

Technical Report Documentation Page

1. Report No. DOT-TSC-RSPA-87-10	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle TRANSPORTATION SAFETY INFORMATION REPORT FIRST 6 MONTHS 1987		5. Report Date February 1988	
7. Author(s) Michael Rossetti		6. Performing Organization Code DTS-32	
9. Performing Organization Name and Address U.S. Department of Transportation Research and Special Programs Administration Transportation Systems Center, Center for Transportation Information, Cambridge, MA 02142		8. Performing Organization Report No. DOT-TSC-RSPA-87-10	
12. Sponsoring Agency Name and Address U.S. Department of Transportation Research and Special Programs Administration Transportation Information Systems Washington, DC 20590		10. Work Unit No. (TRAI5) RS809/P8005	
15. Supplementary Notes		11. Contract or Grant No.	
16. Abstract The "Transportation Safety Information Report" is a compendium of selected national-level transportation safety statistics for all modes of transportation. The report presents and compares data on a monthly and quarterly basis for transportation fatalities, accidents, and injuries for the current and preceding year. The report is based on data input to the Transportation Safety Information System (TRANSIS) by representatives in each of DOT's modal administrations and the National Transportation Safety Board.		13. Type of Report and Period Covered Second Quarter 1986/1987	
14. Sponsoring Agency Code DMA-24		14. Sponsoring Agency Code DMA-24	
17. Key Words Safety, Statistics, Transportation, Fatalities, Accidents, Injuries		18. Distribution Statement Document is available to the public through the National Technical Information Service, Springfield, Virginia 22161	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 64	22. Price

