

Decrease in Signal Failures

IN THE FISCAL YEAR ending June 30, 1958, there were 25,299 restrictive signal failures, a reduction from 28,065 for the previous year. A total of 72 false proceed failures occurred, compared to 74 the year previous, and there were 16 potential false proceed conditions, an increase of four over the previous year.

Investigation of Accidents

Of the collisions investigated, 24 occurred on lines operated by the block system, 7 on lines operated by timetable and train-order system and 6 in locations where yard and miscellaneous operating rules were in effect, as shown in the following statement:

Of the 37 collisions investigated, 7 involved track motorcars; 11, failure to obey signal indications; 4, failure properly to control speed within yard limits; 8, motor vehicles at grade crossing; 1, failure to provide adequate protection for preceding train; 1, switch being opened in front of approaching train; 2, cars moving out of control on grade; 1, failure to deliver a train order; 1, failure to issue a train order; and 1, locomotive and cars occupying track without authority.

During the calendar year 1957, there were 3,569 accidents at high-

way grade crossings which resulted in the death of 1,371 persons and injury of 3,767 persons. Motor vehicles were involved in 3,283 of these accidents, in which 1,217 persons were killed and 3,613 injured. There were 58 derailments of trains at highway crossings involving motor vehicles, which caused the death of 32 persons and the injury of 58 persons. Casualties to persons on trains resulting from derailments and other train accidents at highway crossings consisted of 11 killed and 146 injured.

During the year, 255 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 25 applications previously filed. During the year, 217 applications were acted upon, 2 applications were withdrawn, and at the close of the year action was pending on 61 applications. Public hearings were held on 14 applications.

Report for 1958

The Bureau of Safety and Service of the Interstate Commerce Commission has issued a report for the fiscal year ended June 30, 1958. This report, ab-

stracted herewith, includes tables and explanations pertinent to the results of inspections of railroad safety appliances; investigation of railroad accidents; signal, interlocking, automatic train stop, train control and cab signal installations; train communication systems; highway grade crossing accidents; and other Bureau of Safety and Service activities. The report is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C.

Communications Systems

According to reports submitted by the carriers, as of January 1, 1958, train communication systems were in service for operation over a total of 108,584 miles of road on the line of 98 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 5,580 miles of road.

Considering only radio and inductive system used in connection with railroad operation, such systems were in service on 103,004 miles of road on 97 railroads. This compares with radio and inductive communication systems in service on 89,927 miles of road on 89 railroads, as of January 1, 1957.

Performance Each Year

	False Restrictive Failures	False Proceed Failures
1948	42,282	223
1949	35,860	156
1950	32,918	143
1951	33,758	140
1952	32,885	119
1953	29,509	109
1954	27,865	69
1955	27,371	70
1956	29,761	76
1957	28,065	74
1958	25,299	72

	1956			1956			1957		
	Number	Number of Persons		Number	Number of Persons		Number	Number of Persons	
		Killed	Injured		Killed	Injured		Killed	Injured
Accidents at highway grade crossings.....	3,846	1,446	4,014	3,639	1,338	3,755	3,560	1,371	3,767
Accidents at highway grade crossings involving motor vehicles.....	3,583	1,313	3,885	3,379	1,202	3,629	3,283	1,217	3,613
Deraillments of trains at highway grade crossings involving motor vehicles.....	80	43	72	66	49	115	58	32	58
Miscellaneous train accidents as a result of collisions between trains and motor vehicles.....	307	159	164	347	155	161	183	126	184
Motor vehicles registered.....	62,760,395			65,212,510			67,135,546		
Railroad casualties:									
Passengers.....			27			83			51
Employees on duty.....		3	68		9	64		11	85
Persons carried under contract.....			4		1	5			
Travelers not on trains.....									
Total.....		3	90		10	182		11	146

False restrictive failures of signals, interlockings, etc., for year ending June 30, 1958

