 17 years earlier.[26] They have always handled trailing cars; certainly they did so prior to 1937, the date of the present agreement.[27] However, the number of trailing cars is small, only 9 percent of them handle more than two trailing cars, and 25 percent are operated as a single unit.[28] There has been no change in the use, either in character or volume, of rail motor cars since the existing agreement was entered into in 1937 except by way of decrease.[29]

In the above review of the problem, no reasons of weight were found which would justify a finding in favor of changing the rule which was entered into by agreement in 1937 for reasons that, so far as the evidence before us goes, were thought to be good.[30]

There might possibly have been some merit in a proposal that was directed to preventing the use of these rail motor cars in certain types of runs. That, however, is pure speculation because no such proposal is before us and the inquiry and evidence was not directed to such an issue. On the issue presented, the Board finds no merit in the organization's request.

ISSUE NO. 4. THE ELECTRIC HELPER DIFFERENTIAL

By its notices of intended changes in existing agreements, the Brotherhood of Locomotive Firemen and Enginemen propose to "Eliminate all existing * * * electric * * * differentials where lower than coal burning rates."

This demand, paraphrased, poses the question: Shall firemen assigned to electric locomotives be paid wages applicable to firemen assigned to coal-burning, steam locomotives? [31]

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[23] Tr. 4944. Average speed is under 40 miles per hour.
[24] Carriers' exhibit 35.
[25] Tr. 4266.
[26] Carriers' brief, p. 46.
[27] Tr. 4942–3, 4266–7.
[28] Carriers' exhibit 35, p. 2.
[29] Carriers' exhibits 18, p. 14; 35, p. 2, tr. 3185–7.
[30] See note 2 on first page of discussion of the yard Diesel issue.
[31] For the exact contract clauses sought by the B. L. F. and E. to effectuate its proposal as respects the electric helper differential, see material in the first section of this report relating to the issues in dispute.

Electric operation in railroad service had its inception about 1895. Its earliest development was largely in tunnel and terminal services, although its desirability in commuter use became apparent at an early date, and carriers having considerable commuter service soon adapted their main lines to electric power. This is especially true with respect to the New York Central and the New Haven lines.

Specific provision for the employment of firemen in electric service is first found in an agreement negotiated in November 1906 between the B. L. F. and E. on the one hand and the New York Central and the New Haven Railroads on the other. That agreement provided that firemen of the two carriers would "take position as helper on the electric engines of the respective companies." The rate of pay for all firemen on electric locomotives was fixed at the passenger rate of pay for a hundred-mile day, although two higher pay rates in freight service were then provided for by existing current agreements.

Significant also is the provision contained in the 1906 agreement stating that at the end of 6 months the companies would be permitted to show that opportunities to make mileage on the electric engine were more advantageous than the same number of hours on steam locomotives. In such an event, the firemen were to grant an increase in miles per day, not to exceed 120 miles for constructive service for the day. Inherent in such a plan is recognition by the parties that the increased availability of the electric locomotive over steam was sufficient to make such a difference in the possible earnings of the employees in electric service as to justify provision for adjustment of basic rates through provision of added constructive mileage in favor of the carriers. Otherwise the firemen (helpers) employed on electric locomotives would have earned more money in the same time, or the same amount of money in less time. The so-called electric differential can properly be looked upon as a differential, therefore, if accompanying consideration is given to various modifying factors.

At this time, in the early 1900's, the carriers mentioned above accounted for a very large percentage of the total electric service employed by railroads in the entire country. The New Haven had much more main line electric service than all other carriers combined. Lower rates of pay were fixed for firemen in electric service through agreements made by that carrier in 1907 and in 1910. The agreements specifically provided that "two lower rates of pay fixed herein shall apply to firemen on electric locomotives in passenger and freight service respectively. Existence of a separate rate for freight service in the several agreements would indicate that such service has been in use, in some degree, practically as long as passenger service.

In the 1912 and 1913 Eastern wage movement arbitration, wages on electric locomotives were again dealt with.[32] The single rate basis of pay was continued, except that separate rates were provided for freight and passenger service. More significant, however, is the fact that the rates fixed by that arbitration were equivalent to the lowest or second lowest rates paid in steam service. This schedule of rates, as adopted by the Arbitration Board, was the proposal of the brotherhood. From the record of the proceedings in that case, it is clear that the organization based its offer for lower rates in electric service upon job content when compared to steam service.

Electric wage rates were again considered in 1915. This was done as part of a concerted movement on behalf of the firemen and the engineers jointly in the Western territory. The joint proposal of the two brotherhoods in that proceeding was to the effect that engineers and firemen in steam service should be granted wage increases based upon weight on drivers, while engineers (motormen) and firemen (helpers) on electric locomotives were to be paid on a tractive-power basis. Although, under the proposal, the engineer (motorman) rates were graded in 50,000-pound brackets, no such gradations were proposed for firemen's rates. For firemen, a flat rate in the several branches of electric service was proposed, regardless of tractive power of the locomotive. Such proposal is added recognition on the part of the brotherhood that work on an electric locomotive is lighter than that on a steam locomotive.

It may also be noted that the agreements and understandings as to electric operations on individual roads, at that time, called for added miles for a basic day for both engineers (motormen) and firemen (helpers), indicating further agreement of the parties with respect to the ability of the electric locomotive to earn a day's mileage sooner than the steam locomotive.

The Western Arbitration Award, made pursuant to the proposal of the brotherhoods, fixed the rates of pay for firemen (helpers) in electric without gradation at the lowest rates provided for firemen in steam service in both passenger and freight services. But the hours

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[32] Great stress was placed by one brotherhood witness upon the claim that, in 1913, electric operations were predominantly tunnel and terminal in character. Employees' exhibit No. 17 establishes the contrary to be the fact. In terms of locomotives miles, admittedly the important criterion for the matter in issue, road operations constituted then, as now, the dominant operation. Tr. 966–970. Even if it be assumed that the only road operation in 1913 was that of the New Haven, the total number of road locomotive miles of combined freight and passenger operation on that road in 1913 was 2,195,022 as compared with a total of 1,812,267 miles of combined freight and passenger locomotive miles on all other roads combined. Switching locomotive miles are excluded from these figures because, although in employees' exhibit No. 17 they were included in the summary of tunnel and terminal operations in 1913, they were excluded from the similar summary for 1947.

of service and the mileage provisions with respect to a day's work under other freight and passenger service did not cover firemen (helpers) in electric service. The individual contracts on the various roads, as to those provisions, was to continue in effect.

This award was the first made in the Western region with respect to electric pay rates. The limits there fixed, along with the then existing Eastern agreements, constituted recognition, on a national basis, of the existence of a differential for electric firemen (helpers). This is true even though the extent of the operation in the West was then small and experience with it limited.

