Decrease in Signal Failures Reported by ICC Bureau of Safety

THE BUREAU OF SAFETY and Service of the Interstate Commerce Commission has issued a report for the fiscal year ended June 30, 1957. This report, abstracted herewith, includes several tables and explanations pertinent to the results of inspections of railroad safety ap-pliances; investigation of railroad accidents; signal, interlocking, automatic train stop, train control and cab signal installations; train com-munication systems; highway grade crossing accidents; and other Bureau of Safety and Service activities. The entire report is available from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D.C. In the fiscal year ending June 30,

1957, there were 28,065 restrictive

signal failures, a reduction from 29,761 for the previous year. A total of 74 false proceed failures occurred, compared with 76 the year previous, and there were 12 potential false proceed conditions, as compared with 11 in 1956.

Investigation of Accidents

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:

Of the 47 collisions investigated, 9 involved track motorcars; 10, failure to obey signal indications; 6,

	Performance	e Each Yea	r
		False Restrictive Failures	False Proceed Failures
1947		39,990	227
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

failure properly to control speed within yard limits; 7, motor vehicles at grade crossings; 3, failure to provide adequate protection for pre-ceding train; 2, switch being

Restrictive failures of signals, interlockings, train-stop, train control and cab signals, year ending June 30, 1957

	False restrictive failures						False restrictive failures					
Name of railroad	Block sys- tems	Inter- lock- ing	ATS, ATC, ACS	Other sys- tems	Total	Name of railroad	Block sys- tems	Inter- lock- ing	ATS, ATC, ACS	Other sys- tems	Total	
Alabama Great Southern	76	47	25		148	Kentucky & Indiana Terminal		34			34	
Alton & Southern		17			17	Lake Superior & Ishpeming		1			1	
Ann Arbor	2	15			17	Lehigh & Hudson River.	7				2	
Arkansas & Memphis Ry. Bridge & Terminal						Lenigh & New England	22	13	5		51	
Co	2	3			5	Litchfield & Madison	5	10	0		5	
Atchison, Topeka & Santa Fe	368	347	488		1, 203	Long Island	42	43	495		580	
Atlanta Corminal	- 39	35			39	Louisville & Nashville	584	133	195		912	
Atlantic Coast Line	305	315	97		717	Maine Central	84	20			104	
Baltimore & Ohio	365	147	98		610	Memphis Union Station		38			38	
Bamberger	9				9	Minneapolis, St. Paul & Sault Ste. Marie	129	30			159	
Bangor & Aroostook	92			66	158	Missouri-Kansas-Texas	279	19			298	
Belt Railway of Chicago	2	6			8	Missouri-Ransas-Texas of Texas	210	125			625	
Bessemer & Lake Erie	132				132	Monon	165	15			180	
Birmingham Terminal	100	48			48	Monongahela	37	10			37	
Boston & Maine	188	108	31		011	Monongahela Connecting	50				50	
Butte Appende & Pacific	17	01			17	Nashville, Chattanooga & St. Louis	167	34			201	
Canadian National		5			5	Newburgh & South Shore		7			7	
Canadian Pacific	14				14	New Orleans & Northeastern	50	8	8	1	67	
Central of Georgia	111	9			120	New Orleans Public Belt	3	1			91	
Central R. R. of New Jersey	70	135	2		207	New Oricans Union Passenger Terminal		21			1 022	
Charleston & Western Carolina		2			2	New York Chienge & St Louis	211	202	32		535	
Chesapeake & Ohio	180	188	44		412	New York, New Haven & Hartford	159	243	19		421	
Chicago & Eastern Illinois	182	1/1	0		309	New York, Ontario & Western	30	210			30	
Chicago & Marth Western	917	01	105		503	New York Susquehanna & Western	1 12	1	1	1	12	
Chicago & Western Indiana	299	28	150		50	Norfolk & Western	228	205	26		459	
Chicago Burlington & Quiney	394	26	11		431	Northern Pacific	813	45			858	
Chicago Great Western	164	20			184	Northwestern Pacific	6				6	
Chicago, Milwaukee, St. Paul & Pacific	747	82	99		928	Pacific Electric	33	61			94	
Chicago North Shore & Milwaukee	52	34			86	Paducah and Illinois	1				1	
Chicago, Rock Island & Pacific	413	93	19		525	Pennsylvania	439	571	1, 326	8	2, 344	
Chicago South Shore & South Bend	117	5			122	Pennsylvania-Reading Seashore Lines	31	4	19		54	
Chicago Union Station		50	14		105	Peoria & Pekin Union	25	26		8	61	
Cincinnati, New Orleans & Texas Facine	10	125	14	4	120	Portland Terminal	01	1			1	
City of St. Louis Municipal Bridge		75	******		75	Portland Traction	84				84	
Clinchfield	39				39	Reading	83	57		2	142	
Dayton Union		27			27	Richmond, Fredericksburg & Potomac	54	62	2		118	
Delaware & Hudson	1 141	1 99	1	1	1 240	River Terminal		67			67	
Delaware Lackawanna & Western	179	44	4		227	Rutland		14			14	
Denver & Rio Grande Western	410	14			424	Sacramento Northern	207	20			19	
Denver Union Terminal		32			32	St. Louis Southwestern	200	23			200	
Detroit & Toledo Shore Line	5	1			6	Seaboard Air Line	480				480	
Detroit, Toledo & Ironton		2		0	8	Southern	701	114	161	14	990	
Flain Joliet & Fostann	32	141		1	40	Southern Illinois & Missouri Bridge	3				3	
Eight, Jonet & Eastern	113	91	40	3	247	Southern Pacific	319	107	30		456	
Florida East Coast	272		10		272	Spokane, Portland & Seattle	74	1			75	
Fort Dodge, Des Moines & Southern		2		4	6	Terminal R. R. Assn. of St. Louis	12	84			90	
Fort Worth and Denver	81				81	Texas & New Orleans	128	01			180	
Galveston, Houston & Henderson		1			1	Texas Pacific-Missouri Pacific Terminal Rail-	214	1			240	
Georgia	121				121	road of New Orleans		1	1.20.000		1	
Georgia Southern & Florida	83	0.2	20	00	121	Toledo, Peoria & Western		15		1	16	
Grand Trunk Western	200	59		- 40	554	Union Pacific	434	20	19		473	
Green Bay & Western	400	4	******	1	10	Utah	9				9	
Gulf. Mobile & Ohio	137	28	9	1	174	Virginian	31	22		9	62	
Houston Belt & Terminal	7	12			19	Wabash	175	36			211	
Hudson & Manhattan	81	59	6	12	158	Washington Terminal		88			88	
Illinois Central	399	97	160		656	Western Pacific	189	R			199	
Illinois Terminal	200	30			230	Western Ry of Alabama	62	0			63	
Indianapolis Union		22			22							
Jacksonville Terminal	1.41	92			92	Total	16, 536	7.409	3, 947	173	28,065	
Kansas City Southern	141	251			250			1	1			
Ransas Ony Terminal		104			100							

