REPORT

OF THE

SECTION OF RAILROAD SAFETY BUREAU OF SAFETY AND SERVICE TO THE INTERSTATE COMMERCE COMMISSION

FOR THE FISCAL YEAR ENDED JUNE 30, 1957



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REPORT OF THE SECTION OF RAILROAD SAFETY, BUREAU OF SAFETY AND SERVICE TO THE INTERSTATE COMMERCE COMMISSION

Washington, December 1, 1957.

To the Commission:

I have the honor to present herewith the annual report of the Section of Railroad Safety, Bureau of Safety and Service, for the fiscal year ended June 30, 1957. This report contains information concerning results of inspection of safety appliance equipment of railroads, hours of service of railroad employees, installation and inspection of signal systems, interlocking and automatic train-stop and train-control devices, investigation of railroad accidents, transportation of explosives and other dangerous articles, and prosecutions for violations of laws administered by the Section, as well as other Section activities.

SAFETY APPLIANCES

Increased travel appropriations for fiscal year 1957 have permitted field personnel assigned to safety appliance work to broaden and better balance their activities, resulting in a more effective program to carry out the Section's objectives. The following table which compares 1957 with 1956 reflects the reapportionment of time devoted during the current year to each type of activity.

The total days consumed by agents assigned to safety appliance work were as follows:

Year	Regular inspection	Violation work	Accident investiga- tion	Special investigation
1956	9, 295 8, 454 841	871 1, 267 +396	699 893 +194	611 1,540 +929

Table 1 in the appendix shows separately for the individual railroads the number of freight cars, passenger-train cars, and locomotives inspected, the number found with defective safety appliances, the percentage defective, and data for comparison with the preceding year. A total of 1,059,689 freight cars were inspected; 60,247, or 5.69 percent, of these had defective safety appliances, and 71,951 defects were reported. There were 31,756 passenger-train cars inspected; 1,327, or 4.18 percent, of these had defective safety appliances, and 1,567 defects were reported. A total of 13,391 locomotives were inspected; 411, or 3.07 percent, of these had defective safety appliances, and 564 defects were reported. The total number of cars and locomotives inspected was 1,104,836, the percentage defective was 5.61, and the number of defects per 1,000 units inspected was 67.05, as compared with 60.80 for the preceding fiscal year.

The following statement shows the results of inspections of safety appliances for the years ended June 30, 1953, to 1957, inclusive.

	1953	1954	1955	1956	1957
Freight cars inspected. Percent defective. Passenger-train cars inspected. Percent defective. Locomotives inspected. Percent defective. Number of defects per 1,000 units inspected.	1, 253, 590	1, 347, 710	1, 208, 586	1, 157, 816	1, 059, 689
	3, 68	4. 38	4, 65	5. 33	5. 69
	38, 115	42, 342	41, 040	39, 953	31, 756
	3, 41	3. 69	3, 37	4. 36	4. 18
	14, 303	15, 741	14, 177	13, 797	13, 391
	1, 97	2. 26	2, 21	2. 03	3. 07
	43, 21	50. 85	53, 34	60. 80	67. 05

The following table shows the number of freight cars, passenger-train cars, and locomotives inspected, the number found with detective safety appliances, and the percentage with defective safety appliances, each year for the past 10 years.

Fiscal year	Inspected	Defec- tive	Percent- age de- fective	Fiscal year	Inspected	Defec- tive	Percent- age de- fective
1948	1, 108, 122	41, 098	3. 71	1953	1, 306, 008	47, 720	3. 65
1949	1, 111, 744	35, 863	3. 23		1, 405, 793	60, 963	4. 34
1950	1, 192, 059	40, 315	3. 38		1, 263, 803	57, 878	4. 58
1951	1, 200, 565	43, 398	3. 61		1, 211, 566	63, 787	5. 26
1952	1, 227, 938	44, 913	3. 67		1, 104, 836	61, 985	5. 61

Tables 2 and 2a in the appendix contain the results of train-brake tests made by agents of this Section. Table 2 covers tests of air brakes made prior to departure of trains from terminals. It shows the roads on which the tests were made, the number of trains on which brakes were tested, the total number of cars in such trains, the total number and percentage of cars which were controlled by air brakes, and the number of brakes with impaired efficiency because of excessive brake-cylinder piston travel. It also shows the number of cars set out and the number of cars on which brakes were repaired after inspection began, in order to procure the percentage of operative

brakes shown by the report of tests. During the year, air-brake tests were made on 2,246 trains, consisting of 105,324 cars, prior to departure from terminals. A total of 7,051, or 6.7 percent, of these cars were found with defective air brakes. After these defects were called to the attention of the carriers by our agents, 2,905 of the cars found with defective air brakes were set out and the remaining 4.146 cars had their brakes repaired in these trains. As a result of our airbrake inspections, 105,234, or 99.9 percent, of the cars departed with operative brakes. These trains had been prepared for departure, yet when afterward tested by our agents it was necessary to set out cars or repair the brakes on an average of 3.14 cars per train. Had these trains departed prior to inspection by the Commission's agents, the percentage of operative brakes would have been only 93.3. Table 2a contains similar information concerning the condition of air brakes on trains at the time of arrival at terminals. Air-brake tests were made on 1,342 trains, consisting of 85,944 cars, upon arrival at terminals, and brakes on 84,037 cars, or 97.8 percent of the total, were operative; however, of those brakes considered operative, 6.956, or 8.09 percent, were of impaired efficiency due to excessive piston travel.

The following statement, covering the year ended June 30, 1957, and the preceding 4 years, shows the number of cars set out and the number on which brakes were repaired after terminal air-brake tests had been made by our agents:

			After inspection began		
Fiscal year	Trains	Cars	Cars set out	Cars repaired in train	
1953 1954 1955 1956 1957	2, 754 2, 978 2, 590 2, 484 2, 246	121, 710 138, 302 123, 418 117, 399 105, 324	2, 500 3, 557 2, 883 3, 221 2, 905	2, 158 4, 865 4, 504 4, 634 4, 146	

In the 1,342 trains tested, covered by table 2a, 1,907 cars, or an average of 1.4 cars per train, were not controlled by power brakes.

The average consist of trains tested prior to departure from terminals was 48.2 cars, an increase of 0.9 car per train as compared with the preceding year. The average consist of trains tested on arrival at terminals was 64.0 cars, an increase over last year of 2.9 cars per train.

During the year, 100 complaints were investigated, compared with 61 for the preceding year; 52 involved power brakes and 48 involved

other safety appliances. In 36 of these investigations, evidence of violation of law was obtained and prosecution on 256 counts was instituted. In many other instances, our investigation resulted in the unsatisfactory conditions complained of being corrected.

All complaints which warranted action were promptly investigated, while during the preceding year each complaint had to be carefully screened and only the most flagrant were investigated because of the lack of travel funds.

With increased travel appropriation for fiscal year 1957, agents were also able to more thoroughly cover their assigned territories outside of headquarters. Safety appliance agents worked 8,853 days away from headquarters during this fiscal year as compared with 5,105 days during the preceding fiscal year. As a result, inspections were made at 1,685 inspection points which they found impossible to inspect the previous year.

HOURS OF SERVICE

During the year ended June 30, 1957, hours-of-service reports were filed by 601 railroads. Of these roads, 135 reported a total of 4,545 instances of all classes of excess service, a decrease of 972 instances as compared with the previous year. The remaining 466 roads reported no excess service during the year.

The reports covered 1,033 instances of excess service performed by train and engine employees subject to the 16-hour provision of the law, and 3,512 instances of excess service by operators, train dispatchers, and other employees subject to the 9-hour and 13-hour provisions of the law, classified as follows: 842 instances of employees who remained on duty longer than 16 consecutive hours; 175 instances of employees who continued on duty after having been on duty 16 hours in the aggregate in a 24-hour period; 14 instances of employees who returned to duty with less than 10 consecutive hours off duty after having been on duty 16 consecutive hours; 2 instances of employees who returned to duty with less than 8 consecutive hours off duty after having been on duty 16 hours in the aggregate in a 24-hour period; 3,481 instances of employees who remained on duty longer than 9 hours in a 24-hour period at continuously operated offices, and 31 instances of employees who remained on duty longer than 13 hours in a 24-hour period at offices operated only during the daytime.

The following table shows the causes of excess service, involving train and engine employees subject to the 16-hour provision of the law, for the years ended June 30, 1953 to 1957, inclusive:

Cause	1953	1954	1955	1956	1957
On duty longer than 16 consecutive hours					
Collisions and derailments Weather conditions, track defects, floods, obstructions Congestion of traffic. Mechanical defects; engines and cars. Wrecking and relief service. Miscellaneous. Other	125 108 39 137 152 200	80 69 10 81 146 73	107 164 15 69 146 171	179 419 27 100 124 96	145 354 28 130 109 76
On duty longer than 16 hours in the aggregate in a 24-hour period. Returned to duty without required 10 hours off duty. Returned to duty without required 8 hours off duty.	153 2 4	93 5 0	107 8 4	150 127 0	175 14 2
Total	920	557	791	1, 222	1, 033

The foregoing table shows a decrease of 189 instances of excess service, involving train and engine employees subject to the 16-hour provision of the law, as compared with the number reported last year.

The classes of offices, and the causes of instances in which operators, train dispatchers, or other employees who by the use of the telephone or telegraph handled orders affecting the movement of trains, remained on duty longer than the statutory periods, as indicated by the carriers' monthly reports for the past 5 years, are shown in the following table:

	1 9 53	1954	1955	1956	1957
At continuously operated offices At offices operated only during the daytime.	5, 562 64	4, 427 71	3, 551 65	4, 182 113	3, 481 31
Total	5, 626	4, 498	3, 616	4, 295	3, 512
CAUSES Train accidents Weather conditions, floods, fire, landslides Delayed trains, and held to handle train orders Misunderstanding of instructions or arrangements Station or clerical work Sickness, death, or personal injury Relief operator arrived late Labor shortage Miscellaneous	225 210 68 30 4 4, 263 52 0 774	206 198 53 40 12 3,376 35 0 578	155 266 73 47 4 2,045 34 0 992	280 610 71 107 6 2,695 134 1 228 164	219 285 55 61 78 2, 212 139 1 108 355
Total	5, 626	4, 498	3, 616	4, 295	3, 512

¹ Previously reported under "Miscellaneous."

An analysis of monthly hours-of-service reports filed by carriers has been compiled and published separately.

During the year, agents made 776 inspections to determine the compliance of carriers with provisions of the Hours of Service Act, and 314 inspections of carriers' accident records to determine whether injuries sustained by employees on duty were reported to the Commission as required by its rules and provisions of the Accident Reports Act. The agents also investigated 63 complaints, compared with 31 investigated during the previous year. As results of these inspections and investigations, evidence was obtained for prosecutions involving

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101 violations of the Hours of Service Act, as compared to 29 violations in the preceding year, and for prosecutions on 590 counts for 59 violations of the Accident Reports Act and rules of the Commission, as compared to 228 counts for 27 violations in the previous year. In numerous occasions, objectionable practices were corrected as the result of inspections and investigations, without the initiation of prosecutions.

INVESTIGATION OF ACCIDENTS

Accidents were investigated by the Section of Railroad Safety as follows:

Accidents	investigated

	Number	Pers	ersons		
		Killed	Injured		
Collisions. Derailments.	47 19	93 7	423 349		
Total	66	100	772		

Of the collisions investigated, 29 occurred on lines operated by the block system, 14 on lines operated by timetable and train-order system and 4 in locations where yard and miscellaneous operating rules were in effect, as shown in the following statement:

	Classes of collisions				
	Head end	Rear end	Side	Miscel- laneous	Total
Automatic block system or interlocking	7 0 4 1	8 0 4 0	6 0 2 0	8 1 3 3	29 1 13 4
Total	12	12	8	15	47

Of the 47 collisions investigated, 9 involved track motorcars; 10, failure to obey signal indications; 6, failure properly to control speed within yard limits; 7, motor vehicles at grade crossings; 3, failure to provide adequate protection for preceding train; 2, switch being opened in front of approaching train; 2, failure to clear opposing superior train; 1, train being operated against the current of traffic on a track which was not clear of opposing train; 1, failure properly to control speed of locomotive returning for rear portion of train; 1, cars moving out of control on grade; 1, failure to deliver a train order; 2, train fouling main track immediately in front of approaching train; 1, rear portion of train running into forward portion of train; and the cause of 1 has not yet been determined.