By operation of supplement No. 15, effective January 1, 1919, to general order No. 27 of the United States Railroad Administration the pay rates of firemen (helpers) on electric locomotives were graduated in accordance with weight on drivers. The gradations were fewer and the rates in every gradation lower in electric service than rates for firemen in steam service.

In the matter of wages, the electric problem was next considered by the Board of Railroad Wages and Working Conditions in its recommendation No. 133 (a), of November 8, 1919, to the Director General of Railroads. This recommendation was made as the result of the employees' request for the elimination of the differential for firemen (helpers) set up by supplement No. 15, above mentioned. The recommendation recites:

> No arduous duties whatever are involved in the position of firemen or helpers upon oil-burning or electrically propelled locomotives. Moreover, less skill is really required than to properly stoke a coal-burning engine. We do not believe there is justification for the elimination of existing differentials.

Recognition of lower rates of pay for firemen (helpers) on electric locomotives is also found in supplement No. 24 to general order 27, issued December 15, 1919, by the United States Railroad Administration.

Elimination of the electric helper differential was undertaken by the firemen's organization in the proceedings of the United States Railway Labor Board shortly after that Board's creation in 1920. The effort was not successful. Upon the contrary, that Board did shortly thereafter award a flat wage increase regardless of type of power. Being a flat increase, the electric differential was, accordingly, continued.

By its decision No. 147, the United States Railroad Labor Board, at the request of the carriers, decreased, in part, wage rates of pay. Again, the reduction was upon a flat basis, having the effect of further continuing the electric differential.

Since decision No. 147, there have been 11 general wage movements under which rates of pay of firemen have been adjusted upward. In all of those movements, the electric fireman (helper) rates were adjusted with the differential remaining relatively the same. Of these general increases, the most recent occurred as late as October 16, 1948, considerably more than a year following institution of the present proceedings.

The electric helper differential was an issue presented to the 1943 Diesel Board. As a consequence of recommendations made by that Board, the firemen obtained certain increased pay not shared by the other operating crafts. Even so, that Board rejected the demand of the firemen as respects electric rates and declined to recommend elimination of the differential.[33] There were some changes in the degree of relationship of the differential that occurred in contracts negotiated subsequent to the report of the 1943 Board.

This long differential recognition made by the various governmental and other agencies, and consistently negotiated into the contracts by the parties when dealing with the subject over the entire history of the use of firemen (helpers) in electric service, conclusively establishes the existence of the differential, past and present, by intent rather than by accident.

Notwithstanding the long existence of the electric differential, the brotherhood assigns eight reasons why it is currently inequitable, and which illustrate that conditions have materially changed since the inauguration of the differential. We have examined these arguments most carefully. They fall, generally, into three classifications: (1) productivity, (2) responsibility, and (3) skill.

Touching upon the organization's reliance on productivity to support its demand, we observe that in response to an inquiry from the Board[34] the transportation economist, appearing on behalf of the brotherhood, stated that the productivity factor of an industry in relation to wages is measured by the industry as a whole, rather than in terms of particular pieces of equipment approximate to the creation of productivity. Accepting this statement as a correct one, which in general it is,[35] the argument that the increased productivity of an

[33] The brotherhood argued vigorously that the 1943 Emergency Board gave inadequate consideration to the electric differential problem and that its conclusions cannot be supported. Without going into the validity of such a contention, this Board has reexamined the entire issue de novo.

[34] Tr. 1849–1856.

[35] Productivity may be related closely to wages received, and as respects particular equipment, under a piece-work system of wage payment.

electric locomotive supports a demand for increased wages or for a certain wage rate on this particular equipment, fails utterly.[36]

Even if the claim were considered upon the basis of the increased productivity of the electric locomotive itself, or as compared to other locomotives since the inception of the differential, the contention is not sustained, since the record shows that, except for changes in gear ratio, to make locomotives available for both freight and passenger service, and other minor alterations, such as substitution of spoke wheels by solid wheels, there has been no change in the hauling capacity of electric engines now in use since long before the report of the 1943 Board. The very large electrics used in freight service by carriers engaged in coal hauls through the mountains have been in use for quite a number of years. Such electric power as contemplated or recently placed in this class of service does not alter the situation since electric locomotives of appreciably like capacity have long been so employed.

Furthermore, it could be argued with much support that the availability of the electric locomotive enables it to compensate for lower basic rates by running more miles in fewer hours, thus making possible a higher per hour rate in electric service than in steam.

The claim of equal responsibility on electric and steam locomotives must also fail for want of proof. The fireman (helper) on an electric locomotive does not have the same responsibility for observance of signals as in steam service. At least from personal observation by this Board, the fireman (helper) on a passenger electric is quite frequently not present to observe and call signals. He spends a substantial proportion of his time tending the boiler to supply hot water to the passenger coaches. This boiler is located in one end of the locomotive and is, therefore, mathematically at the end opposite that of the engineer half of the time. Moreover, the record of injuries suffered by firemen (helpers) in discharging the responsibilities of their job is significantly lower than that in steam service, and this is true, whether viewed from the standpoint of dangerous equipment or from that of traffic density and difficult terrain.

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[36] Employees' exhibits 18 to 21 were mainly directed to establishing that the productivity of straight electric locomotives today is greater than in 1913, when, it is claimed, the differential was established. Even if productivity were a proper factor to take into account in resolving this issue, which it is not, and even if increased productivity of electrics were established, there is another defect in this evidence. The important thing to consider in determining whether the differential between electric and steam should be abolished is whether the relationship between the two types of power that gave rise to the differential is now altered. This is true as to productivity as well as any other factor that did, or is claimed to have played a part in its establishment. No evidence was submitted that there was not a rise in productivity of steam power between 1913 and the present comparable to that in electrics. So far as the evidence submitted to the Board in these exhibits or elsewhere goes, the relationship between steam and electrics as to this factor, as well as others, has remained constant. Tr. 1868–1878, especially 1874.

The limited responsibility required in the discharge of his normal duties, the absence of any appreciably arduous chores,[37] and the protection afforded him from the rigors of the weather is a refutation of the required need of any skill on the part of the fireman (helper) comparable to that exacted of the other members of the operating crew.

Examined and appraised upon a basis of uninterrupted history of the differential in the wage scale of firemen (helpers) in electric service, and upon a studied evaluation of the assigned reasons of the brotherhood, we find no cogent nor persuasive reason for recommending a change in such long-recognized and presently existing differential.

ISSUE NO. 5. OIL-BURNER DIFFERENTIAL

Another demand of the brotherhood is directed to eliminating the differential existing between rates of pay of firemen on oil-fired steam locomotives as compared with rates of pay of firemen on coal-fired steam locomotives.[38] Under present schedules effective in the Western territory, the basic rate for oil-burning locomotives is $0.04 less than steam locomotives of comparable weight on drivers.[39] This differential is applicable only in the West but 97.74 percent of all oil-burning locomotives are operated in that territory.[40] The brotherhood seek to eliminate this differential which has been uninterruptedly recognized for many years.