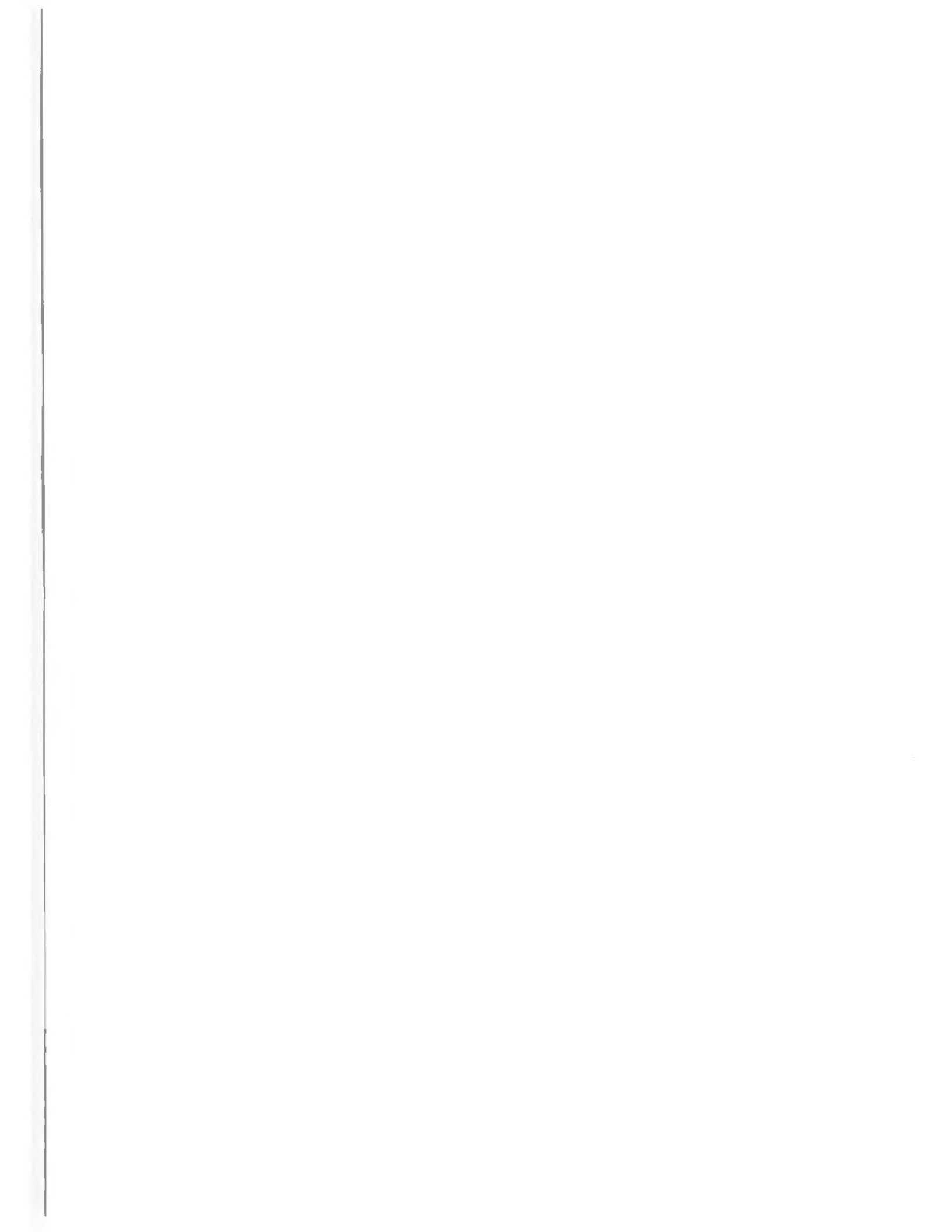


TABLE OF CONTENTS

	<u>Page No.</u>
SUMMARY STATISTICS OF TRANSPORTATION SAFETY	1
SAFETY PERFORMANCE BY MODE	
Highway	4
Railroad	7
Rail Rapid Transit	12
Aviation	
Air Carrier	16
General Aviation	23
Marine	
Waterborne Transport	27
Recreational Boating	31
Materials Transport	
Pipelines	34
Hazardous Materials	34
MAJOR DOT SAFETY REGULATIONS	41
GLOSSARY	50

LIST OF CHARTS

<u>Chart</u>	<u>Page No.</u>
1. Transportation Fatalities by Mode, First 6 Months, 1986-1987	1
2. Motor Vehicle Traffic Fatalities, 1977, 1986 and 1987	5
3. Motor Vehicle Miles of Travel, 1986-1987	6
4. Train Accident Fatalities, Injuries and Accidents, 1986-1987	8
5. Train Fatalities, Injuries and Casualties, 1986-1987	9
6. Non-Train Fatalities, Injuries and Incidents, 1986-1987	10
7. Grade Crossing Fatalities, Injuries and Incidents, 1986-1987	11
8. RRT Train and Non-Train Fatalities, Injuries and Accidents, 1986-1987	13
9. RRT Train Fatalities, Injuries and Accidents, 1986-1987	14
10. RRT Fire Reports Fatalities and Injuries, 1986-1987	15
11. U.S. Air Carrier Fatalities, 1986-1987	17
12. U.S. Air Carrier Serious Injuries, 1986-1987	17
13. U.S. Air Carrier Accidents, 1986-1987	18
14. U.S. Air Carrier Fatal Accidents, 1986-1987	18
15. U.S. Air Carrier Fatalities and Fatal Accidents, all Scheduled Service, 1986-1987	19
16. U.S. Air Carrier Fatalities and Fatal Accidents, all Nonscheduled Service, 1986-1987	20
17. U.S. General Aviation Fatalities, 1986-1987	23
18. U.S. General Aviation Accidents, 1986-1987	25
19. U.S. General Aviation Fatal Accidents, 1986-1987	25