The causes of the collisions are summarized as follows:

Causes	Number of colli- sions in- vestigated
Head-end collisions	
Opening switch in front of approaching train. Failure properly to control speed of train moving within yard limits Train moving against the current of traffic on track not clear of opposing train. Failure to take required precautions in operation of track motorear. Trains admitted to block occupied by track motorear. Occupying main track on time of opposing train. Failure to deliver a train order. Failure to operate train in accordance with signal indications.	$\begin{bmatrix} 1\\2\\1\\2\end{bmatrix}$
Rear-end collisions	
Failure to provide protection for preceding train moving within yard limits. Failure to provide protection for preceding train. Failure to take required precautions in operation of track motorcar. Failure to operate train in accordance with signal indications. Failure to maintain lookout ahead. Failure to provide protection for track motorcar. Track motorcar occupying main track ou time of opposing train.	3 2 2 1
Side collisions	
Failure to provide adequate protection for preceding train. Failure to operate train in accordance with signal indications. Train fouling main track.	1 6 1
$oldsymbol{M}$ is cell an eous collisions	
Failure to stop motortruck short of train moving over rail-highway grade crossing Derailed cars obstructing adjacent track in front of an opposing train. Motortruck occupying rail-highway grade crossing in front of an approaching train. Unauthorized use of track motorcar. Failure to line a route through an interlocking. Failure to take required precautions in operation of track motorcar. Failure to control speed of locomotive returning for rear portion of train. Cars moving out of control on grade. Separation of train.	1 5 1 1 1 1 2

Of the 19 derailments investigated, 7 involved defective equipment; 6, defective track; 3, obstructions on the track; 2, excessive speed; and 1, washout.

The causes of the derailments investigated are summarized as follows:

Causes	Number of derail- ments in- vestigated
Track Insecure condition of track	4
Obstruction on track	2
Irregularities in surface and alinement of track	1
Landslide Broken rail	1
Operating conditions and practices	
Excessive speed. Failure to control speed of train approaching end of track.	1
	•
Broken truck side frame	,
Broken journal.	4
Loose wheel. False flange on slid-flat wheel.	1

The following is a summary of the recommendations with respect to specific corrective or preventive measures contained in accident investigation reports issued by the Commission during the year:

Number of reports	Recommendations
1	Recommended that the carrier install interlocking protection at crossing.

Under the Accident Reports Act, approved May 6, 1910, we have investigated the more serious accidents during the past 5 years as follows:

Year ended June 30—		aber of accide investigated	Persons			
	Collisions	Derail- ments	Total	Killed	Injured	
53. 54. 55. 56.	36 39 36 48 47	17 10 22 11 19	53 49 58 59 66	92 35 34 134 100	1, 041 920 971 1, 612 772	

Under existing law the Commission is authorized to investigate accidents and to make reports on such investigations, including such recommendations as are deemed proper.

SIGNAL SYSTEMS, INTERLOCKING, AUTOMATIC TRAIN-STOP, TRAIN-CONTROL, AND CAB-SIGNAL DEVICES

According to reports submitted by the carriers, block-signal systems, interlocking, and automatic train-stop, train-control, and cab-signal devices were in use on January 1, 1957, as follows:

	Plants	Miles	s of—	Locomo-
		Road	Track	tives
Block-signal systems: Automatic Nonautomatic		81, 622. 2 28, 212. 0	111, 136. 8 29, 083. 4	
Total		109, 834. 2	140, 220. 2	
Corresponding totals, Jan. 1, 1956 Interlocking: Number of plants	4, 247	110, 122. 9	141, 289. 8	
Automatic train-stop, train-control, and cab-signal devices: Train-stop Train-control Cab-signal		9, 297. 3 1, 025. 3 3, 877. 5	15, 084. 1 1, 951. 1 8, 559. 9	5, 289 828 3, 577
Total	4, 247	14, 200. 1	25, 595. 1	9, 694
Corresponding totals, Jan. 1, 1956	4, 177	14, 257. 4	26, 037. 7	9, 805

Detailed information concerning these installations is contained in the annual statistics bulletin, compiled separately.

During the year, 223 applications for approval of modifications of block-signal systems and interlockings were filed by the carriers. At the beginning of the year action was pending on 33 applications previously filed. During the year, 229 applications were acted upon, 2 applications were withdrawn, and at the close of the year action was pending on 25 applications. Public hearings were held on 7 of the applications.

During the year, 51 applications were filed in connection with the rules, standards, and instructions prescribed by the Commission's order of June 29, 1950. At the beginning of the year action was pending on 14 applications previously filed. During the year, 61 applications were acted upon, 1 application was withdrawn, and at the close of the year action was pending on 3 applications. Public hearing was held on 1 application for relief from the requirements of the rules.

The following table shows for a 5-year period information with regard to applications for approval of modifications of block-signal systems and interlockings, as well as applications for relief from or modifications of the rules, standards, and instructions prescribed by the Commission's orders:

Applications
BLOCK SIGNAL

Period	Number filed	Pending at beginning of year		Withdrawn	Pending at close of year
Year 1953. Year 1954. Year 1955. Year 1956. Year 1957.	558 376 197 242 223	57 44 18 18 33	565 402 197 225 229	6 0 0 2 2	44 18 18 33 25
RULES, ST.	ANDARDS, A	ND INSTRUCT	IONS		
Year 1953 Year 1954 Year 1955 Year 1956 Year 1957	48 17 33 64 51	33 6 2 2 2 14	72 21 33 51 61	3 0 0 1 1	6 2 2 2 14 3

Monthly signal failure reports filed by the carriers are summarized in tables 3 and 3a of the appendix, the totals being as follows:

False restrictive failures	28, 065
False proceed failures	74
Potential false proceed conditions	12

During the year, inspections were made as follows:

	Number	Including inspection of—									
System	of inspec- tions	Signals	Switches	Other appliances	Devices on loco- motives	Records of tests					
Automatic block-signal	793 1, 873 740 32 346 157	10, 220 16, 032 8, 365	6, 578 11, 712 4, 948	2, 271 6, 797 3, 791 134 3, 865 357	124 902 452	2, 995 4, 042 2, 240 144 200 273					
Total	3, 941	34, 617	23, 238	17, 215	1, 478	9, 894					

These inspections have resulted in bringing to the attention of the railroad managements, for necessary corrective action, a large number of unsatisfactory maintenance conditions which have been found to exist. The 3,941 systems inspected during the year is an increase of 224 systems inspected over the previous year.

TRAIN COMMUNICATION SYSTEMS

According to reports submitted by the carriers, as of January 1, 1957, train communication systems were in service for operation over a total of 95,240 miles of road on line of road of 91 railroads. In addition to radio and inductive installations these systems included end-to-end communication installations employing physical wire connections through the train, and installations providing radiotelephone service through commercial telephone company radio facilities, operating over 5,313 miles of road.

Considering only radio and inductive systems used in connection with railroad operation, such systems were in service on 89,927 miles of road on 89 railroads. This compares with radio and inductive communication systems in service on 79,686 miles of road on 76 railroads as of January 1, 1956. Summary of the line of road installations in service as of January 1, 1957, follows:

Summary of Line of Road Installations

Type of installation	Miles of road	Wayside stations	Locomo- tives	Cabooses and other mobile	
Radio. Inductive Combination inductive and wire intercommunication. Wire intercommunication system. Commercial radio service used in railroad operation. Commercial public radio telephone service.	82, 188 7, 739 87 2, 259 427 2, 540	866 258 1	5, 075 1, 096 21 12	3, 153 344 2 17 19 15	2, 665 1
Total	95, 240	1, 125	6, 204	3, 550	2, 679

There were 569 installations in service in yards and terminals on 109 railroads. This compares with 457 installations in service on 94 railroads as of January 1, 1956. Summary of installations in service in yards and terminals, as of January 1, 1957, follows:

Summary of yard and terminal installations

Type of installation	Number of instal- lations			Cabooses and other mobile	
Radio Inductive Commercial leased radio service	537 6 26	634 8 48	2, 620 20 319	377	942
Total	569	690	2, 959	377	942

Detailed information concerning train communication installations is contained in the annual statistics bulletin.

TRANSPORTATION OF EXPLOSIVES AND OTHER DANGEROUS ARTICLES

An unusual demand for amendments to the regulations or the issuance of temporary permits to meet the rapidly changing needs for the transport of all types of dangerous goods prevailed since the previous report. Factors contributing to this unprecedented activity are manifold but mainly due to the development of new shipping containers, new products, new methods for fabricating containers, and broader study by technical groups of existing specifications and methods, many of which are undergoing complete revision. The expanding use of cryogenic gases, the development of civilian atomic energy uses, economic changes, and the need for reducing shipping costs have all inspired a greater interest in the controlling regulations.

The specifications for tank cars have undergone a complete revision to eliminate obsolete practices of construction and repair and to incorporate the latest practicable methods. More explicit and helpful details for performing these operations have been adopted and a new system of qualifying shops was also developed in the interest of eliminating delays and long hauls of tank cars requiring repairs. This intensified program promises to continue for some time in order to obtain more efficiency in the use and maintenance of tank cars.

A similar interest has been registered with respect to cargo tanks, for which some materials are difficult to obtain. Several rubber companies are experimenting with large rubber containers for use on flat-bed trucks, and the interest in these is growing because the design will permit their use as storage containers or permit them to be rolled up so carriers can transport other commodities, especially on return trips. Some cargo tanks for liquid gases, such as oxygen,

helium, argon, et cetera, have been developed, and interest in larger containers for rail transport is imminent. Efforts to standardize such equipment are growing.

The need for special permits to provide temporary relief for shippers experimenting with new containers, or pending adoption of amendments to the regulations continues and, in the main, has satisfactorily provided a means of transport without sacrificing reasonable standards of safety or interfering with economic conditions. A total of 512 special permits were issued for the period, and several changes in regulations came as a result of trial shipments that were authorized under the controlled conditions.

Five public notices and orders were published in regard to amendments to the regulations. A total of 756 amendments were proposed, of which 732 were adopted; among them were specifications for 11 new containers for dangerous goods.

The field staff of the Bureau made observations at 825 railroad points, 211 industries, 25 freight forwarders, and 1 truck terminal, to determine the extent of compliance with regulations. Reports from this staff reveal 4,105 violations of varying degree; however, only 9 instances were considered as warranting prosecution. Four cases were pending in the courts at the beginning of the year; 5 cases were disposed of by imposition of fines, and 3 cases were dismissed. As of June 30, 1957, there were 5 cases pending in the courts.