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[37] W. S. Carter, president of the B. L. F. and E. in 1912, in oral argument during the Eastern Firemen's Arbitration, stated: "We never, in fixing the rate, gave a thought to physical exertion. * * * we recognized that tbe factor of physical exertion was absent." Carriers' exhibit 41, p. 150. Again, in reporting his own personal observation of what the fireman, who, "the fact is, * * * is a helper and assistant," did on a trip he made on an electric locomotive, President Carter said that, in addition to calling signals, "he reached up and pulled the bell once in a while." I don't know whether you asked him or not, but I asked him, "Do you ever have much work to do back in the engine?" and he says, "No, if anything goes wrong, I would have to; but it does not often go wrong." Idem., p. 153. The Board's own personal observation, made on a trip on an electric passenger locomotive running between New York and New Haven on August 22, 1949, is that the same is true today, so far as engine-room machinery is concerned. Indeed, if anything should go wrong, there is little or nothing that he could do aobut it. On coal steam locomotives, whether hand-fired or stoke-fired, there is obviously so much more to be done requiring skill and physical exertion that the substantial difference between the two types of power as to job content need not be labored. There are still 12,282 hand-fired steam engines in service out of a total of 38,822, according to the figures submitted by the brotherhood. B. L. F. and E. brief, p. 7 note.

[38] For a statement of the exact contract charges requested by the B. L. F. and E. to effectuate its proposal for the elimination of the oil-burning differential see the first part of this report in which the issues are set forth.

[39] The differential applies to all passenger service and to locomotives used in freight service weighing 215,000 pounds on drivers or less.

[40] In the operation of a very few oil-burning locomotives in the East and Southeast, schedule rates equivalent to steam are paid.

HISTORY OF THE OIL-BURNER DIFFERENTIAL

The record shows that oil was first used as a fuel for steam locomotives in 1896. Use of oil was induced because of its faculty for providing a more constant maximum boiler pressure than the hand-fired coal locomotive. As a result of the use of oil, faster time over mountain grades was possible, and the hours of service of operating crews could be shortened. The physical labor of the firemen was also lessened on oil-burning locomotives.

As early as 1901, the Southern Pacific Railroad had 149 locomotives operating with oil as fuel. With the discovery of the Beaumont oil field in 1901, additional Southwestern carriers converted a part of their coal-burning locomotives to oil-burners. At this time, rates of pay were in no sense standardized. Rates varied, not only between railroads, but between divisions of each railroad. There were different rates of pay for hand-fired, wood-burning locomotives, for coal-burning locomotives and for oil-burning locomotives in the region where oil burners were first put into use.

The first known agreement, recognizing a fixed oil-burning differential was negotiated between the firemen's brotherhood and the Kansas City Southern Railroad as of March 1, 1906. This differential applied to all engine services and was, apparently, not affected by the so-called Western 1907 wage agreement.

As a result of the 1910 Western Arbitration Award, made in determination of requests of the firemen's brotherhood, the oil-burning differential was made effective for the entire Western region. In the proceedings incident to that arbitration, the work required in firing an oil-burning locomotive was compared with the work necessary in firing a coal-burning locomotive. The wage increase granted by that award is significant. An increase of 15 cents per hundred miles or less was directed for all classes of freight service, except Mallet type engines, but an additional 15-cent increase was directed for coal-burning engines.

No specific reason was assigned by the Arbitration Board for directing the additional 15-cent increase in the pay of firemen on coal-burning locomotives. In view of the discussion had before the 1915 Arbitration Board with respect to the more arduous labor required on coal-burning locomotives as compared with oil-burning locomotives, we believe it is entirely reasonable to conclude that the added work demanded of the fireman on coal-burner types formed the basis for the differential thus created. No other explanation can logically be given. Thus, the oil-burning differential was evidently based upon

the principle that added wages should be paid for harder work and lesser wages for relatively easier work.[41]

In 1915 the brotherhood made an attempt to eliminate the differential, in another Western arbitration, in which an increase of oil rates to the coal rate level was sought. The award in that proceeding not only maintained an oil differential in freight service but extended such a differential to passenger service on a graduated basis predicated upon weight on drivers. A further change in the oil differential was made by limiting its applicability to engines weighing less than 215,000 pounds on drivers.

The relative physical exactions demanded of firemen on oil-burning locomotives as compared to coal-burning locomotives was before the 1915 Arbitration Board just as it was before the 1910 Board. Since the result of the 1915 award was the same as that of 1910 with respect to a continuance of the oil differential, this Board draws the conclusion that it was the purpose of the 1915 Board to sustain the principle of higher pay for the greater physical labor involved in firing on coal-burning locomotives.

The pay differential principle as applied to oil-burning locomotives, which had been established on a regional basis by the 1910 Western arbitration and continued by the 1915 Western arbitration, was confirmed by general order No. 27 of the Director General of Railroads issued May 25, 1918. That order fixed rates of pay lower for oil-burning locomotives than for coal burners. The difference between the basic rates for the two types of power was increased in passenger service to as high as 20 cents for locomotives of 140,000 pounds on drivers or over, and in freight service by a like amount.

Lesser rates for oil as compared with coal were provided in the wage rates included in supplement No. 15 to general order No. 27, which was issued on April 10, 1919. This supplement to general order No. 27 set the oil differential at 16 cents for both freight and passenger services except for the 80,000 to 100,000 weight group, which was set at an 8-cent lower rate for oil burners.

In 1919 the oil-differential question was again dealt with—this time by the Board of Railroad Wages and Working Conditions. Proceedings were initiated in that year by the brotherhood through a letter, dated August 23, 1919, from it to the Director General of Railroads.

[41] In present proceedings before this Board, the principle was discussed in terms of "job-content differences." As respects the oil-burner differential in particular, but also more or less as a general proposition, the B. L. F. and E. witnesses suggested that such a factor should no longer be taken into account in wage determination in the railroad industry. The carriers argued to the contrary. In essence, however, the parties switched sides in this matter of applicable principle in setting forth their views on the carriers' demand for the elimination of certain differentials higher than standard, notably the so-called mountain and desert differential.

After hearings, carrier representatives and employee representatives made separate reports to the Director General. No change in the existing differential was made by reason of the hearings.

About this time, a number of general wage changes were made but, in each case, without any change in the oil-burning differential. Supplement No. 24 to general order No. 27 was issued on December 19, 1919, to supersede supplement No. 15 and, while it increased the basic rates for firemen, the same oil differential established by supplement No. 15 was retained. The United States Railroad Labor Board, on July 20, 1920, by its decision No. 2, applied horizontal increases to the then existing wage rates, thus continuing the established differential between oil- and coal-burning locomotives. Decision No. 147, issued by the United States Railroad Labor Board to be effective on July 1, 1921, reduced the basic rates of pay of firemen in both passenger and freight service but did not disturb the established oil differential since the decrease was applicable in equal amounts to oil and coal burners.