20. U.S. General Aviation Serious Injuries, 1986-1987	26
21. U.S. General Aviation Fatalities by Aircraft Classification, First 6 Months 1987	26
22. Waterborne Fatalities Resulting from Vessel Casualties, 1986-1987	28
23. Waterborne Injuries Resulting from Vessel Casualties, 1986-1987	28
24. Waterborne Accidents, 1986-1987	29
25. Vessels Involved in Waterborne Accidents, 1986-1987	30
26. Recreational Boating Fatalities, 1986-1987	32
27. Recreational Boating Injuries, 1986-1987	32
28. Recreational Boating Reported Accidents, 1986-1987	33
29. Gas Pipeline Fatalities, Injuries and Leaks/Failures, 1986-1987	36
30. Liquid Pipeline Fatalities, Injuries and Leaks/Failures, 1986-1987	37
31. Hazardous Materials Fatalities, 1986-1987	38
32. Hazardous Materials Major and Minor Injuries, 1986-1987	39
33. Hazardous Materials Incidents, 1986-1987	39
34. Hazardous Materials Incidents, Injuries, Deaths and Damages by Mode, First 6 Months 1987	40

LIST OF TABLES

<u>Table</u>	<u>Page No.</u>
1. Transportation Fatalities by Mode, First 6 Months, 1986-1987	2
2. Highway Fatalities, First 6 Months 1987 Compared with 1986 and 1977	4
3. Railroad Fatalities, First 6 Months, 1986-1987	7
4. Commuter Carrier Accidents, Fatalities and Injuries, 1986-1987	21
5. On-Demand Air Taxis Accidents, Fatalities and Injuries, 1986-1987	22
6. General Aviation Fatalities by Type of Flying, 1986-1987	24
7. Waterborne Fatalities Resulting from Vessel Casualties, First 6 Months, 1986-1987	27
8. Recreational Boating Fatalities, First 6 Months, 1986-1987	31
9. Pipeline Fatalities, First 6 Months, 1986-1987	35