GRADE CROSSING-RAILWAY WITH HIGHWAY

During the calendar year 1956, there were 3,639 accidents at highway grade crossings, which resulted in the death of 1,338 persons and injury of 3,755 persons. Motor vehicles were involved in 3,379 of these accidents, in which 1,202 persons were killed and 3,629 injured. There were 66 derailments of trains at highway crossings involving motor vehicles, which caused the death of 49 persons and the injury of 115 persons. Casualties to persons on trains resulting from derailments and other train accidents at highway crossings consisted of 10 killed and 152 injured. Information concerning highway grade crossing accidents, together with comparable statistics for the preceding 2 years, is shown in the following table:

Accidents at highway grade crossings, years ended Dec. 31, 1954, 1955, and 1956

	1	954		1	955		1956				
			ber of			ber of			Number of persons		
	Number	Killed	Injured	Number	Killed	Injured	Number	Killed	Injured		
Accidents at highway grade crossings Accidents at highway grade	3, 336	1, 303	3, 426	3, 846	1, 446	4,014	3, 639	1, 338	3, 755		
crossings involving motor vehicles	3,074	1, 151	3, 314	3, 583	1, 313	3, 886	3, 379	1, 202	3, 629		
mig motor vehicles	65	35	72	80	43	72	66	49	115		
cles Motor vehicles registered	315 58, 589, 863	153	142	307 62, 760, 395	159	164	347 65, 212, 510	155	161		
Railroad casualties: Passengers Employees on duty Persons carried under con-		9	21 75		3	27 68		9	83 64		
tract Travelers not on trains Total		9	2 98		3	99		10	5 152		

MEDALS OF HONOR

The act of February 23, 1905 (45 U. S. C. 44 and 45), authorizes the President to bestow bronze medals of honor upon persons who, by extreme daring, endanger their own lives in saving or endeavoring to save lives from any wreck, disaster, or grave accident upon any railroad within the United States engaged in interstate commerce. During the year, one application for award of medal of honor, as provided in this act, was investigated by this Section and a medal was awarded in the following instance:

Herman J. Schaefer, switchman for the Chicago and Eastern Illinois Railroad Company, rescued a 2½-year-old child from the path of a freight train at Evansville, Ind., on March 29, 1954. The train consisted of 1 diesel-electric locomotive and about 15 cars and was proceeding easterly at between 10 and 15 miles per hour. When the locomotive passed Heidelback Avenue crossing, a small child was observed standing close to the right rail about 225 feet ahead. Mr. Schaefer, who was seated on the front platform of the locomotive, immediately gave slow and stop signals and then crossed over to the opposite side of the locomotive and dropped down on the front foot-

board. He reached far out, caught the child under the armpit, and shoved him from the rail and clear of the train. He then regained his balance, and neither he nor the child was injured. The front of the locomotive stopped about 30 feet east of the location where the child had been standing.

Since the passage of this act, of the 110 applications for medals of honor filed, 70 medals have been awarded and 40 denied.

INVESTIGATION OF SAFETY DEVICES

During the year, plans and specifications of four devices designed to increase safety in railway operation were examined and opinions transmitted to the proprietors or their agents.

LEGAL

During the year, 247 cases of violation of the safety appliance laws, comprising 1,038 counts, were transmitted to United States attorneys for prosecution. At the beginning of the year 274 counts were pending in the district courts. Judgment was confessed on 853 counts, 4 counts were dismissed, and 28 counts were tried resulting in judgment for the defendant on 20 counts and 8 counts await decision. The two counts reported last year as awaiting decision by the district court were decided in favor of the Government. On June 30, 1957, 98 cases comprising 433 counts were pending in the district courts.

During the year, 23 cases of violation of the hours of service law, comprising 101 counts, were transmitted to United States attorneys for prosecution. At the beginning of the year 17 counts were pending in the district courts. Judgment was confessed on 35 counts, 2 counts were dismissed, and 5 counts were tried, resulting in judgment for defendant on all counts. On June 30, 1957, 12 cases, comprising 76 counts, were pending in the district courts.

During the year, 7 cases of violation of section 25 of the Interstate Commerce Act, known as the Signal Inspection Law, comprising 8 counts were transmitted to United States attorneys for prosecution. At the beginning of the year 6 counts were pending in the district courts. Judgment was confessed on 11 counts. On June 30, 1957, 3 cases, comprising 3 counts, were pending in the district courts.

During the year, 22 cases of violation of the Accident Reports Act, comprising 590 counts were transmitted to United States attorneys for prosecution. At the beginning of the year 160 counts were pending in the district courts. Defendants plead guilty to 236 counts and 154 counts were nol prossed. On June 30, 1957, 10 cases, comprising 360 counts, were pending in the municipal court for the District of Columbia.

STAFF OF THE SECTION

During the year, agents and inspectors of the Section devoted 13,767 days to regular inspection work, 912 days to procuring evidence of violation of law, 24 days in court furnishing testimony for prosecution of cases, 1,406 days to investigation of accidents, 664 days to investigation of applications submitted by carriers for approval of modification of signals and interlockings and 2,601 days to special investigations.

Agents, inspectors, engineers, and other members of the staff of the Section have performed their many and varied duties in a highly satisfactory manner.

Respectfully submitted.

C. W. TAYLOR,

Director.

	198	56 total		1957											
Railread		De- fec- tive	Per- cent defec- tive	,	Total		Fre	ight ear	s	Passens	er-train	cars	Lee	motive	·s
	In- spected			In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive
Aberdeen & Rockfish Akron & Barberton Belt. Akron, Canton & Youngstown Alabatra Central. Albabra, "Pennessee & Northern Albabra fort District. Allinuippa & Southern Alban Fort District. Allinuippa & Southern Alton & Southern Angelina & Noches River Alexander. Ann Arbor Angalara & Noches River Alexander. Ann Arbor Analachicola Northern Arkansas & Louisiana Missouri Arhers & Louisiana Missouri Arhers & Konthern Archison, Topeka & Sante Fe Atlanta & St. Andraws Bay Atlanta Joint Terminals Atlanta Joint Terminals Atlanta Terminal Atlantic & Danville Atlantic & Danville Atlantic & Fast Carolina Atlantic & Coast Line Baltimore & Ohio Baltimore & Ohio Baltimore & Ohio Baltimore & Morchead Beaumont, Sour Lake & Western Beaumont, Sour Lake & Western Beaumont Wharf & Terminal Bett Railway of Chicago Berlin Mills Bessener & Lake Frie Birningham Southern Boston & Maine Boston & Maine Boswden.	43. 0 817 113 0 0 38, 010 86, 620 86, 1742 122, 283 147 122, 28, 415 32, 869 1, 848 1, 848 79 0 1111 0 2, 438 79 260 1, 934 1, 934 1, 934 1, 9441	1 0 6 6 0 17 0 17 0 17 0 18 18 0 19 18 0 19 18 0 19 18 0 19 18 19 19 19 19 19 19 19 19 19 19 19 19 19	4.0 0 4.0 0 8.9 0 3.2 1.9 1.0 0 0 10.5 3.6 0 0 3.7 15.6 0 3.5 1.3 1.3 1.3 1.3 1.3 1.3 1.3 1.3	73 125 134 43 397 59 170 0 0 0 16 1, 377 569 78 392 36, 799 1, 567 373 171 110 28, 361 37, 473 443 1, 218 66 0 48 1, 18, 665 1, 387	6 10 8 2 30 3 5 6 0 0 0 143 15 53 6 0 0 143 10 52 2 0 0 769 0	8. 2 8. 0 6. 0 4. 7 7. 6 5. 1 2. 9 0 0 0 6. 3 9. 8 3. 7 6. 1 4. 6 6. 2 2. 9 4. 9 6. 3 7. 0 6. 2 2. 7 0 4. 9 6. 3 7. 0 6. 2 2. 7 0 0 0 0 0 0 0 0 0 0 0 0 0	72 125 133 42 383 57 170 0 0 0 15 1, 367 552 78 390 35, 692 3, 534 377 1, 453 368 104 9 27, 525 36, 702 441 158 1, 210 60 15 1, 371 1, 452 151 1, 371 0 17, 933 0	6 10 8 2 300 2 2 5 0 0 0 0 1 1 135 24 1 690 14 400 2 344 31 1 6 3 6 0 0 143 10 52 0 0 0 726 0	8.3 6.0 6.4 7.8 3.5 2.9 0 0 0.7 9.9 3.8 16.7 2.8 16.2 4.7 2.8 3.0 0 2.9 0 5.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 1 1 1 1 4 2 2 0 0 0 0 0 1 1 0 1 2 2 8 0 2 2 3 5 8 1 1 0 0 1 0 1 2 1 6 6 0 0 2 1 4 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Brooklyn Eastern District Terminal Broward County Port Authority Buffalo Creek Burlington-Rock Island Bush 'i erminal Butte, Anaconda & Pacific Cadiz Camas Prairie Campbell's Creck Cambria & Indiana Canadian National Canadian Pacific Canton Cape Fear Carolina & Northwestern Carolina Southern	366 72 1, 273 91 143 2, 063 2, 058 125 120 2, 438 8, 8 8, 582 0 302 0	14 11 76 14 9 19 0 58 9 3 139 30 51 0 20 0	3.8 8 15.3 6.0 15.3 6.3 9 0 2.8 7.2 5 5.7 8.8 0 6.6 0	0 162 534 0 304 1,003 6 1,090 0 0 1,748 609 0 16 560 10	0 14 40 0 26 9 0 0 0 71 13 0 1 30 0 0 0 0 0 0 0 0	0 8.6 7.5 0 8.6 .9 0 .6 0 4.1 2.1 0 6.3 5.4	0 160 532 0 303 985 4 1,075 0 1,741 600 0 15 547 9	0 0 14 8.8 40 7.4 0 0 26 8.6 9 0 0 0 70 4.1 10 0 11 6.1 10 0 0 0 0 0 13 0 0 0		0 0 0 0	0 2 2 2 0 1 18 1 15 0 0 7 9 0 1 13 1 1 1 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 6.7 0 0 0 0 1 14.3 0 0 0 0
Carrollton. Cedar Rapids & Iowa City. Central of Georgia. Central Railroad of New Jersey.	81 40 5, 480 2, 514	5 11 249 122	6. 2 27. 5 4. 5 4. 9	0 50 7, 722 2, 346	0 13 479 112	0 26. 0 6. 2 4. 8	50 7, 451 2, 114 2, 326	$egin{array}{c c c} 0 & 0 \\ 13 & 26.0 \\ 452 & 6.1 \\ 107 & 5.1 \\ 72 & 3.1 \\ \hline \end{array}$	134 1 205	$\begin{array}{c cccc} 0 & 0 & 0 \\ 0 & 0 & 14.2 \\ 5 & 2.4 \\ 0 & 0 & 0 \end{array}$		0 0 0 0 8 5.8 0 0 0 0
Central Vernont Charleston & Western Carolina Chattanoga Traction Chesapeake & Ohio	2, 612 1, 001 111 18, 588 27	65 58 0 1, 272	2, 5 5, 8 0 6, 8 3, 7	2, 354 2, 216 45 17, 187	72 113 0 I, 159	3.1 5.1 0 6.7	2, 320 2, 165 41 16, 904	112 5.1 0 0 1,148 6.1	0 0	0 0 0 0 5 3.7	51 4	1 2.0 0 0 6 4.0 0 0
Chesapeake Western Chicago & Eastern Illinois Chicago & Illinois Midland Chicago & Illinois Western Chicago & North Western 2	2, 545 177 550	157 12 54 2,634	6. 2 6. 8 9. 8 7. 1	2, 072 131 135 32, 789	167 8 25 4,002	8. 1 6. 1 18. 5 12. 2	2, 060 130 135 31, 460	167 8. 8 6. 25 18. 3. 815 12.	0 0	0 0 0 0 0 0 174 18.2	12 1 0 375	0 0 0 0 0 0 13 3.5
Chicago & Western Indiana. Chicago Burlington & Quincy. Chicago Great Western. Chicago Heights Terminal Transfer	95	1, 429 411 0	8. 4 6. 1 7. 6	175 19, 982 2, 646 141	1, 273 182 6	5. 1 6. 4 6. 9 4. 3	12 19, 166 2, 627 149	2 16. 1, 247 6. 189 6. 6 4.	5 596 5	$egin{array}{c cccc} 7 & 4.4 \\ 20 & 3.4 \\ 0 & 0 \\ 0 & 0 \end{array}$	220 14 1	$ \begin{array}{c cccc} 0 & 0 \\ 6 & 2.7 \\ 2 & 14.3 \\ 0 & 0 \end{array} $
Chicago, Milwaukee, St. Paul & Pacific. Chicago Produce Terminal Chicago River & Indiana Chicago, Rock Island & Pacific.	34, 205 125 1, 111 23, 777	1, 932 5 72 2, 246	5. 6 4. 0 6. 5 9. 4	26, 322 0 0 20, 832	1, 984 0 0 1, 730	7.5 0 0 8.3	25, 688 0 0 20, 222	1, 916 7. 0 0 0 0 1, 674 8.	0	40 10.3 0 0 0 0 42 10.3	0	$\begin{array}{ c c c c } \hline & 28 & 11.4 \\ & 0 & 0 \\ & 0 & 0 \\ 14 & 6.5 \\ \hline \end{array}$
Chicago Short Line Chicago Swest Pullman & Southern Cincinnati Union Terminal City of Princy ille	280	16 3 4 8	5. 7 15. 0 5. 3 7. 0	120 182 92 108	13 17 1 1 14	10.8 9.3 1.1 13.0	120 180 0 106	13 10. 17 9. 0 0 14 13.	4 0 92	$\begin{array}{c cccc} 0 & 0 & 0 \\ 0 & 0 & 1 \\ 1 & 1 & 1 \\ 0 & 0 & 0 \end{array}$	2	$ \begin{array}{c cccc} 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{array} $
Clarendon & Pittsford Cliffside Clinchfeld Colorado & Southern	80 11 2, 389 6, 329	1 1 114 180	5. 0 9. 1 4. 8 2. 8	0 27 4, 206 3, 169	0 0 109 118	0 0 2.6 3.7	0 26 4,075 3,130	0 0 0 0 105 2. 118 3.	$\begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix}$	0 0 0 0 0 0	0 1 130 39	$\begin{array}{c cccc} 0 & 0 & 0 \\ 0 & 0 & 3.1 \\ 0 & 0 & 0 \end{array}$
Colorado & Wyoming Columbia, Newberry & Laurens Columbia & Greenville Conemaugh & Black Lick	51 120 164	0 1 6 11	0 . 8 3. 7 4. 1	638 456 622 341	12 8 33 29	1. 9 1. 8 5. 3 8. 5	633 444 615 340	12 1. 8 1. 32 5. 28 8.	$\begin{bmatrix} 9 & 0 \\ 8 & 0 \\ 2 & 1 \end{bmatrix}$	0 0 0 0 1 100.	5 12 6 1	0 0 0 0 0 0 1 100.0