RAILWAY SIGNALING and COMMUNICATIONS

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opened in front of approaching train; 2, failure to clear opposing superior train; 1, train being operated against the current of traffi on a track which was not clear of opposing train; 1, failure properl to control speed of locomotive returning from rear portion of train 1, cars moving out of control or grade; 1, failure to deliver a trai order; 2, train fouling main trac immediately in front of approach ing train; 1, rear portion of train running into forward portion o train; and the cause of 1 has no yet been determined.

Grade Crossing Accidents

During the calendar year 195 there were 3,639 accidents at high way grade crossings, which resulted in the death of 1,338 person and injury of 3,755 persons. Moto 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.

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,

		Num	ber of sons		Number of persons			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, 75	
crossings involving motor vehicles	3, 074	1, 151	3, 314	3, 583	1, 313	3, 886	3, 379	1, 202	3, 62	
way grade crossings involv- ing motor vehicles Miscellaneous train accidents as a result of collisions be- tween trains and motor vehi-	65	35	72	80	43	72	66	49	114	
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		9	21 75		3	27 68			81 64	
tract	-	- -	2			4		1		
Total	-	9	98		3	99		10	152	

1954

Accidents at highway-railroad crossings

1955

1956

3, 755

3, 629

115

161

83 64

5

152

229 applications were acted upon, two applications were withdrawn, and at the close of the year action was pending on 25 applications. Public hearings were held on seven.

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 con-nections through the train and installations providing radio-telephone service through commercial telephone company radio facilities, operating over 5,313 miles of road.

Considering only radio and in-ductive 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. 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.

Causes of false-proceed failures, year ending June 30, 1957

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			3	1			1 1 1		1
Boston & Maine. Central of Georgia Central R. R. of New Jersey.	1	1			1				
Chesapeake & Ohio. Chicago, Burlington & Quincy. Chicago, Milwaukee, St. Paul & Pacific	1		1	1	1	1			
Erie Fort Worth and Denver	1		1	1	1				
Hudson & Manhattan Illinois Central Indianapolis Union	1	21	1		1		12		
Jacksonvule 1 erminal Long Island Louisville & Nashville	1		1		1		1		
Monon. New York Central Pennsylvania	4		4	17	1			1	
Pittsburgh & West Virginia Richmond, Fredericksburg & Potomac St. Louis-San Francisco	1				1	i	1	1	
Seaboard Air Line			1		1 3	1	1		
Wabash. Washington Terminal	5					1			1
Total	18	-4	13	11	12	5	9	2	74

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