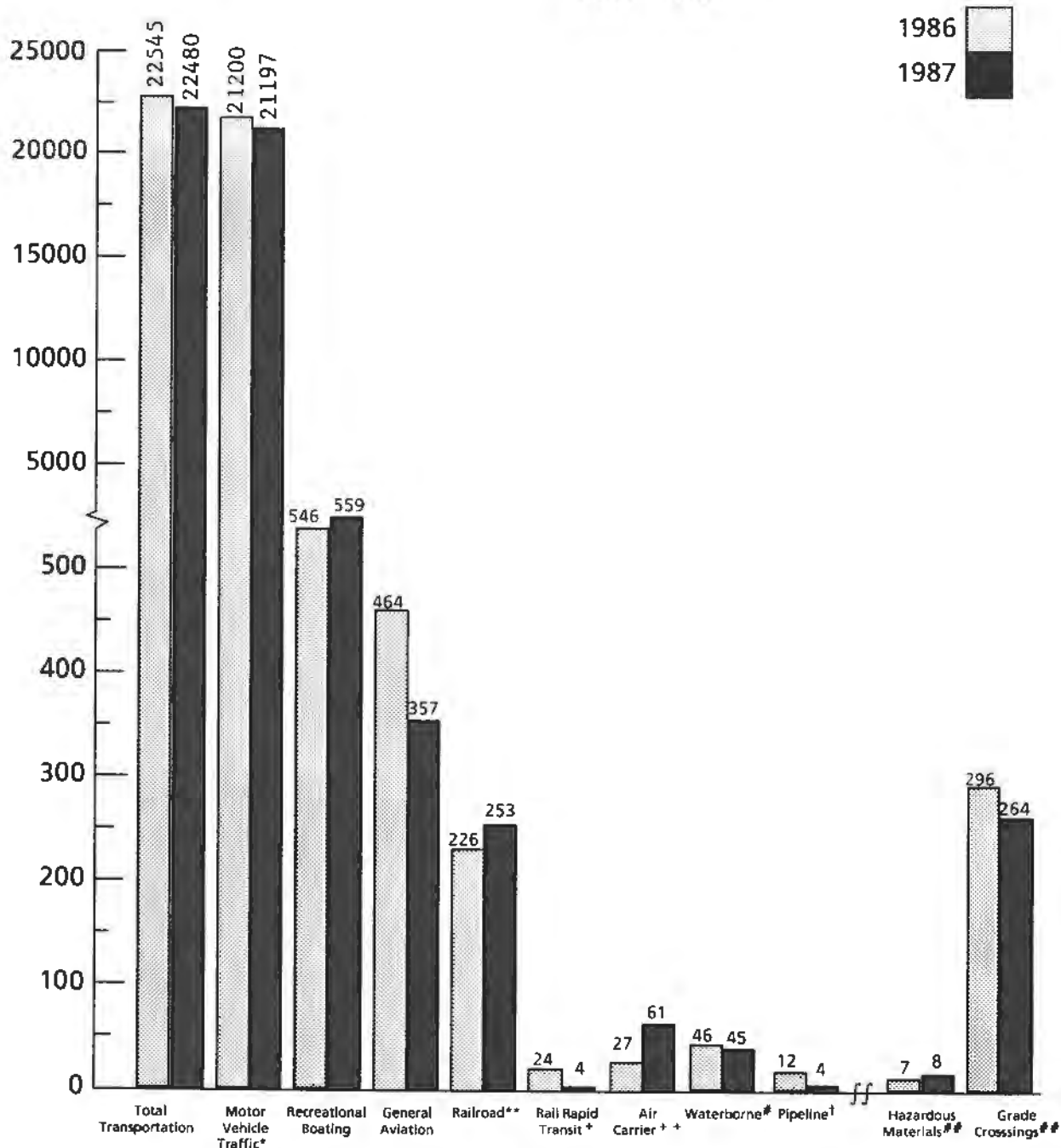
TRANSIS REPRESENTATIVES AND MANAGEMENT

AGENCY	ROUTING SYMBOL	TELEPHONE (FTS)	ROOM
RESEARCH & SPECIAL PROGRAMS ADMINISTRATION			
Richard C. Stevens	DMA-24	366-4348	8405
FEDERAL AVIATION ADMINISTRATION			
Charles J. Hoch	ASF-200	267-8256	330B(10A)
FEDERAL HIGHWAY ADMINISTRATION			
Phyllis Young	HHS-22	366-2159	3409
FEDERAL RAILROAD ADMINISTRATION			
Bruce Fine	RRS-20	366-0521	8314
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION			
Grace B. Hazzard	NRD-33	366-5820	6125H
NATIONAL TRANSPORTATION SAFETY BOARD			
J. Stanley Smith	SP-30	382-6672	834(10A)
URBAN MASS TRANSPORTATION ADMINISTRATION			
Steven Barsony	URT-6	366-0209	6428
UNITED STATES COAST GUARD			
Paul Ponce	G-MMI-3	267-1430	2406(TRPT)
Albert J. Marmo	G-BP-42	267-1070	4220(TRPT)
TRANSIS MANAGEMENT			
SPONSOR-RSPA/TRANSPORTATION INFORMATION SYSTEMS			
Richard C. Stevens	DMA-24	366-4348	8405
TASK MANAGER/PROGRAM COORDINATOR			
Michael A. Rossetti	DTS-32	837-2020	1161(TSC)
James Kelley	DTS-930	837-3439	854(TSC)