By settlement reached between the firemen's brotherhood and the conference committee of managers for the Western railroads, increases in rates of pay in passenger and freight services were agreed to as of September 1, 1924. Again, the increases were applied to the existing wage rates without disturbing the oil differential.

Wage and proposed rules changes demanded by the firemen in 1927 were submitted to a Board of Arbitration. During the hearings before the 1927 Board, the existence of an oil differential was expressly called to the attention of the president of the B. L. F. and E. when he was specifically asked if abolition of the differential was asked for by the organization. The president answered: "No; we have not asked for its abolishment. We have recognized it and gone along with it * * *."[42] Brotherhood witnesses have suggested in the present proceedings that one of the factors resulting in a continuance of the oil differential, for many years and through a number of wage adjustments, has been the joint action by several of the brotherhoods in most of the wage movements. Under such circumstances, it is stated, the oil differential problem has been left unattended because it was of concern to but one craft. In this connection, it may be noted that no other employees' organization was before the 1927 Board to interfere with any desire of the B. L. F. and E. to press a demand for dissolution of the differential. The award of the Board resulted in increased wages in passenger, freight, and yard services, but the oil differential was left in effect.

[42] Tr. 5018.

Some years later, however, the firemen did attempt to eliminate the oil differential in connection with a proposed table of graduated rates of pay on the basis of over-all weights of locomotives to be substituted for rates of pay based on weight on drivers. A single wage scale was proposed for all types of locomotives. This demand, though otherwise somewhat amended, was dealt with at considerable length by the so-called Diesel Emergency Board which reported May 21, 1943.

After a rather full review of the history of the oil differential, together with the reasons assigned by the B. L. F. and E. for its abandonment and by the carriers for its retention—which incidentally, are substantially the same as here urged—the Board found that the differential was originally "based upon substantial grounds and that those grounds have not changed." This statement of the 1943 Board has been criticized by the brotherhood in the present proceeding. It is said to be so indefinite and general as to render it wholly meaningless as a reason for retaining the differential. A careful reading of the report of the 1943 Board will show, however, that the statement referred to by the brotherhood was enlarged upon. The work to be performed in firing an oil-burning locomotive was compared with that of firing a coal-burner. The Board found that "the labor required on such (coal-fired) locomotives is far in excess of the labor required on oil-burning or electric locomotives." It also found the additional duties, such as signal watching, were common to firemen on both types as apprentices for the position of engineer on all classes of engines. The 1943 investigation of the oil-burner differential was concluded by this statement: "The Board finds, therefore, no adequate reason for their elimination."

Following the report of the 1943 Board, negotiations for a new Agreement were undertaken by the B. L. F. and E. and the carriers upon a national basis. They failed. Negotiations were then renewed upon a regional basis. The Brotherhood again urged elimination of the oil differential to the Western carriers' conference committee. It will be recalled that the oil differential is applicable only in the West where 97½ percent of all the oil-burning locomotives are used. Through bargaining between the parties, the oil differential was retained as a differential in the agreement that followed, but its amount was reduced by one-half.

A general wage and rules change movement was inaugurated in July 1945 and the B. L. F. and E. was a party to this movement. Elimination of the oil differential was again proposed by the brotherhood. In handling the combined proposals, the wage dispute was processed first by the organizations, and the rules proposals, including the re-

quest for abolishment of oil-burner differential, were withdrawn. New notices for changes in working rules, however, were served by the firemen's brotherhood, along with the four other operating railroad organizations, on June 20, 1947. This notice was followed, September 30, 1947, with a demand for further wage increases.

The firemen's proposed rule 1, served in the rules notice of June 20, 1947, provided that basic daily wage rates in Western territory should be no less than rates in effect on railroads in the Eastern and Southeastern territories.

This demand, along with others of the firemen's organization, as well as demands of the engineers' and switchmen's organizations, was carried before an emergency board. In proceedings before that board, the B. L. F. and E. case for elimination of the oil differential was based largely upon the fact that no such differential exists in the Eastern and Southeastern regions. The board, in its report of March 27, 1948, remarked that such contention did not establish the differential as being either warranted or unwarranted; the fact that the differential did not exist on a handful of locomotives in one region constituted no controlling argument for its discontinuance on a large number in another. The same observation, in effect, was made with respect to the absence of an oil differential in yard service in the West, and in freight service on locomotives weighing over 215,000 pounds on drivers. The board's recommendation was "that the organization's proposed rule 1 be withdrawn."

It is worthy of notice that the 1948 Emergency Board also had before it proposed rules which would fix the minimum rates for engineers and firemen in all classes of service paying freight rates at the rates applicable to locomotives weighing 250,000 pounds on drivers. An adoption of that proposal would have resulted in the automatic elimination of the oil differential in freight service. Thus, the question of that differential was passed upon a second time by the 1948 board when it declined to recommend favorably on the proposal.

THE ISSUE BEFORE THIS BOARD

In the present proceeding, the B. L. F. and E. requests the elimination of a differential which has been recognized to be sound by governmental agencies and arbitration boards, and which has also been agreed upon by the parties, over a long period of years and through a long succession of wage changes. It is a Western problem now as it has always been.[43] Because of the halving of the oil differential

[43] As of December 31, 1948, there were 6,117 oil-burning locomotives in the United States of which nearly 98 percent were in use in the Western district.

by agreement of the parties in 1943, the amount of the differential today is relatively small.

The issue before us, then, is really whether, in the form of a wage-rate difference there should be any recognition at all—even a relatively slight recognition—of lesser work involved in the firing of oil-burning locomotives as compared to coal-burning locomotives.[44] It is of moment to emphasize that the present differential is relatively small. This is significant in view of the fact that the oil rates are below the standard rates which apply equally to hand-fired coal-buring locomotives, stoker-fired coal locomotives, and to Diesel-electric locomotives. A comparison between the fireman's task on oil-burning locomotives and each of the general types on which standard rates are paid gives different results. It seems evident, for example, that the oil job involves substantially less work than on hand-fired coal locomotives but is much more nearly comparable to firing on stoker-fired coal locomotives.

The brotherhood's request before us is that oil rates be equalized with coal-burning rates of pay. That directs a comparison of the job on oil burners with the job on both the hand-fired and the stoker-fired coal-burning locomotives.

To support its demand, the brotherhood asserts the presence of three basic elements common to both that are equally present in oil and coal firing services, namely, skill, productivity, and hazard.