REPORT
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THE
SECTION
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RAILROAD
SAFETY

	198	66 total		1957											
70 W - 1		De-	Per-		Potal .		Fre	ight cars	s	Passenger-train cars			Locomotives		
Railroad	In- spected	fee-	cent defec- tive	In- spected	Dc- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Percent defective	In- spected	De- fec- tive	Per- cent defec- tive
Cornwall Curtis Bay Cuvaloga Valley Dallas Terminal Railway & Union Depot Davenport, Rock Island & North Western Delaware & Hudson Delaware, Lackawanna & Western Des Moines & Central Iowa Detroit & Toledo Shore Line Detroit & Toledo & Ironton Detroit Terminal Detroit Terminal Detroit Terminal Detroit Terminal Donora Southern Duluth Missabe & Iron Range Duluth Missabe & Iron Range Duluth, South Shore & Atlantic Duluth, Winnipeg & Pacific Duluth, Winnipeg & Pacific Duluth, Winnipeg & Pacific Durham & Southern East Eric Conniercial. East Tennessee & Western North Carolina Edgemoor & Manetta Elgin, Jolict & Eastern Erie Fairport, Painesville & Eastern Ferie Fairport, Painesville & Eastern Ferenwood, Columbia & Gulf Florida Fast Coast Fonda, Johnstown & Gloversville Fort Dodge, Des Moines & Southern Fort Street Union Depot	11, 336 12, 471 21, 830 21, 830 20, 654 831 800 2, 045 151 70 2, 468 671 99 748 0 0 21 53 11 1, 810 1, 810	0 9 11 1 1 1 0 255 598 330 80 0 73 106 104 331 35 0 0 26 0 0 25 598 106 104 39 106 104 39 106 106 107 107 108 108 108 108 108 108 108 108 108 108	0 15. 0 3. 4 1. 3 0 2. 2 4. 8 14. 9 11. 2 12. 7 13. 0 11. 2 15. 8 7. 16 5. 2 0 0 18. 18 9. 0 18. 18. 18. 18. 18. 18. 18. 18. 18. 18.	206 51 0 81 12, 236 10, 846 140 12, 791 27 65 44 289 421 519 1, 819 1, 819 303 352 259 6 205 146 11, 74 1, 74 1, 74 4, 982 4, 982 0 0 48	11 7 0 0 7 395 676 25 31 4 7 7 2 31 102 198 0 0 16 25 0 16 25 19 102 19 102 19 102 103 104 105 105 105 105 105 105 105 105	5. 3 13. 7 0 8. 6 8. 2 17. 9 2. 4 14. 8 10. 2 19. 7 10. 2 19. 7 10. 9 0 2. 8 3. 3 0 0 0 10. 4 10. 8 10. 7 10. 2 19. 7 10. 9 10. 10. 10. 10. 10. 10. 10. 10. 10. 10.	204 50 0 0 80 12, 986 10, 128 140 12, 328 43 286 420 515 1, 805 0 3, 811 299 0 3, 811 299 10 10 10 10 10 10 10 10 10 10	11 7 0 0 7 394 626 25 301 43 102 31 143 102 198 0 0 16 25 0 10 11 0 20 11 12 13 14 10 10 10 10 10 10 10 10 10 10	8.3 14.0 0 0.8 8.3 6.2 17.9 2.5 0 10.8 4.7 10.2 19.8 10.2 19.8 4.7 10.2 19.8 11.0 0 0 2.9 10.5 11.0 0 10.5 11.0 10.5 10.5 10.5 10	0 0 0 0 0 73 597 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	2 1 1 0 0 0 1 1 777 121 1 21 2 0 0 1 1 4 4 1 1 4 0 0 0 1 1 4 4 1 1 4 0 0 0 1 1 1 1	0 0 1 0 0	0 0 0 0 0 0 14.3 0 0 0 11.1

Fort Worth & Denver	2, 942	140	4.8	3, 447	196	5.7	3, 304	190	5, 8	75	5	6.7	68	1 1.5
Fort Worth Belt	238	19	8. 0	415	24	5.8	410	24	5. 9	ŏ	ŏ	Ö	5	0 0
Frankfort & Cincinnati	53	ŏ	0.0	40	l ô	l ő. Ö	34	-ô	ñ	Ŏ	ŏ	ŏ	6	ŏlŏ
Franklin & Carolina	7	ĭ	14.1	10	ĺŏ	ŏ	0	ŏ	ŏ	ň	ŏ	ŏ	ŏ	ŏlŏ
Gainesville Midland	57	2	3. 5	64	3	4.7	57	š	3. 5	ŏ	ŏ	ŏ	7	1 14.3
	172	4	2.3	510	11	2.2	510	11	2. 2	ŏ	lŏ	l ŏ	6	0 14.0
Galveston, Houston & Henderson				535	116	1.1	535	6	1.1	ŏ	ŏ	l ŏ	Ö	0 0
Galveston Wharves	487	16	3.3					12						0 0
Genesse & Wyoming	0	0	0	140	12	8.6	140		8, 6	0	0	Ŏ	0	
Georgia	671	21	3. 1	1, 568	60	3.8	1, 472	59	4.0	69	0	0	27	1 3.7
Georgia & Florida	488	29	5. 9	1, 260	64	5. 1	1, 238	58	4. 7	0	0	0	22	6 27.3
Georgia, Ashburn, Sylvester & Camilla	24	0	0	26	1	3.8	25	1	4.0	0	0	0	1	0 0
Georgia Northern	45	0	0	102	6	5. 9	89	5	5.6	4	1	25.0	9	0 0
Georgia, Southern & Florida	141	0	0	0	0	0	0	0	0	0	1 0	0	0	0 0
Grand Trunk Western	4. 176	558	13. 4	5, 100	727	14. 3	4, 925	714	14. 5	151	1 11	7.3	24	2 8.3
Grasse River	0	0	0	26	5	19. 2	25	4	16, 0	0	0	0	1	1 100.0
Great Northern	26, 347	819	3. 1	20, 568	756	3. 7	19, 942	705	3. 5	267	14	5. 2	359	37 10.3
Great Western	474	8	1.7	174	0	0	172	0	0	0	1 0	0	2	0 0
Green Bay & Western	320	27	8.4	546	46	8.4	534	46	8.6	Ō	l ō	l ō	12	0 0 0
Greenville & Northern	6	i õ	0.1	31	2	6.5	29	2	6.9	l ŏ	ŏ	ŏ	2	0 0
Greenwich & Johnsville	7Ŏ	l š	2.9	0	Õ	0.0	1 01	. õ	0.0	l ŏ.	ŏ	ő	Ō	0 0
Gulf Coast Lines 1	299	17	5.7	lŏ	ŏ	lŏ	ا ة	ŏ	ň	ŏ	lŏ	ŏ	ŏ	ŏlŏ
Gulf, Colorado & Santa Fe	6, 169	331	5.7	9.688	502	5.2	9, 337	496	5. 3	168	4	2.4	183	ž ĭ.1
Gulf, Mobile & Ohio		396	5. 5	10, 495	566	5. 4	10, 230	555	5.4	81	11	13. 6	184	ة أ ق أ
Hampton & Branchville	7, 926			10, 493	300	0.4	10, 230	999 N	0.4	01	10	10.0	104	l ŏlŏ
Tampton & Dranchvine	0	0	0				505				l ő	0	1 6	0 0
Harbor Belt Line	1, 430	52	3.6	535	20	3.7	535	20	3.7	0	0		0	
High Point, Thomasville & Denton	67	0	0	46	0	0	44	0	0	0		0	0	
Hoboken Shore	0	0	0	144	6	4.2	144	6	4. 2	0	0	0	0	
Houston & Brazos Valley	0	0	0	290	29	10.0	288	29	10. 1	0	0	0	2	
Houston Belt & Terminal	5, 408	298	5. 5	3, 995	192	4.8	3, 715	188	5. 1	270	4	1.5	_10	0 0
Illinois Central		1, 107	4.7	32, 435	1, 165	3. 6	31, 236	1, 153	3. 7	419	12	2. 9	780	0 0
Illinois Northern	150	7	4.6	90	18	20.0	90	18	20.0	0	0	0	0	0 0
Illinois Terminal	323	14	4.3	250	11	4.4	250	11	4.4	0	0	0	0	0 0
Indiana Harbor Belt	2, 416	293	12.1	3, 113	381	12. 2	3,086	380	12.3	1	1	100.0	26	0 0
Indianapolis Union	174	9	5. 2	135	8	5. 9	60	4	6.7	75	4	5.3	0	0 0
International-Great Northern 1	8, 641	453	5. 2	0	0	0	0	0	0	0	0	0	0	0 0
Interstate	181	7	3.9	1, 165	36	3.1	1, 144	36	3.1	0	0	0	21	0 0
Iowa Transfer	356	29	8.0	0	0	0	0	0	0	0	0	0	0	0 0
Jacksonville Terminal	2, 098	89	4. 2	918	35	3.8	291	14	4.8	590	21	3, 6	37	0 0
Jay Street Connecting	146	7	4.8	0	1 0	0	0	0	0	0	0	0	0	0 0
Joplin Union Depot	154	i 2	1.3	56	ĺ	1.8	55	1	1.8	0	0	0	1	0 0
Kansas City Southern	2, 905	137	4.7	4.918	253	5, 1	4, 860	253	5. 2	20	0	0	38	0 0
Kansas City Terminal	1, 586	73	4.6	1, 366	77	5. 6	715	19	2. 7	638	58	9.1	13	0 0
Kansas, Oklahoma & Gulf	447	30	6.7	1, 153	37	3. 2	1, 136	37	3.3	l on	0	0	17	0 0
Kelley's Creek & Northwestern	21	5	23. 8	30	12	40.0	30	12	40.0	ŏ	l ŏ	ŏ	1 0	0 0
Kelley's Creek	24	3	12.5	126	27	21. 4	125	27	21.6	ľ	lŏ	ŏ	l ĭ	0 0
Kentucky & Indiana Terminal	1, 160	27	2. 3	1, 664	8	.5	1, 472	7	. 5	101	ľ	1.0	91	l ŏ l ŏ
Lakefront Dock & Railroad Terminal	431	27	6.3	1,004	7	5.6	125	7	5.6	0	Ô	0.0	0	ŏŏŏ
		20		150	3	2.0	150	3	2.0	l ő	0	ŏ	Ĭ	0 0
Lake Champlain & Moriah	0		0				406	47		0	0	0	1 7	0 0
Lake Superior & Ishpeming	371	20	5.4	413	47	11.4		47	11.6	0	0	0	1 4	0 0
Lake Superior Terminal & Transfer	113	5	4.4	207	1	. 5	203		. 5				1 4	
Lake Terminal	0	0	0	170	9	5.3	170	9	5.3	0	0	0	0	0 0
Lancaster & Chester	120	7	5.8	144	9	6.3	138	9	6.5	0	0	0	6 2	
Laurinburg & Southern	0	0	1 0	1 17	0	0	15	0	0	1 0	1 0	0	1 2	0 0

¹1957 figures included in Missouri Pacific.