SUMMARY STATISTICS OF TRANSPORTATION SAFETY

CHART 1.

TRANSPORTATION FATALITIES BY MODE, FIRST 6 MONTHS, 1986 - 1987



Note: 1987 data are preliminary.
 * Traffic fatalities are NHTSA's estimates based on a 30-day definition (see Glossary).
 ** Fatalities resulting from train accidents, train incidents, and nontrain incidents. Train-related grade crossing fatalities are not included.
 † Fatalities resulting from train and nontrain incidents.
 †† Air Carrier includes Commuter Carriers and Air Taxis.
 # Waterborne data are for vessel casualties only.
 ## Highway related fatalities are included in other modes and Total Transportation. Rail-related grade crossing fatalities are not included.
 † Includes Liquid and Gas Pipeline.

TABLE 1.
TRANSPORTATION FATALITIES BY MODE,
FIRST 6 MONTHS, 1986 - 1987

CLASSIFICATION	JANUARY			FEBRUARY			MARCH		
	1986	1987	% CHANGE	1986	1987	% CHANGE	1986	1987	% CHANGE
MOTOR VEHICLE TRAFFIC*	3,124	3,185	+1.9%	2,676	2,916	+8.9%	3,416	3,385	-0.9%
RAILROAD**	34	36	+5.9%	25	38	+52.0%	34	40	+17.6%
RAIL RAPID TRANSIT+	2	0	-100.0%	4	0	-100.0%	10	4	-600.0%
AIR CARRIER++	7	18	+157.1%	4	5	+25.0%	4	13	+225.0%
GENERAL AVIATION	73	57	-21.9%	47	53	+12.8%	76	54	-28.9.3%
WATERBORNE#	9	3	-66.7%	17	19	+11.8%	3	4	+33.3%
RECREATIONAL BOATING	34	36	+5.9	38	34	-10.5%	78	97	+24.4%
PIPELINES†	0	0	0.0%	8	1	-87.5%	1	1	0.0%
TOTAL TRANSPORTATION	3,283	3,335	+1.6%	2,819	3,066	+8.8%	3,622	3,598	-0.6%
HAZARDOUS MATERIALS**	0	1	[1]	0	3	[1]	1	1	0.0%
GRADE CROSSING ONLY**	54	68	+25.9%	53	44	-17.0%	60	47	-21.7%

CLASSIFICATION	APRIL			MAY			JUNE		
	1986	1987	% CHANGE	1986	1987	% CHANGE	1986	1987	% CHANGE
MOTOR VEHICLE TRAFFIC*	3,506	3,593	+2.5%	4,173	4,095	-1.9%	4,305	4,023	-6.5%
RAILROAD**	30	44	+46.7%	45	49	+8.9%	58	56	-3.4%
RAIL RAPID TRANSIT+	6	0	-100.0%	1	0	-100.0%	1	0	-100.0%
AIR CARRIER++	1	9	+800.0%	6	6	0.0%	5	10	+100.0%
GENERAL AVIATION	72	64	-11.1%	99	58	-31.3%	97	71	-26.8%
WATERBORNE#	5	13	+160.0%	8	2	-75.0%	4	4	0.0%
RECREATIONAL BOATING	95	136	+43.2	140	132	-5.7%	161	124	-23.0%
PIPELINES†	1	0	-100.0%	1	0	-100.0%	1	2	+100.0
TOTAL TRANSPORTATION	3,716	3,859	+3.8%	4,473	4,342	-2.9%	4,632	4,290	-7.4%
HAZARDOUS MATERIALS**	1	2	+100.0%	2	0	-100.0%	3	1	-66.7%
GRADE CROSSING ONLY**	40	37	-7.5%	42	28	-33.3%	47	40	-14.9%

TABLE 1.