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 adjustments	Undetermined	Total
Alabama Great Southern.....					1				1
Ann Arbor.....			1						1
Atchafalaya, Topeka & Santa Fe.....			3		1				4
Boston & Maine.....			1						1
Chesapeake & Ohio.....			2				1		3
Chicago & Eastern Illinois.....			1						1
Chicago & North Western.....			2	1		1			4
Chicago, Burlington & Quincy.....	1		1						2
Chicago, Milwaukee, St. Paul & Pacific.....		3	1		1		1		7
Chicago, Rock Island & Pacific.....						1			1
Denver & Rio Grande Western.....	1								1
Erie.....						1			1
Fort Worth & Denver.....			1						1
Hudson & Manhattan.....		1							1
Illinois Central.....			3				1		4
Louisville & Nashville.....			1				1		2
Missouri-Kansas-Texas of Texas.....			1				1		2
Monon.....			1		1				2
New Orleans & Northeastern.....			1						1
New York Central.....			8	3		1			12
Norfolk & Western.....			1	1					2
Northern Pacific.....			1		1				2
Pennsylvania.....	4		1	3		1			7
Seaboard Air Line.....		1							1
Southern.....		1	1						2
Southern Pacific.....					1				1
Union Pacific.....	1								1
Washington Terminal.....	3								3
Western Pacific.....	1						1		2
Total.....	11	6	30	8	6	8	3		73