	195	6 total							195	7					
				7	ro t al		Frei	ght cars		Passenge	er-train	cars	Loco	motives	3
Railroad	ln- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spe ct ed	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per cen defe tiv
chigh & New England chigh Valley exington Union Station. itchfield & Madison. ive Oak, Perry & Gulf ong Island ongsylew, Portland & Northern os Angeles Junction os Angeles Junction os Angeles Junction os Angeles Union Passenger Terminal ouisiana & Arkansas ouisiana & North West ouisiana & North West ouisiana & Suthern ouisville & Jeffersonville Bridge & RR Co ouisville & Nashville IcKeesport Connecting Jacon, Publin & Savannah Jaine Central Janistee & Northeasteru Manufacturers' Junction Marianna & Blountstown Maryland & Pennsylvania Mason City & Clear Lake Massena Terminal Memphis Union Station Meridian & Bigbee River Middle Fork Midland Coutinental Midland Coutinental Midland Valley Milwaukee-Kansas City Southern Joint Agency Minneapolis & St. Louis Minneapolis & St. Louis Minneapolis, Northfield & Southern Minneapolis, St. Paul & Sault Ste Marie	1,704 30 74 243 21,097 363 141 508 106 340 101 10 46 65 203 129 42 40 496 496	128 0 34	5. 8 6. 1 11. 4 0	9, 735 2 175 262 862 181 670 360 2, 229 0 0 24, 908 412 174 1, 749 0 360 0 0 2, 121 143 0 40 44 121 144 155 6, 105	76 63 0	14. 3 0 4. 5 7. 0 50. 0 2. 3 5. 9 7. 9 11. 4 0 3. 8 7. 8	541 9,554 175 253 658 128 670 15 2,209 0 23,334 400 164 1,666 10 135 0 0 135 0 0 23,209 0 0 24,334 400 164 1,666 0 0 0 24,000 164 1,666 0 0 185 0 185 0 185 0 185 0 185 0 185 0 185 0 185 0 185 0 185 0 185 0 185 0 0 185 0 0 185 0 0 185 0 0 185 0 0 185 0 0 185 0 0 0 185 0 0 0 0 185 0 0 0 0 185 0 0 0 0 0 185 0 0 0 0 0 0 0 0 0 0 0 0 0	27 578 0 9 18 32 14 17 3 96 0 0 0 986 61 4 99 80 10 0 0 0 11 11 11 11 12 14 14 15 16 16 16 16 16 16 16 16 16 16	7.9 11.3 0 3.8 8.0	0 83 2 2 0 0 0 196 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 1	0 0 0 0 7. 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 98 0 0 0 9 8 8 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000000000000000000000000000000000000000	000000000000000000000000000000000000000

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Minnesota Transfer	2, 507	27	1.1	448	24	5.4	445	24	5.4	0	0	Ŏ.	3	ŏ l	Ŏ
Minnesota Western	114	8	7.0	46	0	0	45	_0	0	0		0	1 1	0	ŭ
Mississippi Central	105	14	13.3	555	38	6.8	544	38	7.0	0	0	0	11	0	Ň
Mississippi Export	85	9	10.1	103	7	6.8	100	7	7.0	0	V 1	0	3	0	Ü
Missouri-Illinois	71	3	4.2	476	22	4.6	475	22	4.6	0		0	1	0	ū
Missouri-Kansas-Texas	13, 129	642	4.9	10, 773	643	6.0	10, 474	629	6.0	231		6. 1	68	0	0_
Missouri Pacific 3	14, 496	861	5. 9	26, 612	1,678	6.3	26, 014	1,644	6, 3	327		9.8	271	2	7
Mobile & Gulf	í 0	0	0	34	2	5.9	33	1	3.0	0		0	1		00.0
Monongahela.	452	17	3.8	527	28	5.3	525	28	5. 3	0	0	0	2	0	0
Monongahela Connecting	700	43	6.1	0	0	0	1 0	0	0	0	0	0	0	0	0
Monon	653	64	9.8	1, 214	66	5.4	1, 190	65	5, 5	12		8.3	12	0	0
Montour.	190	12	6.3	245	10	4.1	245	10	4.1	0	0	0	0	0	0
Morehead & Fork	100	1 70	ő	3	l õ	0.	0	0	0	1 0	o l	0	3	0	0
Moscow, Cainden & San Augustine	42	l ĭ	2.4	ň	l ŏ.	۱ŏ	0	ō	0	1 6	Ó	0	0	0	0
Mount Hood	ñ	Ô	0.1	29	6	20.7	28	6	21.4	l ől	ŏΙ	Ó	i i	0	0
Municipal Belt Line (Tacoma)	Ĭŏ	l ŏ	ŏ	287	14	4.9	285	14	4.9	l öl	ō l	Ô	2	0	0
Nashville, Chattanooga & St. Louis	7, 320	157	2.1	9, 261	172	1.9	8,842	167	1.9	189	3	1.6	230	2	. 9
Nashville Terminals	21, 145	369	1.7	4, 778	42	1.9	3, 460	34	1.0	1,053	8	. 8	265	ō	0
Natchez & Southern	78	303	3.8	4, 770	29	13.6	213	29	13.6	1,000	ŏl	ດັ້	0	ŏ	ŏ
	112	7	6.3	193	8	4.2	192	8	4. 2	1 6	ŏ	ŏ	ĭi	ŏ	ň
Nevada Northern	1,067	50	4.7	219	1 14	6.4	218	14	6.4	1 6	ŏ	ŏ	1 1	ŏ	ň
Newburgh & South Shore		30	0 4.7	190	14	3. 2	190	6	3. 2	1 % 1	ŏ	ŏ	ا أ	ŏl	ň
New Orleans & Lower Coast.	1 001	45	4.5		79	3.8	2,090	79	3. 8	ا ۾	ŏ	ŏ	l š l	ŏ	ň
New Orleans Public Belt	1,001			2,098	1 '9	0.0	2,090	6	0.0	6	× I	ŏ	ا م	ŏ	ň
New Orleans, Texas & Mexico 1	99	16	16. 2	405		3.9	· · · · · ·	ň	lő	418	17	4.1	١	0	ŏ
New Orleans Union Passenger Terminal	403	18	4.5	435	17		12		6.6	3, 655	162	4.4	517	35	6.8
New York Central	96, 728	6, 578	6.8	66, 067	4, 270	6.5	61, 895 10, 457	4, 073 793	7.6		3	7. 9	124	11	8. 9
New York, Chicago & St. Louis	10, 340	760	7.4	10, 619	807	7.6			4. 2	38	ő	0.8	124	10	0. 5
New York Dock	0	0	0	243	10	4.1	239	10 686	3.3	1 1		3.1	151	ĭ	. 7
New York, New Haven & Hartford	24, 076	865	3.6	22, 928	749	3.3	20, 793			1, 984		71.4	131	ō	'n'
New York, Ontario & Western	1,710	87	5.1	989	75	7.6	962	65 9	6.8	14	10 7	0	15	ŏ	ň
New York, Susquehanna & Western	0	0	0	257	9	3. 5	255		3.5		ő	0	5	ŏ	ŏ
Niagara Junction	1, 556	88	5. 6	387	28	7. 2	385	28	7.3	0 1	ň	0	25	ŏ	ñ
Norfolk & Portsmouth Belt Line	4, 527	202	4.5	1, 360	45	3.3	1, 335	45	3.4	0.0		.9	131	5	3.8
Norfolk & Western	13, 360	537	4.0	11, 587	499	4.3	11, 138	491	4.4	318	3			0	0.0
Norfolk Southern	1,771	44	2.5	1, 688	48	2.8	1, 656	48	2.9	1 1	0	ŏ	31	ő	ő
North Louisiana & Gulf	0	0	0	80	9	11.3	80	9	11.3	0	0	0	0	0	.,
Northeast Oklahoma	44	1	2.3	40	0	0	38	0	0_	0	0	0	007		0
Northern Pacific	32, 283	1, 283	4.0	24, 996	1, 189	4.8	24, 139	1, 137	4.7	520		3.5	337		10. 1
Northern Pacific Terminal	2, 817	172	6. 1	1, 778	98	5. 5	1,775	97	5. 5	0	0	0	3		33. 3
Northwestern Pacific	575	3	. 5	2, 083	88	4.2	2,073	87	4. 2	0	0	0	10		10.0
Norwood & St. Lawrence	168	16	9, 5	92	13	14. 1	90	12	13.3	0		0	2		50.0
Ogden Union Railway & Depot	1, 376	13	. 9	1, 939	60	3.1	1,875	60	3. 2	61		0	3	0	0
Okmulgee Northern	9	0	0	0	0	0	0	0	0	0		0	0	0	0
Oklahoma City-Ada-Atoka	0	0	0	85	6	7.1	81	6	7.4	0		0	4	0	0
Oregon & Northwestern	0	0	0	399	6	1.5	393	5	1.3	0		0	6		16. 7
Oregon, California & Eastern	0	0	0	38	8	21. 1	37	8	21. 1	0		0	1	0	0
Oregon, Pacific & Eastern	144	16	11. 1	176	13	7.4	173	13	7.5	0		0	3	0	0
Pacific Coast	515	11	2. 1	373	11	2.9	372	11	3.0	0		0	1 1	0	0
Pacific Electric	3, 724	159	4.3	3,606	148	4.1	3, 589	148	4.1	0	0	0	17	0	0
Pacific Lumber Co	0,0	0	0	50	2	4.0	50	2	4.0	0	0	0	0	0	0
Panhandle & Santa Fe	2, 364	141	6.0	2,040	181	8.9	1,980	178	9.0	17	3	17.6	43	0	0
	-, - · -			,											

 ¹⁹⁵⁷ figures included in Missouri Pacific.
 Includes Gulf Coast Lines, International-Great Northern, and New Orleans, Texas & Mexico for 1957.