**TRANSPORTATION FATALITIES BY MODE,
FIRST 6 MONTHS, 1986 - 1987 (Continued)**

CLASSIFICATION	SECOND QUARTER			FIRST 6 MONTHS		
	1986	1987	% CHANGE	1986	1987	% CHANGE
MOTOR VEHICLE TRAFFIC*	11,984	11,711	-2.3%	21,200	21,197	0.0%
RAILROAD**	133	139	+4.5%	226	253	+11.9%
RAIL RAPID TRANSIT+	8	0	-100.0%	24	4	-83.3%
AIR CARRIER++	12	25	+108.3%	27	61	+125.9%
GENERAL AVIATION	268	193	-28.0%	464	357	-23.1%
WATERBORNE#	17	19	+11.8%	46	45	-2.2%
RECREATIONAL BOATING	396	392	-1.0%	546	559	+2.4%
PIPELINES†	3	2	-33.3%	12	4	-66.7%
TOTAL TRANSPORTATION	12,821	12,481	-2.7%	22,545	22,480	-0.3%
HAZARDOUS MATERIALS##	6	3	-50.0%	7	8	+14.3%
GRADE CROSSING ONLY##	129	105	-18.6%	296	264	-10.8%

NOTE: 1987 data are preliminary.
 * Traffic fatalities are NHTSA's estimates based on a 30-day definition.
 ** Fatalities resulting from train accidents, train incidents, and nontrain incidents. Train-related grade crossing fatalities are not included.
 + Fatalities resulting from train and nontrain incidents.
 ++ Air Carrier includes Commuter Carriers and Air Taxis.
 # Waterborne data are for vessel casualties only.
 ## Highway related fatalities are included in other modes and Total Transportation. Rail-related grade crossing fatalities are not included.
 † Includes Gas and Liquid Pipeline.
 [1] Not calculable.

HIGHWAY

- The number of estimated motor vehicle fatalities for the first 6 months of 1987 were nearly identical to the same period of 1986. A total of 21,197 fatalities was estimated compared to 21,200 in the first 6 months of 1986. These figures were virtually the same as the number of fatalities occurring during the corresponding period in 1977, despite the increase in both the number of vehicles and miles of travel.
- Motor vehicle miles of travel have increased each year since 1980. The preliminary travel estimate for the first 6 months of 1987 was 927 billion miles compared to 890 billion miles for the same period of 1986, an increase of 4.2 percent.

TABLE 2.

**HIGHWAY FATALITIES, FIRST 6 MONTHS 1987 COMPARED WITH 1986
AND 1977**

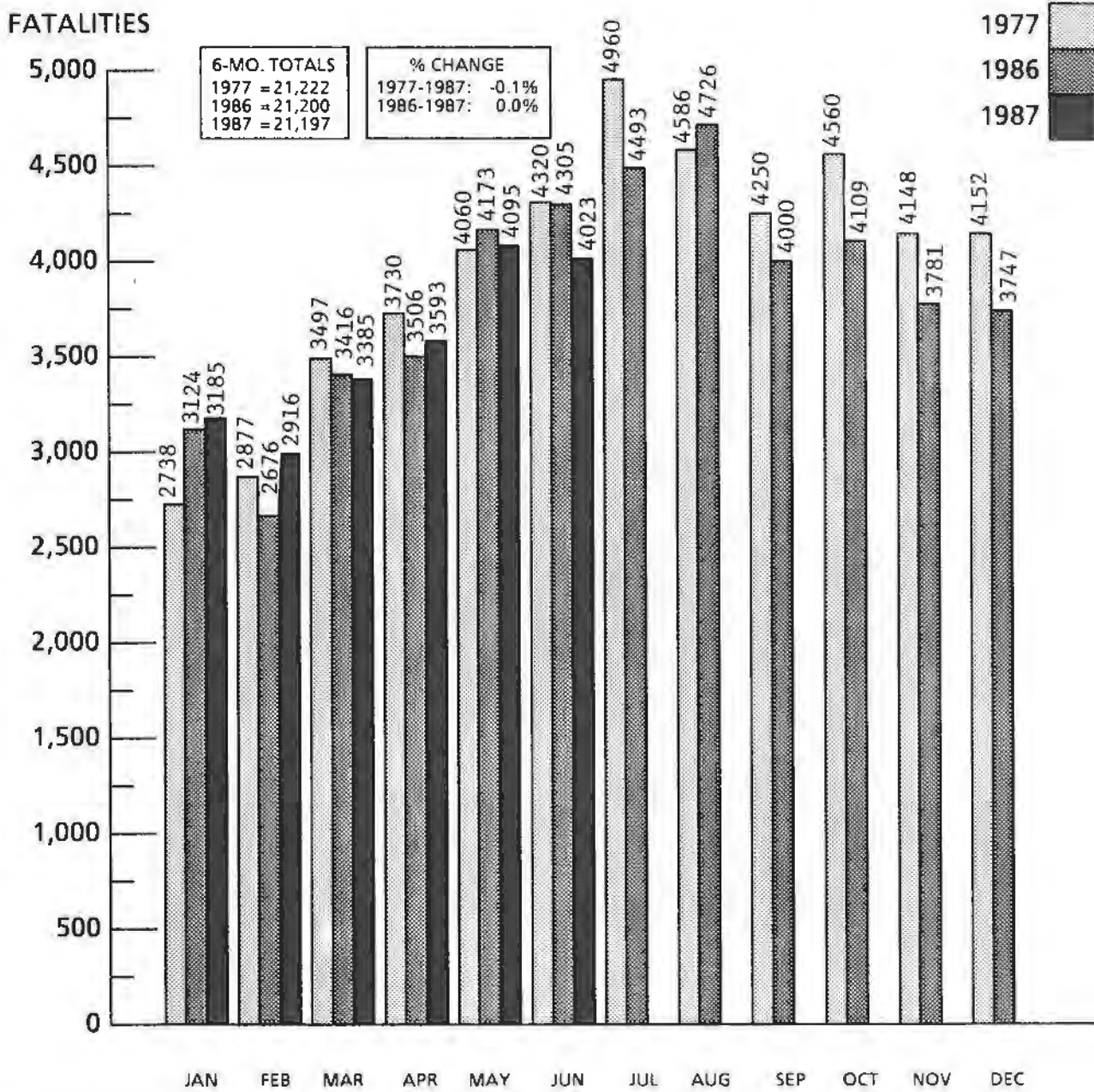
	1977	1986	1987	% Change 1977-1987	% Change 1986-1987
January	2,738	3,124	3,185	+16.3	+1.9
February	2,877	2,676	2,916	+1.4	+8.9
March	3,497	3,416	3,385	-3.2	-0.9
April	3,730	3,506	3,593	-3.7	+2.5
May	4,060	4,173	4,095	+0.9	-1.9
June	4,320	4,305	4,023	-6.9	-6.5
Total	21,222	21,200	21,197	-0.1	0.0