Certainly, an argument of job equality as to effort expended cannot be made as respects hand-fired, coal-burning locomotives. Physical labor is unquestionably not comparable, and the considerable skill required in properly distributing the fuel in the firebox of a hand-fired coal burner is wholly unnecessary in the case of oil burners. Such considerations are pertinent to a lesser degree in a comparison as between stoker-fired coal locomotives and oil-burning locomotives. But, even here there is a difference. The stoker is subject to clogging by foreign articles that require attention to such an extent as to necessitate hand-firing at times. Also, the responsibility for seeing that a supply of coal is readily available to the stoker screw; the keeping the firebox clear of clinkers, and other like chores common to coal burners, are not present in oil-firing. In our opinion, however, there is but a relatively small difference between the two jobs under scrutiny. However, there is only a slight differential in basic wage rates that is in dispute.

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[44] No particular claim was made that elimination of the oil differential was called for by the payment of standard rates on Diesel-electrics. (See B. L. F. and E. brief, p. 15.) For a complete statement of the organization's "theory" of the argument for elimination of the oil differential see B. L. F. and E. brief, p. 13.

No significant claim for increased productivity is advanced on behalf of the oil-burning locomotive, unless the brotherhood intended to include in the concept of increased productivity any use of the oil burner to provide more constant boiler pressure and to secure the advantages of lower fuel costs. It was specifically urged, however, that the oil-burner locomotives provide the same transportation service that a comparable coal burner does, and are thus equally productive, and that the fireman on the oil burner should, therefore, receive the same rate of pay.

It is necessary to this B. L. F. and E. argument for the organization to add that the same rate of pay should be effective regardless of any differences in job content. In this connection, we are impressed by the fact that a variation in job content between oil and coal burning locomotives, even as respects equally productive locomotives, has for many years been deemed an appropriate reason for a wage differential. There can be no denying the fact that differences of job content have been one—although only one—of the factors taken into account over many years of effort directed toward the building of a wage structure on an equitable and a rational basis.

We have been asked by the B. L. F. and E. to consider its claims for total elimination of the oil-burning differential in relation to its contention that job content variations have no significance to the determination of wages payable to members of its craft who are subject to assignment on all the various types of locomotives. Regardless of the merits of such a wage policy in general—which is followed in some industries—the fact of the matter is that such a broad argument used in reference to this particular problem could well have very broad implications in relation to a wage structure in some portions of which job content variations have long been recognized as a factor. In particular, numerous differentials above standard rates of various sorts might well be affected.

It seems to us that the oil-burning wage differential, based upon differences in job content which have been recognized over so many years, cannot now be eliminated by casual adoption of the notion that differences in job content will not be recognized in the railroad industry. We are convinced that there are differences in job content as between oil-burning and coal-burning locomotives not only because the parties themselves have recognized such differences for many years but also on the basis of our own observations. The need for less skill and the exactions of fewer responsibilities of firemen on oil-burning locomotives reduces the hazard of the job when compared to that of firemen on coal-burning locomotives in like proportions. We find no significant change in the industry, with respect to the oil differ-

ential, occurring since 1943, when the subject was fully considered, that indicates its abolishment. It is recommended that claim for such be withdrawn.

ISSUE NO. 6. SAVINGS CLAUSES AS TO HIGHER THAN STANDARD RATES OF PAY AND DIFFERENTIALS BASED UPON THEM

Under this general description [45] are grouped five separate subdivisions or subissues. Four of these subissues are raised by requests presented by the carriers. The other one is before the Board by reason of a demand by the organization.[46] The five subissues are as follows:

A. Mountain and Desert Differentials.
B. The 24-Inch Cylinder Differential.
C. Miscellaneous Higher than Standard Western Rates.
D. Miscellaneous Higher than Standard Southeastern Rates.
E. Savings Clause Section 5 (a).

The subissues are taken up in order.

A. MOUNTAIN AND DESERT DIFFERENTIALS

Included in the notices served by the Western carriers on the B. L. F. and E. is one that, as paraphrased by the carriers, poses the inquiry: Shall higher than standard rates paid firemen and engineers in the Western territory as a result of allowances made for unfavorable working conditions and the terrain traversed be reduced to standard rates?

Higher pay in mountain and desert territory was established as long as 60 years ago as an inducement to get men to work out of sparsely settled districts, in recognition of the more exacting physical requirements in firing locomotives being operated in mountain and desert territories, and in recognition of the longer hours required for movements up mountain grades. Such conditions led to the necessity of premium pay as a compensation to the employees for the undersirable working conditions. Such pay was sometimes expressed in increased money rates, sometimes in constructive miles, and sometimes in both.

The practice then established is still in effect. The nature of these differentials is shown in tables, submitted by the carriers, containing the mountain and desert differentials being paid on eight Western roads.[47] Examination of these tables shows a great number of such rates of pay. These rates vary from railroad to railroad. They also vary as between divisions on the same railroad. Types of locomo-

[45] For the exact contract changes sought by the carriers and by the B. L. F. and E. to effectuate their proposals, see material in the first section of this report relating to issues in dispute.

[46] The demand relating to change in the language of secs. 5 (a) as they now read in all three regional agreements.

[47] Carriers' exhibit 36. See also carriers' exhibit 69 and tr. 4982–4984; 5101.

tive and the kind of fuel consumed frequently result in different rates. Various factors existing in local situations have also evidently entered into the bargaining of these many individualized rates.

The fact of the existence of mountain and desert differentials and the reasons for their establishment, are not questioned by either party. These do not comprise the difficulty that arises in considering the request for their elimination. The payment of various rates on the several roads, and on the different divisions of the roads, marks the local origin of mountain and desert differentials. Any intelligent recommendation with respect to them on a national basis is patently impossible without a separate examination of each higher than standard rate in order to determine whether or not the particular reason for the establishment of that individual rate still exists, or has been removed by changed conditions and altered circumstances.

It is not sufficient for the carriers to assert that higher than standard rates exist. There is no evidence before us to allow a determination about how much of the higher rate is required to afford the employee a standard basic wage under his present working conditions, and how much, if any, is in excess of that need, thus creating actual higher than standard, or bonus pay. Nor can it be determined whether or not any such bonus pay is inequitable.

No proof of this nature was offered. The carriers, other than for inconclusive and unpersuasive contention that speeds in mountain divisions were now equal to those in valley districts, limited themselves to assertions of the continued existence of the higher than standard rates, and to statements of the obvious fact of the growth of settlements, both in numbers and size, in the region affected.

In response to a question from the Board, a brotherhood witness stated that the higher than standard rates paid is now a divided factor; that some of it is to compensate for adverse working conditions, and some part represents a bonus over valley service. How much for each, and on how many of the various higher rates, is left to conjecture.[48]

Having recognized a legitimate ground for the establishment of these higher than standard rates at their inception, the burden is upon the carriers to show the subsequent removal of the cause for the differentials. Since carriers failed to discharge such burden, no basis exists to support the recommendation asked. None is made.