	195	6 total							195	7					
				7	rotal		Frei	ght cars	3	Passeng	er-train	cars	Loco	motive	8
Railroad	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defec- tive	In- spected	De- fec- tive	Per- cent defective
Patapsco & Back Rivers Pearl River Valley Pecos Valley Southern Pennsylvania Pennsylvania Pennsylvania Peoria & Eastern Peoria & Pekin Union Philadelphia, Bethlehem & New England Pickens Pickens Pittsburgh & Ohio Valley Pittsburgh & Ohio Valley Pittsburgh & Ohio Valley Pittsburgh & West Virginia Port Huron & Detroit Portland Terminal Portland Traction Port Utilities Commission of Charleston Quanah, Acme & Pacific Railway Transfer of Minneapolis Raritan River Reading River Terminal Rockdale, Sandow & Southern Rockchigham Roscoe, Snyder & Pacific Rutland St. Johnsbury & Lamoille County St. Joseph Belt St. Louis, Brownsville & Mexico	502 229 0 1, 903 5, 471 200 74 8, 898 254 1, 182 605 2, 020 0 0 13, 711 3, 452 607 608 13, 452 609 14, 408 15, 408 16, 408 16, 408 17, 408 18,	0 40 23 0 44	0 0 0 4.0 4.4 2.6 3.9 0 0 0 2.8 4.8 0 6.5	620 0 62 61 77, 854 303 1100 70 484 4, 981 110 117, 528 173 1, 993 251 1, 087 409 180 109 11, 147 3, 160 200 555 0 4 1, 570 570 571 575 568 568 575 575 575 575 575 575 575 57	40 23 68	9.8 0.7.6 21.1 3.7 5.8 6.1 3.1 3.1 3.2 12.7 0 25.0 2.5 6.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	620 60 60 60 74, 307 220 110 70 480 16 1, 500 1, 500 1, 500 1, 500 105 171 1, 751 249 1, 868 1, 949 1, 949 1, 949 1, 180 105 10, 554 3, 156 0 0 0 1, 500 2 2 1, 500 2 1, 500 2 1, 500 2 1, 500 1, 500	192 0 7 7 0 1 39 23 6 65 948	6. 1 6. 1 0 3. 6 13. 5 0 50. 0 2. 6 4. 0 2. 7 11. 7 6. 0	0 0 0 0 0 0 3, 015 75 0 0 0 0 95 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0	.4 0 3.1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 2 1 532 8 8 0 0 0 4 4 0 23 3 2 2 13 2 2 15 0 4 4 103 4 4 103 10 2 2 18 8 2 2 0 9 182 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		0 0 0 0 0 0 6. 0 0 1. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

St. Marys Sacramento Northern Sait Lake, Garfield & Western San Antonio, Uvalde & Gulf. San Diego & Arzona Eastern Santa Maria Valley Saratoga & Encampment Valley Savannah & Atlanta. Savannah Union Station Seaboard Air Line Sioux City Terminal South Brooklyn South Buffalo South Omaha Terminal. Southern Indiana Southern Indiana Southern Facific Southern San Luis Valley Spokane International Spokane, Portland & Seattle State Belt (California) Tallulah Falls Tavares & Gulf Tennessee Tennessee, Alabama & Georgia Tennessee Central Terminal Railroad Association of St. Louis Terxas & New Orleans Texas & Northern Texas & Northern Texas & City Terminal Texas Mexican Texas Mexican Texas Mexican Texas Mex Mexico	153 355 87 365 87 368 27 0 0 580 0 33, 872 49, 806 46 48, 193 0 519 6, 600 17 75 0 0 17 285 4, 130 1, 130 1	19 4 2 9 9 14 0 0 0 1, 304 8 2 107 2, 509 3 1, 960 0 1446 0 0 0 1386 699 1387 1377 2, 509 1487 1388 1386 1387	12. 4 11. 4 12. 3 2. 5 0 0 0 6 0 0 0 3. 8 0 0 0 0 3. 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	397 0 52 282 282 282 668 50 35 521 29 32, 763 267 47, 814 4 0 43, 880 11 140 5, 927 26 47, 79 215 3, 242 1, 143 0 14, 662 11, 823 1, 823 271 785 234	33 0 0 19 1 1 0 27 1,757 13 0 14 6 2,742 1,944 0 0 351 0 351 0 17 58 32 0 0 17 18 19 19 10 10 10 10 10 10 10 10 10 10	8.3 0 9.2 2.8 2.0 0 5.2 6.5 4.4 0 0 3.9 1.3 5.7 0 4.4 0 0 7.9 1.8 0 0 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9	393 0 50 275 665 50 35, 514 0 31, 748 265 60 357 452 45, 881 0 43,055 10 140 5, 895 0 25 45 77 207 3, 122 975 0 14, 394 0 11, 106 0 11, 106 0 11, 106 1270 772 230	33 0 0 25 119 1 1 0 26 0 1, 726 1 13 0 14 6 2, 656 0 1, 922 0 346 0 346 0 0 177 555 266 0 849 0 702 133 74 411	8.4 0 0 9.1 2.2 0 0 5.1 2.2 0 0 5.4 0 3.9 3.1.3 0 0 5.9 0 0 0 8.2 1.8 7 0 0 6.3 9.6 9.6 9.6 9.6	0 0 0 0 0 0 0 1 27 404 0 0 0 0 0 1,675 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 0 2 5 3 0 0 6 6 2 611 2 0 1 5 758 0 152 1 0 31 0 1 2 2 8 1 2 2 8 1 1 2 2 8 1 1 2 2 8 1 1 1 2 2 8 1 1 2 8 1 1 2 8 1 1 1 2 8 1 1 1 2 1 1 1 1	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Texas Pacific-Missouri Pacific Terminal Railroad of New Orleans Texas South-Eastern Texas Transportation Tillamook County Naval Airport Commission. Toledo, Angola & Western Toledo, Peoria & Western Toledo Terminal Tooele Valley Trenont & Gulf. Tucson, Cornelia & Gila Bend Union (Memphis) Union (Pittsburgh) Union Belt of Detroit Union Terminal (Dallas) Union Terminal (St. Joseph) Union Terminal (St. Joseph) Uniper Merion & Plymouth	564 36 55 40 28 200 1,052 21 2,606 5,198 448 42,437 283 0 428	444 3 6 5 4 100 115 5 9 1 130 2711 722 895 6 0 0	7. 8 8. 3 11. 0 12. 5 14. 3 11. 0 6. 3 13. 0 5. 0 5. 2 16. 1 2. 1 2. 1 0 4. 2	1, 453 47 32 78 0 179 653 101 70 41 2, 118 2, 428 0 52, 417 185 372 440 176	59 1 2 5 0 0 16 98 1 1 106 106 106 1, 236 3 10 0 1, 236	4. 1 2. 1 6. 3 6. 4 0 8. 9 15. 0 10. 0 2. 4 5. 0 4. 4 0 2. 4 1. 6 2. 7	1, 451 47 31 77 0 172 647 100 70 41 2, 112 2, 410 0 49, 275 50 365 435 175	59 1 2 5 0 0 16 98 1 7 7 1 1 106 106 106 10,189 1 1 0 1,189	4.1 2.1 6.5 6.5 0 9.3 15.1 1.0 10.0 2.4 4.4 0 2.7 0 7.4	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 0 1 1 0 7 6 1 0 0 6 18 0 704 0 704	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

TABLE 1.—Conditions of safety appliances on cars and locomotives of railroads inspected during the fiscal year ended June 30, 1957, as compared with the preceding fiscal year—Continued

	1	Per- cent defec- tive	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.07
	Locomotives	De- fec- tive	0-0000000000000000000000000000000000000	411
	Locor	In- spected	~~1100481144460 24460 2460 2460 2460 2460 2460 246	13, 391
	cars	Por- cent defec- tive	00000000000000000000000000000000000000	4.18
	er-train	De- fec- tive	000000000000000000000000000000000000000	1, 327
7	Passenger-train cars	In- spected		31, 756
1957		Per- cent defec- tive	.1447800000000000000000000000000000000000	5.69
	Freight cars	De- fec- tive	87.8820000000000000000000000000000000000	60, 247
	Frei	In- spected	315 252 252 20 0 0 0 1 13 863 13 13 13 15 10 15 10 15 10 10 10 10 10 10 10 10 10 10 10 10 10	1, 059, 689
		Per- cent defec- tive	.411.70000012877448112877400000000000000000000000000000000000	5.61
	Total	De- fec- tive	88888888888888888888888888888888888888	61, 985
	-	In- spected	28. 28. 28. 29. 20. 1, 624. 1885. 1895. 18	1, 104, 836
	ļ	cent defec- tive	11.000.000.000.000.000.000.000.000.000.	5.26
1956 total	,	fec- tive	\$11.5 \$6.0 \$6.0 \$6.0 \$6.0 \$6.0 \$6.0 \$6.0 \$6.0	63, 787
195		In- spected	200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1, 211, 566
		Ralfroa d	Utah Valdora Southern Valdora Southern Valdora Southern Virginia & Carolina Southern Virginia & Carolina Southern Virginia Central Wabsh Wabsh Waco, Beaumont, Trinity & Sabine Ware Shoals Warrenche & Saline River Warrenche & Saline River Warrenche & Saline River Warrenche & Saline River Warrenche & Carolina & Washington Terminal Washington Terminal Washington Terminal Washington Alaho & Morthwestern Washington Alaho & Morthwestern Washington Alaho & Morthwestern Washington Alaho & Galeton Western Manyland Western Manyland Western Railway of Alabama	Wyandotte Terminal

Table 2.—Tests of air brakes on trains departing from terminals from July 1, 1956, to June 30, 1957

		to J	une 3	9, 195	(
			Brakes		Cars not	Cars	Per- cent of	spec	r in- tion an	Ex-
Railroad	Trains	Cars	cut out	did not apply	con- trolled by air	con- trolled by air	cars con- trolled by air	Cars set out	Cars re- paired in train	cessive piston travel
Ann Arbor Ashley, Drew & Northern Atchison, Topeka & Santa Fe Atlanta & St. Andrews Bay Atlantic Coast Line Baltimore & Ohio	4 2 73 6 6 66 50	239 72 4, 434 375 3, 271 2, 831	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	239 72 4, 434 375 3, 271 2, 831	100 100 100 100 100 100	4 1 91 29 35 136	15 1 276 1 195 137	15 7 94 17 190 191
Baltimore & Ohio Chicago Terminal Belt Railroad of Chicago Bessemer & Lake Erie	9 4 1	390 222 100	0 0 0	0 0 0	0 0 0	390 222 100	100 100 100	18 29 0	5 0 0	25 26 0
Bonhomie & Hattiesburg Southern Boston & Maine Camas Prairie Canadian National Canadian Pacifie Carolina & Northwestern Central of Georgia	1 23 1 1 4 1 13	30 993 97 46 177 27 574	0 0 0 0 0 0	0 0 0 0 0	0 0 0 0 0	30 993 97 46 177 27 574	100 100 100 100 100 100 100	0 12 3 2 1 0 12	0 10 0 2 1 3 39	0 12 0 2 0 3 37
Central Railroad of New Jersey. Central Vermont. Charleston & Western Carolina Chesapeake & Ohio. Chicago & Eastern Illinois Midland. Chicago & North Western I. Chicago & Western Indiana. Chicago & Burlington & Quincy. Chicago Great Western. Chicago, Illinois & Western.	2 1 4 45 2 1 161 174 8 1	47 5 146 2, 480 39 11 7, 575 8 3, 208 433 22	0 0 0 0 0 0 0 2 0 0 0	0 0 0 1 1 0 0 9 0 0 0	0 0 0 1 0 0 11 0 0 0	47 5 146 2,479 39 11 7,564 8 3,208 433 22	100 100 100 99 100 100 99 100 100 100	1 0 3 20 0 3 530 0 131 10	0 0 12 69 1 0 156 0 48 22	0 0 10 68 0 0 518 0 111 29
Chicago, Milwaukee, St. Paul & Pacific Chicago, Rock Island & Pacific Clinchfield Colorado & Southern Colorado & Wyoming Columbia, Newberry & Lau-	93 45 9 8 1	5, 163 2, 052 744 457 59	3 2 0 0 0	10 3 0 0	13 5 0 0	5, 150 2, 047 744 457 59	99 99 100 100 100	229 123 4 4 0	137 82 16 13 0	269 168 2 7 0
Columbus & Greenville Conwall Delaware & Hudson Delaware, Lackawanna &	1 1 1 8	21 28 38 361	0 0 0 0	0 0 0 2	0 0 0 2	21 28 38 359	100 100 100 99	0 1 0 2	0 9 0 7	0 10 0 13
Western Denver & Rio Grande Western. Detroit & Mackinae Detroit Terminal Detroit, Toledo & Ironton Duluth, Missabe & Iron Range Duluth, South Shore & At-	1 4	586 802 24 139 121 964	0 1 0 0 0	1 0 0 5 0	2 3 0 0 5 0	584 799 24 139 116 964	99 99 100 100 96 100	10 4 0 22 25 0	18 19 0 0 6 3	26 19 0 15 29 3
Duluth, Winnipeg & Paeific. Duluth, Winnipeg & Paeific. Durham & Southern. Elgin, Joliet & Eastern Erie. Florida East Coast. Fort Worth & Denver City. Georgia. Grand Trunk Western. Great Northern. Great Northern. Gulf, Colorado & Santa Fe. Gulf, Colorado & Santa Fe. Gulf, Mobile & Ohio. Harbor Belt Lines. Illinois Central. Illinois Northern. Indiana Harbor Belt. Interstate. Kansas City Southern. Kansas City Terminal Kansas, Oklahoma & Gulf.	1 4 4 100 111 15 52 6 6 3 31 1 21 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22 20 27 80 703 689 594 109 360 2,775 1,598 4,729 26 612 150 279 85	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 20 27 80 703 689 594 109 360 2,766 1,624 1,598 24,728 26 607 149 279 85	100 100 100 100 100 100 100 100 100 100	0 0 0 8 19 27 11 22 29 22 22 39 1 26 34 46 60 4 4 0 0	0 3 0 0 19 28 60 3 3 80 0 120 58 0 29 0 0 0 0 0 19 19 0 0 0 0 0 0 0 0 0 0 0	