Causes of false proceed failures for year ending June 30, 1958

Name of railroad	False restrictive failures				Total	Name of railroad	False restrictive failures				Total
	Block systems	Interlocking	ATS, ATC, ACS	Other systems			Block systems	Interlocking	ATS, ATC, ACS	Other systems	
Alabama Great Southern.....	80	46	6		132	Kansas City Terminal.....		237			237
Alam & Southern.....	5	18			23	Kentucky & Indiana Terminal.....		32			32
Ann Arbor.....	6	9			15	Lake Superior & Ishpeming.....	1	3			4
Arkansas & Memphis Ry. Bridge & Term. Co.....	2	4			6	Lake Superior & Hudson River.....	6	1			7
Atchafalaya, Topeka & Santa Fe.....	272	237	264		773	Lehigh & New England.....	1	1			2
Akron & West Point.....	51				51	Lehigh Valley.....	37	7	11		55
Atlanta Terminal.....		44			44	Long Island.....	15	40	479		534
Atlantic Coast Line.....	246	244	49	15	554	Louisville & Nashville.....	648	139	153		940
Baltimore and Ohio.....	340	129	94		563	Maine Central.....	56	8			64
Baltimore & Annapolis.....	1				1	Memphis Union Station.....		38			38
Baltimore & Annapolis.....	87			104	191	Minneapolis, St. Paul & Sault Ste. Marie.....	121	41			162
Baltimore & Annapolis.....	1				1	Missouri-Kansas-Texas.....	319	24		3	346
Baltimore & Annapolis.....	64				64	Missouri-Kansas-Texas of Texas.....	302	7			310
Birmingham Terminal.....		66			66	Missouri Pacific.....	384	167			551
Boston & Maine.....	138	99	30		267	Monon.....	101	17			118
Boston Terminal.....		61			61	Monongahela.....	24				24
Boston, Andover & Pacific.....	20	1			21	Monongahela Connecting.....	46				46
Canadian National.....		1			1	Newburgh & South Shore.....		1			1
Canadian Pacific.....	16				16	New Orleans & Northeastern.....	42	3	6		51
Central of Georgia.....	110	6			116	New Orleans Public Belt.....	3	1			4
Central R. R. of New Jersey.....	75	150	3		228	New Orleans Union Passenger Terminal.....	2	14			16
Charleston & Western Carolina.....		2			2	New York Central.....	686	649	274		1,609
Chesapeake & Ohio.....	178	155	24		357	New York, Chicago & St. Louis.....	160	256	40		456
Chicago & Eastern Illinois.....	134	100			243	New York, New Haven & Hartford.....	170	196	5		371
Chicago & Illinois Midland.....	17				17	New York, Susquehanna & Western.....	14				14
Chicago & North Western.....	288	95	183		566	Norfolk & Western.....	192	206			398
Chicago & Western Indiana.....	23	32			55	Northern Pacific.....	780	41			821
Chicago, Burlington & Quincy.....	293	21	9		423	Northwestern Pacific.....	1				1
Chicago Great Western.....	128	17			145	Pacific Electric.....	34	58			92
Chicago, Milwaukee, St. Paul & Pacific.....	503	141	123		767	Pennsylvania.....	527	767	1,223	11	2,528
Chicago, North Shore & Milwaukee.....	51	30			81	Pennsylvania-Reading Seashore Lines.....	18	6	31		55
Chicago, Rock Island & Pacific.....	479	105	4		588	Peoria & Pekin Union.....	10	20			30
Chicago, South Shore & South Bend.....	74	7		1	82	Pittsburgh & West Virginia.....	96				96
Chicago Union Station.....		7			7	Portland Terminal.....		4			4
Chicheston, New Orleans & Texas Pacific.....	46	47	11	4	108	Portland Tracton.....	40				40
Cincinnati Union Terminal.....		122			122	Reading.....	76	51	4	1	132
City of St. Louis Municipal Bridge.....		53			53	Richmond, Fredericksburg & Potomac.....	34	49	7		90
Cleveland.....	53				53	River Terminal.....		73			73
Dayton Union.....		24			24	Rutland.....		15			15
Delaware & Hudson.....	138	89			227	Sacramento Northern.....	1	3			4
Delaware, Lackawanna & Western.....	146	74	7		227	St. Louis-San Francisco.....	365	15			380
Denver & Rio Grande Western.....	348	12			360	St. Louis Southwestern.....	102				102
Denver Union Terminal.....		16			16	Seaboard Air Line.....	436				436
Detroit & Toledo Shore Line.....	6				6	Southern.....	615	100	113	14	842
Detroit, Toledo & Ironton.....		4			4	Southern Illinois & Missouri Bridge.....	6				6
Duluth, Missabe & Iron Range.....	13	10			23	Southern Pacific.....	365	105	31		501
Erie, Joliet & Eastern.....	32	115			147	Sookane, Portland & Seattle.....	75	9			84
Erie.....	105	93	81	4	283	Terminal R. R. Assn. of St. Louis.....	21	124			145
Florida East Coast.....	158				158	Texas & New Orleans.....	175	50			225
Fort Dodge, Des Moines & Southern.....		5		1	6	Texas & Pacific.....	187	2			189
Fort Worth & Denver.....	86	9			95	Texas Pacific-Missouri Pacific Terminal Railroad of New Orleans.....		1			1
Georgia.....	65				65	Toledo, Peoria & Western.....		16			16
Georgia Southern & Florida.....	66		37	14	117	Union.....		1		1	2
Great Frank Western.....	160	90			250	Union Pacific.....	438	19	12		469
Great Northern.....	358	56			414	Utah.....	4				4
Great Bay & Western.....	10	4	1		15	Virginian.....	31	21		8	60
Great, Marble & Ohio.....	107	29	3		139	Wabash.....	172	45			217
Herkon Belt & Terminal.....	2	11			13	Washington Terminal.....		332			332
Hudson & Manhattan.....	39	51	25	1	116	Western Maryland.....	72	27			99
Illinois Central.....	336	66	132		534	Western Pacific.....	166	3			169
Illinois Terminal.....	133	16			149	Western Ry. of Alabama.....	47				47
Indianapolis Union.....		10			10						
Jacksonville Terminal.....		72			72						
Kansas City Southern.....	133	159			292						
Total.....	14,526	7,114	3,474	145	25,299						