NOTE: Figures are based on 30-day fatality definition (see Glossary).
1987 data are preliminary.

SOURCE: Fatal Accident Reporting System (FARS), NHTSA, NCSA, NRD-33.

CHART 2.

MOTOR VEHICLE TRAFFIC FATALITIES, 1977, 1986 AND 1987

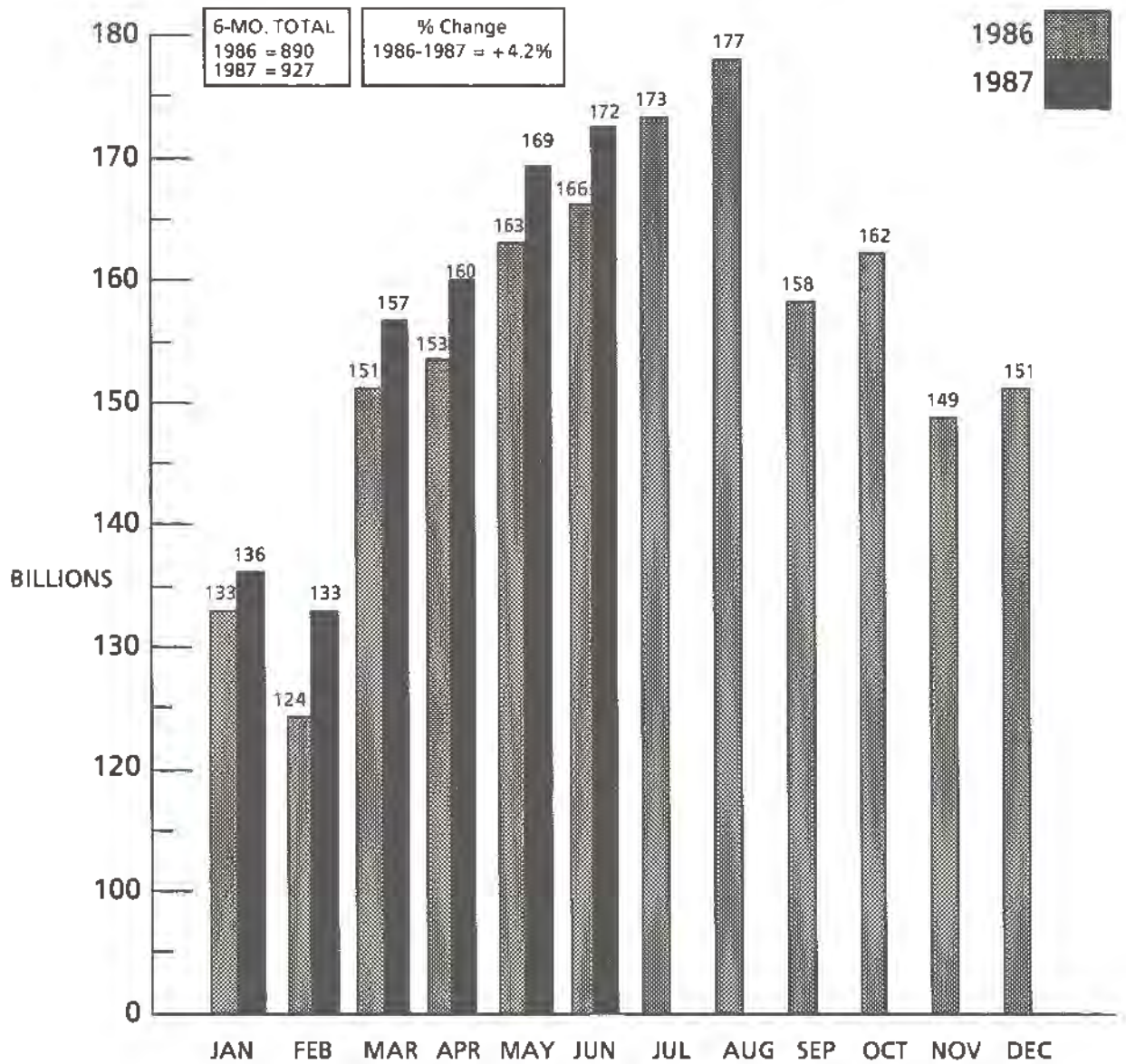


NOTE: Figures are based on 30-day fatality definition (see Glossary).
 1987 data are preliminary.

SOURCE: Fatal Accident Reporting System (FARS), NHTSA, NCSA, NRD-33.

CHART 3.

MOTOR VEHICLE MILES OF TRAVEL, 1986 - 1987^P



^P = Preliminary.

SOURCE: FHWA, Office of Highway Safety, HHS-22.

RAILROAD

- During the first 6 months of 1987, train accidents and injuries decreased when compared with the same period of 1986. There were 1,254 train accidents reported in 1987 compared to 1,289 in 1986. Injuries declined from 426 in the first 6 months of 1986 to 301 in 1987. A total of 29 train fatalities were reported in the first 6 months of 1987 compared to 2 in the same period of 1986.
- Rail-Highway Grade Crossing incidents and injuries experienced a decline during the first 6 months of 1987 when compared with 1986. Incidents fell from 3,115 in 1986 to 2,923 in 1987 and injuries dropped from 1,152 to 1,085. During the same period, the number of fatalities also decreased from 296 in 1986 to 264 in 1987.

TABLE 3.
RAILROAD* FATALITIES, FIRST 6 MONTHS, 1986-1987

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1986	1987	1986	1987	1986	1987
RAILROAD*	34	36	25	38	34	40
GRADE CROSSING	54	68	53	44	60	47
TOTAL RR AND GC	88	102	78	82	94	87

	APRIL		MAY		JUNE	
CLASSIFICATION	1986	1987	1986	1987	1986	1987
RAILROAD*	30	44	45	49	58	46
GRADE CROSSING	40	37	42	28	47	40
TOTAL RR AND GC	70	81	87	77	105	86