¹ Includes Chicago, St. Paul, Minneapolis & Omaha.

Table 2.—Tests of air brakes on trains departing from terminals from July 1, 1956, to June 30, 1957—Continued

			Brakes	Brakes that	Cars	Cars	Per-	Afte spec beg	tion	Ex-
Railroad	Trains	Cars	cut out	did not apply	con-	con- trolled	cars con-	Cars set out	Cars re- paired in train	cessive piston travel
Lake Superior & Ishpeming	2	145	0	0	0	145	100	7	0	3
Lake Superior Terminal & Transfer	1	32 382	0	0	0	32 382	100 100	0 6	0 23	0 26
Lehigh Valley Long Island Los Angeles Union Passenger Terminal	1	4	0	0	0	4	100	0	0	0
Louisiana & Arkansas	. 4	15 195	0	0 1 0	0 1 0	15 194 3, 454	99 100	27	8 99	63
Louisville & Nashville Macon, Dublin & Savannah	. 2	3, 454	0 0	0	0	30 176	100 100	3 2	3 13	13
Maine Central Maryland & Pennsylvania Massena Terminal	3 1 1	176 5 33	0	0	ŏ	5 33	100 100	$\frac{1}{2}$	0 5	1 5
Midland Continental	- 1	5 86	0 0	ŏ	Ŏ O	5 86	100 100	0	12	0 5 0
Midland Valley Minneapolis & St. Louis Minneapolis, St. Paul & Sault	. 2	67	Ŏ	0	0	67	100	1	1	146
Ste. Marie Minnesota Western	30	1, 471 33	0	1 2	1 2	1, 470	94	0 30	39	133
Missouri-Kansas-Texas	- 34 90	1,820 3,550	0	6	6	3, 544	99	137 1	110 250 4	318
Monon Mount Hood	$\begin{bmatrix} 6 \\ 1 \end{bmatrix}$	185 7	0	0	0		100	ō	i	î
Nashville, Chattanooga & St. Louis New Orleans Public Belt	_ 50	1, 523 51	0	0	0		100 100	13 6	15 0	10 1
New Orleans Union Passenger Terminal New York Central	1 .	12 2, 856		0 2				0 85	0 138	0 170
New York, Chicago & St.	18	1,086	0							59 12
New York, Ontario & Western New York, New Haven &	7	170 261	1		1					
Hartford. Norfolk & Portsmouth Bell		73	1	1	1	-	1	0		
Line	16	981 100	. 0	() 100	100	1	. 3	: 3
Northern Pacific Terminal Co	74	4, 472	: 0) 10	100	1 0) () 0
Northwestern Pacific	4	1					i	1	1 .	
Depot_ Oregon, California & Eastern_	. 4	358 19) () () () 1	100) () ;	3 3
Pacific Coast		52	3 () () (5 5 13	3 100) () () 0
Pacific Electric Panhandle & Santa Fe	10	136 597	7 () ($\begin{bmatrix} 59 \\ 0 \\ 0 \end{bmatrix}$	7 100	14	4	49
Pecos Valley Southern Pennsylvania	55					$\begin{vmatrix} 2, 2\tilde{7} \end{vmatrix}$	4 99	49	175	i i
Pennsylvania-Reading Sea shore Lines	6					0 10 0 6	3 100) () (1 5
Piedmont & Northern		19	6 (5 ($\begin{bmatrix} 0 & 19 \\ 0 & 3 \end{bmatrix}$	6 100	5 (3 8
Port Terminal Reading	! 1	. 7	7	י וֹכ) ($\begin{bmatrix} 0 & 7 \\ 0 & 42 \end{bmatrix}$	7 100		5 1	1 0 7 17
Richmond, Fredericksburg	<u>ل</u> ا يا	38				0 38			6 4	
Rockdale, Sandow & Souther Roscoe, Snyder & Pacific	n_	.	3	Ď	0	0	5 100 3 100	5 0	0 0	$egin{array}{c cccc} 0 & 4 & 4 \\ 0 & 0 & 0 \\ 1 & 0 & 0 \\ 1 & 1 & 1 \\ \end{array}$
Rutland St. Clair Tunnel Co	j	15	5	Ŏ	ŏ		5 10	0	2	
St. Louis-San Francisco St. Louis Southwestern San Diego & Arizona Eastern	26 17		4	0	0	0 86 0 39 0 18	10	0	$1 \mid 1$	

Table 2.—Tests of air brakes on trains departing from terminals from July 1, 1956, to June 30, 1957—Continued

			Brakes		not	Cars	Per-	spec be	er in- etion gan	Ex-
Railroad	Trains	Cars	out out	did not apply	con- trolled by air	con- trolled by air	cars con- trolled by air	Cars set out	Cars re- paired in train	cessive piston travel
Seaboard Air Line	52	2,190	0	2	2	2, 188	99	48	114	135
Southern Pacific	69	3, 468	0	0	ő	3, 468	100	109	159	47
Southern	90	3, 535	ŏ	ĭ	1	3, 534	99	63	176	149
Spokane, Portland & Seattle	9	312	ŏ	ō	Ó	312	100	ii	9	22
Tennessee	ĭ	73	ŏ	ŏ	ŏ	73	100	0	0	0
Tennessee Central	40	906	0	0	0	906	100	8	2	8
Texas-New Mexico	2	131	0	0	0	131	100	2	33	32
Texas & New Orleans	35	1,665	0	3	4	1,661	99	28	116	127
Texas & Pacific	29	2, 142	0	0	0	2, 142	100	27	218	214
Toledo, Peoria & Western	1	27	0	0	0	27	100	0	1	1
Toledo Terminal	4	46	0	0	0	46	100	1	1	2
Union (Pittsburgh)	3	124	0	0	0	124	100	6	0	4
Union Pacific	82	4, 504	0	0	1	4, 503	99	83	110	81
Union Terminal	1	10	0	0	0	10 38	100 100	1	0	1 0
Utah	1	38	0	0	0	532	100	3	26	25
Virginian	6 13	532 647	0	0	0	647	100	16	32	51
Wabash Warren & Saline River	13	75	0	0	0	75	100	10	0	0
Washington Terminal	2	17	ő	0	6	17	100	0	ŏ	ŏ
Waterloo, Cedar Falls &		1'		"	"	1.	100	"		
Northorn	2	22	1 0	0	0	22	100	0	1	1
Weatherford, Mineral Wells &			"	1	1		-00	ľ	_	_
Northwestern	1	9	0	0	0	9	100	0	0	0
Western Maryland	1 7	480	lŏ	Ŏ	ŏ	480	100	ž	22	16
Western Pacific	5	255	Ŏ	Ŏ	Õ	255	100	4	- 8	0
Western Railway of Alabama	l i	47	0	Ó	0	47	100	0	3	3
Winston-Salem Southbound	1	4	0	0	0	4	100	0	0	0
Grand total	2, 246	105,324	10	77	90	105,234	99	2, 905	4, 146	4, 967

NOTE.—Whenever the sum of cars with "Brakes cut out" and cars with "Brakes that did not apply" is less than the number of "Cars not controlled by air" the difference is the number of nonair cars hauled in the trains tested.

Table 2a.—Tests of air brakes on trains arriving at terminals from July 1, 1956, to June 30, 1957

•	w Jun	0 00, 1	001					
Railroad	Trains	Cars	Brakes ent out	Brakes that did not apply	Cars not con- trolled by air	Cars con- trolled by air	Percent of cars controlled by air	Ex- ces- sive piston travel
Ann Arbor Apalachicola Northern Atchison, Topeka & Santa Fe. Atlantic Coast Line. Baltimore & Ohio Chicago Terminal. Beit Railway of Chicago Terminal. Canadian National Canadian Pacific. Carolina & Northwestern. Central of Georgia. Central Georgia. Central Railroad of New Jersey Central Vermont. Charleston & Western Carolina Chesapeake & Ohio. Chicago & North Western. Chicago Great Western. Chicago Great Western. Chicago, Milwaukee, St. Paul & Pacific. Chicago, Milwaukee, St. Paul & Pacific. Chicago, Rock Island & Pacific. Colorado & Southern. Chicago, Island & Eastern. Erie. Florida East Coast. Fort Worth & Denver. Georgia & Florida. Grand Trunk Western. Great Northern. Green Bay & Western. Great Northern. Green Bay & Western. Great Northern. Great Northern. Green Bay & Western. Great Northern. Green Bay & Western. Great Northern. Green Bay & Western. Great Northern. Kansas City Terminal Kansas, Oklahoma & Gulf. Lake Superior & Islanding. Lake Superior Terminal & Transfer. Lehigh Valley. Los Angeles Junction. Lusisian & Arkansas. Louisville & Nashville. Macon, Dublin & Savannah. Maine Central. Massena Terminal Minneapolis & St. Louis. Minneapolis & St. Louis. Minneapolis & St. Louis.	3 3 1 5 5 25 5 8 8 1 1 4 4 26 6 20 0 4 4 7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	58 547 2, 012 146 1, 217 118 122 5, 86 1, 46 413 413 17 7	00110000110000110000110000110000110000110000	0 0 377 13 2 2 4 12 12 12 12 12 12 12 12 12 12 12 12 12	4 1 1 9 9 9 9 9 50 3 1 0 0 0 1 1 3 6 1 1 3 6 1 1 3 6 1 1 3 6 1 1 3 6 1 1 1 1	235 4, 319 84 48 13 1323 1, 287 56 1, 420 1, 200 1,	999 999 100 999 100 999 100 997 986 986 997 986 998 999 999 999 999 999 999 999 999	33 8 8 12 288 11 10 10 10 10 10 10 10 10 10 10 10 10

Table 2a.—Tests of air brakes on trains arriving at terminals from July 1, 1956, to June 30, 1957—Continued