B. THE 24-INCH CYLINDER DIFFERENTIAL

A proposal of the Western carriers, covered by their notices served on the representatives of the organization, asks that, "All existing

[48] Tr. 5609.

rates of pay which are higher than standard rates of pay shall be reduced to standard rates of pay."

This proposal carries the requested elimination of the so-called 24-inch cylinder differential paid on certain Western roads.[49]

Prior to the first regional agreement negotiated, in 1907, between the Western carriers and the firemen's organization, there was no uniformity in pay rates as between railroads, and, in many cases, as between divisions of the same railroad. A majority of the wage schedules that existed at that time were based upon the size of the cylinders of the locomotive.

The 1907 agreement provided for a straight increase in pay upon a per diem basis for firemen in all freight services. It also provided for pay increases for firemen in passenger service, based upon certain cylinder diameters.

The next regional wage rate movement occurred in 1909–10. After the parties were unable to reach an agreement with respect to the firemen's demands, the matter was referred to an arbitration board. The amended and final proposition of the organization relating to rates of pay which was submitted to the carriers, and subsequently to the arbitration board, made separate requests for pay raises for passenger and freight service. The requested wage increase in passenger service was for a horizontal increase of 25 cents per 100 miles or less in all such service. The requested wage increase in freight service was for a flat increase of 40 cents per 100 miles or less, with the proviso that on simple engines having cylinders 24 inches or over in diameter, and on compound engines weighing 215,000 pounds or more on drivers, firemen should not receive less than $3.85 per 100 miles or less. The Board awarded the increases in the form asked by the firemen but reduced the amounts requested.

The 24-inch cylinder differential had its origin in the second, or paragraph (b) of that arbitration award. The association of a 24-inch cylinder and a compound locomotive weighing 215,000 pounds grew out of suggestions by organization representatives. It was considered by them that, where simple engines had cylinders 24 inches or over in diameter, they would about equal compound engines weighing 215,000 pounds on drivers. There were few such locomotives in use in the Western territory at that time, so that the effect of the provision was to fix a minimum rate of $3.75 for firemen assigned to such locomotives.

The negotiations between the parties and the proof offered before the arbitration board clearly indicate an attempt to provide suitable

[49] For the principal evidence presented by the carriers in support of this claim, see tr. 5517–5536.

pay for firemen assigned to the larger locomotives to compensate them for the labor required in firing them.

Notwithstanding the fact that the arbitration was upon a regional basis, the record before us does not disclose that any regional agreement was made between the carriers and the organization to put the award into effect. It appears that the individual carriers involved in the proceedings amended their separate schedules to include the provisions of the award.

There was further arbitration participated in by the B. L. F. and E. and the Western carriers in 1914–15. The award in that case based wage classifications entirely upon weight on drivers. It was believed that the weight-on-driver basis of pay was more scientifically correct, and it, consequently, more nearly compensated firemen for more work necessitated in firing larger locomotives. A minimum-rate-of-wages-per-day schedule, calculated upon such basis, was fixed by the award. It would appear from a reading of the schedule that it was the purpose of the Board to substitute this schedule for paragraph (b) of the 1910 award. However, at the end of the schedule appears: "existing rates of pay per day that are higher than the above minima are hereby awarded."

By reason of paragraph (b) of the 1910 award, the rates of pay of some firemen assigned to locomotives with cylinders 24 inches or over in diameter were higher than the rates of pay provided by the schedule award by the 1915 Board. This provision marked the beginning of the 24-inch differential. It has been preserved by various savings clauses in subsequent agreements.

The 1915 arbitration board nowhere undertook to explain why this small remnant of the old manner of fixing rates of pay was carried over upon the adoption of the new. The carriers maintain that it was prompted entirely by the fact that the parties did not wish the award to result in reducing the pay of any fireman then in service. This is, at least, a plausible explanation, and it lends some reason for the retention of this otherwise curious provision that is wholly foreign to the plan of the new schedule. Reason would dictate a doubt that it was ever intended that such provision would operate to create a permanent differential within itself.

Another remarkable feature of this differential lies in the fact that it now includes passenger as well as freight service within the scope of its operation. This resulted from an interpretation made by the Board shortly after release of its award. Although paragraph (a) of the award as proposed, and as made, related only to passenger service, and although paragraph (b), certainly on its face both in proposal and award, related only to freight service with the 24-inch

cylinder provision, when the Board interpreted its own award it held that paragraph (b) did, nevertheless, apply to both classes of service, thus holding that such paragraph controlled, not only its own provisions, but controlled the provisions of the previous paragraph as well.

This unexpected interpretation required a rewriting by the parties of agreements made in the belief that the 24-inch cylinder provisions covered only freight service. Only seven of the carriers ever negotiated contracts for payment of the 24-inch cylinder differential in passenger service, and but nine of them made agreements providing for the payment of such differential in freight service. What is more, of the nine carriers that pay the differential in freight service and the seven that pay it in passenger service, no more than four of the total number pays the differential in both freight and passenger service. This paragraph is a recitation of facts, not the ravellings of a riddle.

There are, in all, 773 locomotives involved in this 24-inch cylinder question; 660 of them are either stoker-fired or oil-burners. The remaining 93 are hand-fired—the total number to which the differential was apparently applicable when it, by operation of the exception put in the 1915 award, had its start. How many of this 93 are in freight service and how many in passenger service, how many are covered by contract requiring differential pay and how many are not, was not told the Board.

The amount of bargaining between the parties on individual, or regional, contracts that has gone on over the years is not shown by the record. Doubtless there has been much. The very small number of carriers paying the differential in either or both services is strong evidence of that fact.

Upon the fact of it, viewed from its origin, history and varying application, it would seem that, in all reason, this differential should be eliminted; yet, until each of these contracts providing for payment of it in either service is thoroughly examined in the full light of its bargaining history, no equitable recommendation looking towards its abolishment can possibly be made. No recommendation is made as respects this issue.

C. MISCELLANEOUS HIGHER THAN STANDARD WESTERN RATES

This subissue was withdrawn from consideration by the Board by action of the carriers.[50] In a statement accompanying its with-

[50] Tr. 5542.

drawal counsel for the carrier made it clear that the issue was not abandoned, but only deferred until a future time.[51]

D. MISCELLANEOUS HIGHER THAN STANDARD SOUTHEASTERN RATES

There are three miscellaneous higher than standard Southeastern rates that are sought to be eliminated by the carriers' proposals under this general issue.[52] They are:

1. The Southern Santa Fe engine differential.
2. The Cincinnati, New Orleans & Texas Pacific tunnel differential.
3. Higher than standard electric helper rates.

They will be taken up in order.