Railroad	Trains	Cars	Brakes cut out	Brakes that did not apply	Cars not con- trolled by air	Cars con- trolled by air	Percent of cars controlled by air	Ex- ces- sive piston travel
Northern Pacific Northwestern Pacific. Ogden Union Railway & Depot Pacific Electric. Pennsylvania. Pennsylvania. Pennsylvania Reading Seashore Lines. Piedmont & Northern Pittsburgh & Lake Eric Pittsburgh & West Virginia Quanah, Acme & Pacific Reading. Richmond, Fredericksburg & Potomac Ritland. St. Louis-San Francisco Seaboard Air Line. Southern Southern Southern Southern Southern Pacific Pennsesse, Alabama & Georgia Texas & New Orleans Texas & New Orleans Texas & Pacific Tucson, Cornelia & Gila Bend Union Pacific Utah Valley & Siletz Wabash Western Maryland Western Pacific	7 5 14 8 1 14 76 36 8 1 9 4 1 52	1, 765 78 116 26, 565 10 56 267 305 561 119 761 1, 023 3, 409 2, 807 627 51 870 79 14 4, 146 46 46 46 256 1, 188 256 264	2 0 3 0 0 13 0 0 0 0 2 2 0 0 0 2 2 0 0 0 2 0 0 0 0	15 13 1 226 0 2 7 2 1 7 6 4 4 13 18 64 48 81 13 11 0 0 0 0 0 0 0 0 0 0 0 0 0	17 1 6 1 239 0 0 2 7 4 4 1 7 7 4 4 16 4 4 3 3 20 736 515 11 105 2 1 35 8 8	1, 748 77 110 21 6, 326 10 54 260 301 1 115 745 503 93 1, 003 3, 336 2, 751 612 50 847 79 13 4, 041 44 42 1, 153 242 262	99 99 95 96 100 96 97 97 97 99 97 98 98 98 98 98 98 97 100 97 96 97	69 1 6 5 707 0 1 12 65 5 65 5 98 43 43 43 43 60 287 3599 588 122 124 145 6 6 2 123 133 13 13 15
Grand total	1,342	85, 944	250	1,657	1,907	84, 037	98	6, 956

Norg.—Wherever the sum of cars with "Brakes cut out" and cars with "Brakes that did not apply" is less than the number of "Cars not controlled by air" the difference is the number of nonair cars hauled in the trains tested.

Total

148 17

17

158

48 377

503 50 431

122 5 125

Block

sys-tems

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Inter.

lock-ing

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False restrictive failures

ATS, ATC, ACS

25

488

97 98

31

2

44

195

11

99 19

14

Block

sys-tems

76

2

368

59

305 365 9

92 2 132

188

17

14 111

70

180

48

39

Inter-

lock-

ing

47 17 15

 $\frac{3}{347}$

35

315 147

48 158 81

5

5 5 59

125 75

27

Other

sys-tems

66

Name of railroad

Alabama Great Southern_____ Alton & Southern Ann Arbor Arkansas & Memphis Ry. Bridge & Terminal

Arkansas & Memphis IV, Mage Co.

Atchison, Topeka & Santa Fe.

Atlanta & West Point

Atlanta Terminal

Atlantic Coast Line

Baltimore & Ohio

Battlenore & Otto
Bamberger
Bangor & Aroostook
Belt Railway of Chicago
Bessemer & Lake Erie
Birmingham Terminal
Boston & Maine
Boston Terminal
Butte Anaconda & Pacific

Boston & Maine.

Boston Terminal
Butte, Anaconda & Pacific.
Canadian National
Canadian Pacific
Central of Georgia.
Central of Georgia.
Central R. R. of New Jersey.
Charleston & Western Carolina
Chesapeake & Ohio.
Chicago & Eastern Illinois.
Chicago & Illinois Midland.
Chicago & Illinois Midland.
Chicago & Western Indiana.
Chicago & Western Indiana.
Chicago, Burlington & Quincy.
Chicago Great Western.
Chicago, Milwaukee, St. Paul & Pacific.
Chicago, North Shore & Milwaukee.
Chicago, Rock Island & Pacific.
Chicago, Rock Island & Pacific.
Chicago South Shore & South Bend.
Chicago Union Station.
Cincinnati, New Orleans & Texas Pacific Cincinnati, New Orleans & Texas Pacific Cincinnati, Vicin Terminal.
City of St. Louis Municipal Bridge.
Clinchfield.
Dayton Union

False proceed failures

ATS, ATC, ACS

2

Other

sys-tems

Total

1

Total

sys-tems

Potential false proceed conditions

ATS, ATC, ACS

lock-

Block

sys-tems

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Delaware & Hudson	141 179 410	99 44 4 14		240 227 424 32	2		gyddiad o'r c	 2				
Detroit & Toledo Shore Line Detroit, Toledo & Ironton Duluth, Missabe & Iron Range Elgin, Joliet & Eastern Erie Florida East Coast Fort Dodge, Des Moines & Southern Fort Worth and Denver Galveston, Houston & Henderson	8 33 113 272 81	1 2 34 141 91 40	3 4	6 8 43 174 247 272 6 81 1 121	2			 2				REPORT
Georgia Southern & Florida Grand Trunk Western Great Northern Green Bay & Western Gulf, Mobile & Ohio Houston Belt & Terminal Hudson & Manhattan Illinois Central Illinois Terminal Indianapolis Union	83 206 496 5 137 7 81 399 200	12 59 97 16 30 22	28 1 9	121 327 554 10 174 19 158 656 230 22 92	1 4	2	1	4 4	2	1	3	OF THE SECT
Jacksonville Terminal Kansas City Southern Kansas City Terminal Kentucky & Indiana Terminal Lake Superior & Ishpeming Lehigh & Hudson River Lehigh & New England Lehigh Valley Litchfield & Madison Long Island	7 1 33 5 42	43 49		250 251 34 1 7 3 51 5 580 912	3	1			1			ECTION OF RAIL
Louisville & Nashville Maine Central. Memphis Union Station Minneapolis, St. Paul & Sault Stc. Marie Missouri-Kansas-Texas Missouri-Kansas-Texas of Texas Missouri-Kansas-Texas Missouri-Kansas-Texas Missouri-Monon Monongahela Monongahela Monongahela Connecting	210 500 165 37	133 19 20 38 19 22 135 15		104 38 159 298 232 635 180 37 50	1	1		1 3	2		 2	RAILROAD SAFETY
Nashville, Chattanooga & St. Louis Newburgh & South Shore New Orleans & Northeastern New Orleans Public Belt New Orleans Union Passenger Terminal New York Central New York, Chicago & St. Louis New York, New Haven & Hartford New York, Ontario & Western	167 50 3 840 211	1 21 846 292	8 1	201 7 67 4 21 1, 922 535 421 30	1		8	9	1		1	• • •

Name of railroad	False restrictive failures				False proceed failures				Potential false proceed conditions						
	Block sys- tems	Inter- lock- ing	ATS, ATC, ACS	Other sys- tems	Total	Block sys- tems	Inter- lock- ing	ATS, ATC, ACS	Other sys- tems	Total	Block sys- tems	Inter- lock- ing	ATS, ATC, ACS	Other sys- tems	Total
ew York, Susquehanna & Western	12				12										 - <u>-</u>
orfolk & Western	228	205	26		459					li					
orthern Pacific	813	45			858										
orthwestern Pacific	6	10			6										
	33	61			94										
acific Electric		01			94										
aducah and Illinois	1				2, 344	2	3	3							
ennsylvaniaennsylvania	439	571	1, 326	8		2		3							
ennsylvania-Reading Seashore Lines	31	4	19		54										
eoria & Pekin Union	25	26		8	59										
ittsburgh & West Virginia	61				61	2				2					
ortland Terminal		1			1										
ortland Traction	84		i		84										
eading	83	57		2	142				İ	1					
ichmond, Fredericksburg & Potomac		62	2		118		1			1					
iver Terminal		67			67		-								
utland		14			14										
	7	17			14										
acramento Northern	397	29			426	3				1					
. Louis-San Francisco		29			200	, ,									
t. Louis Southwestern	200				480	- 									
eaboard Air Line	480					1	1								
outhern	701	114	161	14	990	1		~		1	1				1
outhern Illinois & Missouri Bridge	3				3										
outhern Pacific	319	107	30		456	3	1	\		4			1		
pokane, Portland & Seattle	74	1			75						l				
erminal R. R. Assn. of St. Louis	12	84			96	1				1			-		
exas & New Orleans	128	57			185		1		l	1					
exas & Pacific	242	i			243	1		1							
exas Pacific-Missouri Pacific Terminal Rail-	1 212	1			210					1					
road of New Orleans	l	1			1]			1			1	l		
		15		1	16										
oledo, Peoria & Western	434	20	19	1	473										
nion Pacific		20	19												
tah	9				9										
irginian	31	22		ļ 9	62										
Vabash		36			211					. 1]	
Vashington Terminal		. 88			88		5								
Vestern Maryland	84	27			111										
Vestern Pacific		6	l		188	l					I				
Vestern Ry, of Alabama	63	l			63						-	.	l		
ODDOLLI IVJ . OL ILIGOGILIGETETETETETETETETETETE													-		
Total	16, 536	7, 409	3, 947	173	28, 065	37	23	14		74	10	1	2	1	

Table 3a.—Causes of false-proceed failures reported by carriers for the year ended June 30, 1957, as listed in table 3

Name of railroad	Sand, rust, or other deposit on rails	Failure of relays and similar devices	Circuits open, crossed or grounded, foreign current, et cetera	Apparatus broken, defective, or out of adjustment	Failure of apparatus due to ice, sleet, snow wet track, weather, or lightning	Failure of apparatus due to obstruction	Errors in making connections or adjust- ments	Undeter- mined	Total
Ann Arbor. Atchison, Topeka & Santa Fe- Baltimore & Ohio. Boston & Maine			3	1			1 1 1		1 5 1 1
Baltimore & Ohio Boston & Mainc Central of Georgia Central R. R. of New Jersey Chesapeake & Ohio Chicago, Burlington & Quincy Chicago, Milwaukee, St. Paul & Pacific Chicago North Shore & Milwaukee Delaware & Hudson Erie Fort Worth and Denyer	1	1	1	1		1			1 1 1 3
Chicago, Milwaukee, St. Paul & Pacific. Chicago North Shore & Milwaukee Delaware & Hudson Erie Fort Worth and Denver	1		1	1	1				1 1 2 2 1
Fort Worth and Denver Hudson & Manhattan Illinois Central Indianapolis Union Jacksonville Terminal Long Island Louisville & Nashville Maine Central Monon New York Central Pennsylvania Pennsylvania Pittsburgh & West Virginia Richmond, Fredericksburg & Potomac St. Louis-San Francisco Seaboard Air Line Southern Southern Pacific	1 1	2 1	1		1		1 2		4 4 1 1
Long Island Louisville & Nashville Maine Central Monon Monon Louisville & Nashville	1		1	1 7	1 1		1		1
Pennsylvania Pittsburgh & West Virginia Richmond, Fredericksburg & Potomac. St. Louis-San Francisco.	4 1		4		1	1	1	i	1 3
Terminal R. R. Association of St. Louis		1				1			
Wabash Washington Terminal	5					1			
Total		4	13	11	12	5	9	2	74

Table 3b.—Causes of potential false-proceed conditions reported by carriers for the year ended June 30, 1957, as listed in table 3

Name of Railroad	Sand, rust, or other deposit on rails	Failure of relays and similar devices	Circuits open, crossed or grounded, foreign current, et cetera	Apparatus broken, defective, or out of adjustment	Failure of apparatus due to ice, sleet, snow, wet track, weather, or lightning	Failure of apparatus due to ob- struction	Errors in making con- nections or adjustments	Undeter- mined	Total
Atchison, Topeka & Santa Fe			1		1	1			3
Atchison, Topeka & Santa Fe. Central R. R. of New Jersey.				1					1
Hudson & Manhattan		3							3
Lehigh Valley				1				1	1
Missouri Pacific New York Central	2	-				<i>-</i> -			2
New York Central						1			1
Southern									
Total	2	3	1	3	1	2			12

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