1. *The Southern Santa Fe engine differential.*—There is a differential of 21 cents per 100 miles paid by the Southern Railway Co. to firemen on Santa Fe engines. This differential originated in the same historical background in 1919 as did the 24-inch cylinder differential just discussed. No considerations have been presented to this Board as reasons why it should arrive at a different conclusion as to these Santa Fe engines than it did as to the 24-inch cylinder differential. The Board, therefore, finds that this, the carrier's proposal, should not apply to eliminate this differential.

2. *The Cincinnati, New Orleans & Texas Pacific tunnel differential.*—In 1907 a tunnel differential payable to firemen on both freight and passenger service was established by agreement between the Cincinnati, New Orleans & Texas Pacific Railway and the B. L. F. and E. applicable to only one division of the road.[53] Originally 10 cents per mile, it was increased to 13 cents in the application of general order No. 27 on January 1, 1918, and has been preserved in all the various wage increases agreed to since that time. Thus it has been in existence for 42 years.

As reasons for its abolition the carriers urge a variety of factors, mainly changes that have occurred since 1907. Agreed to originally because of hazards of operation and discomfort caused by smoke in tunnels, the latter being felt especially by firemen engaged in the arduous labor of hand-firing coal-burning steam locomotives, it is pointed out that these have been reduced. By 1919 the number of tunnels was cut down from 22 to 14, thus eliminating 3,825 feet of tunnel trackage; in 1931–32 clearances in the tunnels were increased, and, since 1919, smoke ducts have been applied to steam locomotives designed to eliminate smoke and gas in the engine cabs. These meas-

[51] Tr. 5544.
[52] See carriers' exhibit No. 65 and carriers' brief, pp. 9–13.
[53] Carriers' exhibit 65; carriers' brief, p. 11.

ures may have lessened hazards and discomforts, but they have not eliminated them.[54] Whether the reduction is sufficient to justify the abolition of the differential, the Board does not feel competent to decide without additional evidence of the amount of hazard and discomfort still remaining.

The change in types of motive power from small, hand-fired, coal-burning steam locomotives, which are no longer used, to large, stoker-fired, coal-burners and Diesels, the latter handling 45 percent of freight and 66 percent of passenger trains, is also advanced as a reason why the differential should be wiped out. There is no evidence before the Board that large stoker-fired locomotives produce less smoke going through tunnels than do small hand-fired ones. As laymen, it believes to the contrary. Hazards from smoke are as great or greater on the larger stoker-fired locomotives than on the small hand-fired ones. Although the effects of discomfort are felt more acutely by a fireman if he is engaged in the job of shoveling coal, nevertheless the discomfort to the fireman on stoker-fired locomotives is considerable. As to this, the Board relies to some extent on its own experience in riding one of the latest type stoker-fired steam locomotives which passed through a short tunnel or underpass. An argument might be persuasive that the differential should not be paid on Diesel locomotives, but that proposition is not before us. The proposal is to abolish it completely.

Nor does the fact that no differential is paid to engineers on the same run constitute sufficient evidence to warrant finding that the differential should be ended. The Board does not have before it the engineers' contract nor does it know what bargaining may have produced it. There may be some valid reason why it is not paid to them which would not apply to firemen.

In view of the foregoing, the Board concludes that, on the evidence before it, it would not be justified in finding that this differential should be abolished.

3. *Higher than standard electric helper rates on the Norfolk & Western Railway Co. and the Virginian Railway Co.*—In 1915, a single rate applicable to the LC–1 and LC–2 electric locomotives was established, although they have different weights on drivers. This rate is higher than either of the two standard rates which would apply if the usual weight on driver test for determining it were applied. In effect, therefore, there are two differentials. These differentials originated when

[54] It should be observed that when this differential was established, it represented a much greater percentage wage difference than it does at present. Hence, the reduction in the hazard and discomfort of the job may be considered as compensated for in the reduction of the ratio the differential bears to the present wage rate.

these locomotives were substituted for steam Mallet type locomotives, the rate fixed being identical with that of the Mallets they replaced.[55] This identical rate was established on the Virginian when electric engine operation was inaugurated on this property in 1925. There is apparent, therefore, no reason why the two should be treated differently.

It is argued that this differential ignores not only the job content of the firemen but also the standard basis of fixing wages, i. e., weights on drivers. Prima facie there is force to these contentions. Had they been presented during the hearing in a way that permitted the Board to ask questions of both sides to discover whether or not there might be countervailing considerations, the Board might have accepted them. However, they were presented during the last hours of the hearing along with a multitude of other matters in the form of a single small exhibit,[56] one page of which was devoted to this question. The Board had no opportunity to examine this exhibit until after the hearing was ended. It amounts, therefore, to an inadequate ex parte presentation of the request. Consequently, the Board makes no finding one way or the other on this issue.

E. CHANGES IN SAVINGS CLAUSE

The B. L. F. and E.'s proposal as to savings clauses,[57] would affect section 5 (a) of the existing contract clauses in the three regional agreements. No change is asked as to the language of sections 5 (b) and only a slight change in wording of 5 (c).[58] Those sections will not, therefore, be considered here. The controversy as respects section 5 (a), according to the Board's understanding, centers about the question of whether such a clause should be worded so as to preserve only existing rates that are higher than standard or whether it should preserve existing differentials in rates.

Changes in the saving clauses as proposed by the B. L. F. and E. in this case were suggested in contemplation of the possible elimination of oil and electric differentials. In amplifying the purposes of these proposed changes, the president of the B. L. F. and E. stated,[59]

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[55] Carriers' exhibit 65; carriers' brief, p. 12.

[56] Carriers' exhibit 65.

[57] For statement of the exact contract changes sought by the B. L. F. and E. to effect its proposal, see the first part of this report dealing with the issues in the case. The savings clause of each of the three regional agreements vary one from another. Since the notice of June 30, 1947, expresses an Organization desire for a single national agreement, the B. L. F. and E. requests a uniform Savings Clause applicable throughout the country.

[58] The Brotherhood proposal would make a slight change in section 5 (c). The words "change in any manner" would be substituted for the word "modify," making the last part of the clause read: "except as specifically provided herein, this agreement does not change in any manner or supersede existing agreements covering rates of pay, rules, and working conditions.

[59] Tr. 2743.

"The objective of savings clauses in railroad agreements is the protection and preservation for individual properties, during national movements, of local advantages achieved during prior local collective bargaining negotiations. Briefly, our * * * proposal is that special local agreements, written into contracts on individual properties to meet local conditions, and almost always obtained through sacrifices on a give and take basis, shall not be surrendered in this national movement." Mr. Robertson said further,[60] that "These local agreements * * * usually take the form of according employees rates of pay higher than standard, although they may, on occasion, be expressed in terms other than higher rates of pay." And the principal local agreements, in mind, were the mountain and desert differentials.

In the employees' brief,[61] it is noted that "* * * the request for elimination of the differentials and the proposed savings clause must be read together." The purpose of the proposed savings clause, in relation to the differential-elimination request, is carefully spelled out, as follows:[62] "all oil and electric rates which are less than standard coal rates shall be raised to standard, and *. * * such rates as are higher shall not be reduced" but "in instances where a differential presently exists between oil and electric rates on the one hand and a higher than standard coal rate on the other, the brotherhood would expect to invoke paragraph (b) of the savings clause, which is advanced to protect mountain, desert, and divisional differences."

There is some reasonable doubt about whether the language of the B. L. F. and E. proposal to change section 5 is in accord with the construction placed upon the words, during these proceedings, as to their effect upon any possible change in the electric and oil differential. In this connection, the organization suggested:[63] "If the Board is of the mind that the language employed by the general chairmen in their proposal does not square with the foregoing construction * * * the Board need only state its agreement with the objective sought to be achieved. We believe the Board need only announce the principle, leaving to the experienced schedule makers on both sides the mechanics of drawing the rule incorporating the Board's ideas."

The Board recommends no change either in the electric-helper or in the oil differential in these issues raised by the brotherhood and, in addition, the Board recommends no change in the present higher than standard rates in issues raised by the carriers. In consequence,

[60] Tr. 2743–44.
[61] B. L. F. and E. brief, p. 17.
[62] B. L. F. and E. brief, pp. 18, 19.
[63] B. L. F. and E. brief, p. 19.

the various contentions made with respect to section 5 would have to be considered in vacuo if they were to be dealt with at all.

In the event of wage-rate changes, incident to a national movement, should higher than standard rates provided in local agreements be preserved or should the differential represented by higher than standard rates be preserved? This difference of opinion between the parties, which underlies this issue, will doubtless arise in connection with any future national wage movement. The question has arisen in connection with past national wage movements and, according to the evidence before us, has been variously answered. This strongly suggests the necessity and the desirability of leaving the question unanswered here since it can only be considered now in vacuo. Under the circumstances, the Board makes no recommendations with respect to proposed changes in section 5.

ISSUE NO. 7. THE 4-8-4 AND 2-10-4 TYPE ENGINE DIFFERENTIALS

This issue was withdrawn by the carriers from consideration by this Board.[64]

ISSUE NO. 8. LOCAL AND WAY FREIGHT

There exists no dispute between the parties as to the existing practices, the intent and purpose of the existing contractual clauses or the intent and purpose of the proposed one.[65] The question is solely one of properly drawing a clause to effectuate that intent and purpose.

Counsel for the B. L. F and E. in his closing argument advised the Board not to attempt to draft specific contract clauses, that that could be safely left to the parties who were experienced negotiators in such matters. Heeding that advice, the Board makes no recommendation on this matter other than that the parties, through negotiation, arrive at the wording of a clause that will, satisfactorily to both, express clearly and accurately their intent and purpose.

ISSUE NO. 9. PROPOSED COMMITTEE TO ADMINISTER AGREEMENT

The B. L. F. and E. asks for a committee to administer the national agreement that is expected to be negotiated following these proceed-

[64] For the exact contract clause changes sought by the carriers to effectuate their proposal as to this issue, and statement of the carrier withdrawing it from consideration by this Board, see materials in the first section of this report relating to issues in dispute.

[65] For the exact clauses sought by the B. L. F. and E. to effect its proposal as respects to pay in local and way freight, see material in the first section of this report relating to the issues in dispute.

ings.[66] Under existing agreements such committees are already established in the West and Southeast. The effect of the proposal would be merely to include the East where at present no such committee has been set up. The carriers offered no opposition to this proposal. The Board believes that it should be adopted.

[66] For the exact wording of the clause sought by the B. L. F. and E. to effect its proposal as respects a committee to administer the agreement, see material in the first section of this report relating to the issues in dispute.

RECOMMENDATIONS OF THE BOARD

On the basis of the Board's findings with reference to the merits of the several proposals before it, as set forth in our discussion of the specific issues in the body of this report, the Board makes the following recommendations:

MANPOWER ISSUES

1. *Road Diesel issue.*—With reference to the proposal of the Brotherhood of Locomotive Firemen and Enginemen relating to this issue, the Board recommends that it be denied.

2. *Yard Diesel issue.*—With reference to the proposal of the Brotherhood of Locomotive Firemen and Enginemen relating to this issue, the Board recommends that it be denied.

3. *The rail motorcar issue.*—With reference to the proposal of the Brotherhood of Locomotive Firemen and Enginemen relating to this issue, the Board recommends that it be denied.

WAGE DIFFERENTIAL ISSUES

4. *The electric helper differential issue.*—With reference to the proposal of the Brotherhood of Locomotive Firemen and Enginemen relating to this issue, the Board recommends that it be denied.

5. *The oil burner wage differential issue.*—With reference to the proposal of the Brotherhood of Locomotive Firemen and Enginemen relating to this issue, the Board recommends that it be denied.

6. *Issues raised concerning savings clauses as to higher than standard rates of pay and differentials based upon them.*—A. *Mountain and desert differential issue.*—With reference to the proposal of the carriers relating to this issue, the Board recommends that it be denied.

B. *The 24-inch cylinder differential issue.*—With reference to the proposal of the carriers relating to this issue, the Board recommends that it be denied.

C. *Miscellaneous higher than standard Western rates issues.*—With reference to the proposal of the carriers relating to this issue, the Board makes no recommendation.

D. *Miscellaneous higher than standard Southeastern rates issues.*—1. *The Southern Santa Fe engine differential issue.*—With reference

to the proposal of the carriers relating to this issue, the Board recommends that it be denied.

2. *The Cincinnati, New Orleans & Texas Pacific tunnel differential issue.*—With reference to the proposal of the carrier relating to this issue, the Board recommends that it be denied.

3. *The higher than standard electric helper rate on the Norfolk & Western Railway Co. and the Virginian Railway Co.*—With reference to the proposal of the carriers relating to this issue, the Board makes no recommendation.

E. *Savings clause section 5 (a) issue.*—With reference to the proposal of the Brotherhood of Firemen and Enginemen relating to this issue, the Board makes no recommendation.

7. *The 4–8–4 and 2–10–4 type engine issue.*—With reference to the proposal of the carriers relating to this issue, the Board makes no recommendation.

8. *Local or way freight service differential issue.*—With reference to the proposal of the Brotherhood of Firemen and Enginemen relating to this issue, the Board makes no recommendation other than that the parties determine by negotiation the exact language to achieve their intent and purpose.

MISCELLANEOUS ISSUE

9. *Machinery for settlement of disputes issue.*—With reference to the proposal of the Brotherhood of Firemen and Enginemen relating to this issue, the Board recommends that it be adopted.

GEORGE W. TAYLOR, *Chairman.*
GRADY LEWIS, *Member.*
GEORGE E. OSBORNE, *Member.*

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