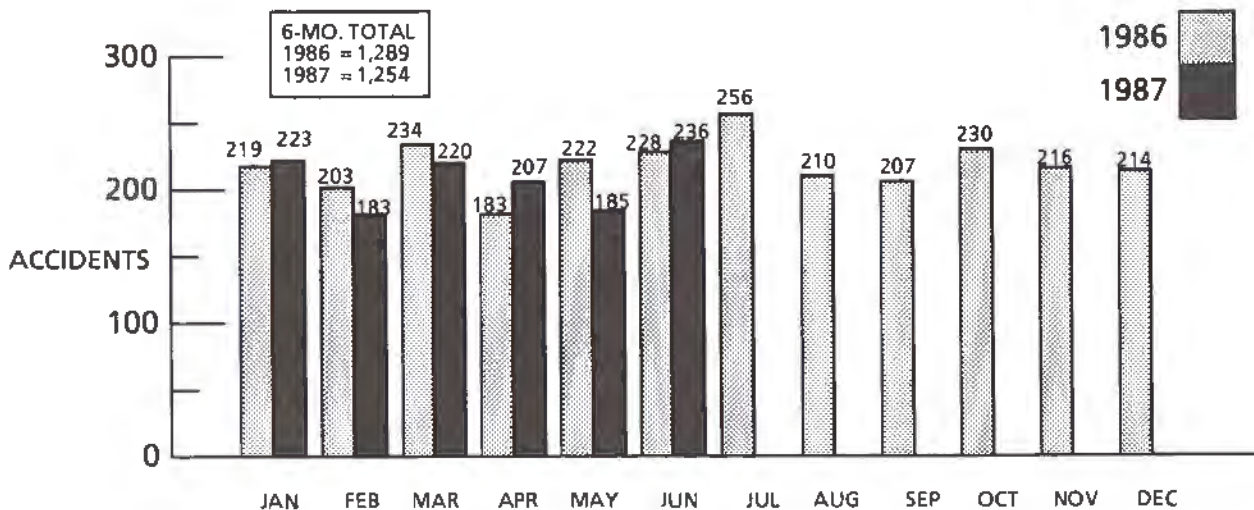
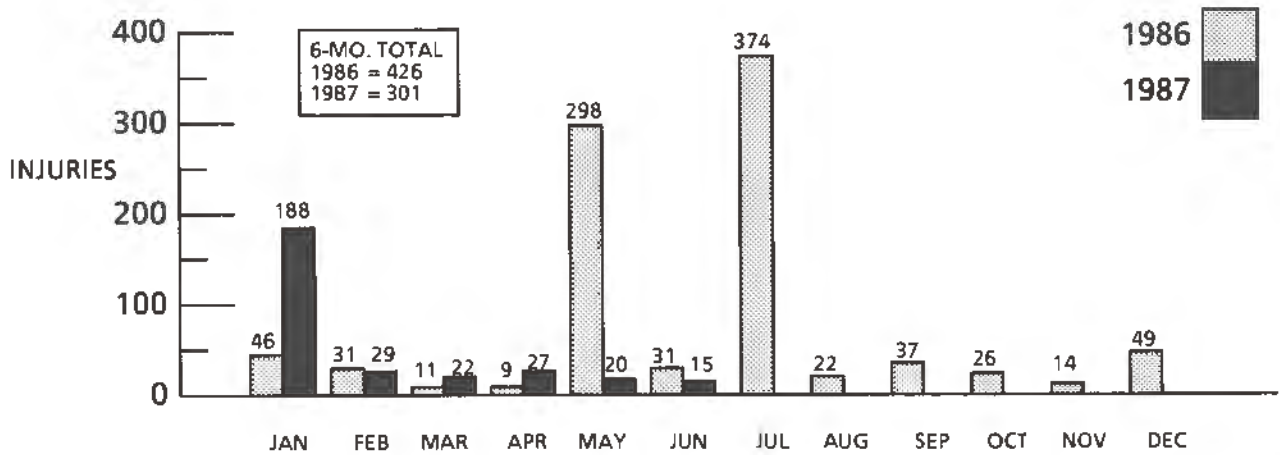
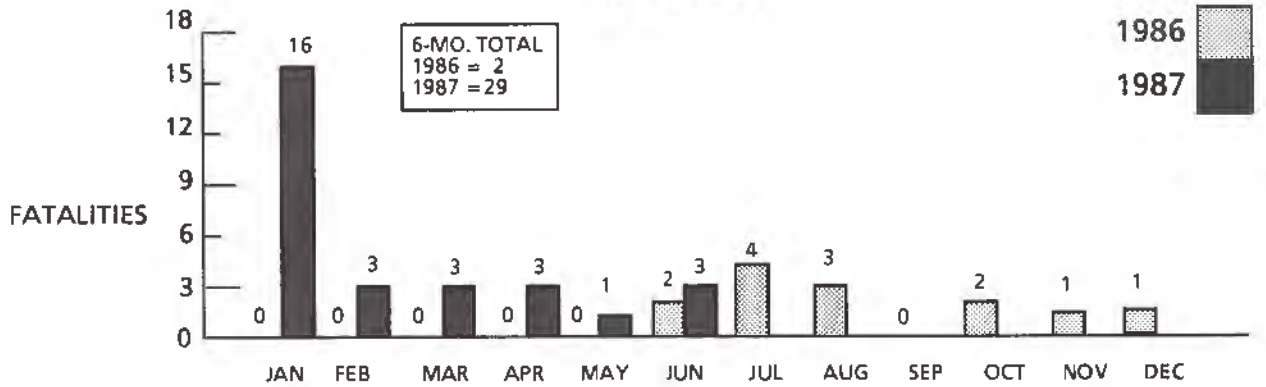
	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1986	1987	% Chg	1986	1987	% Chg
RAILROAD*	133	139	+4.5	226	253	+11.9
GRADE CROSSING	129	105	-18.6	296	264	-10.8
TOTAL RR AND GC	262	244	-6.9	522	517	-1.0

* Includes train accident, train incident, and nontrain incident data.
NOTE: 1987 data are preliminary.

SOURCE: FRA, Office of Safety Analysis, RRS-20.

CHART 4.

TRAIN ACCIDENT* FATALITIES, INJURIES AND ACCIDENTS, 1986-1987

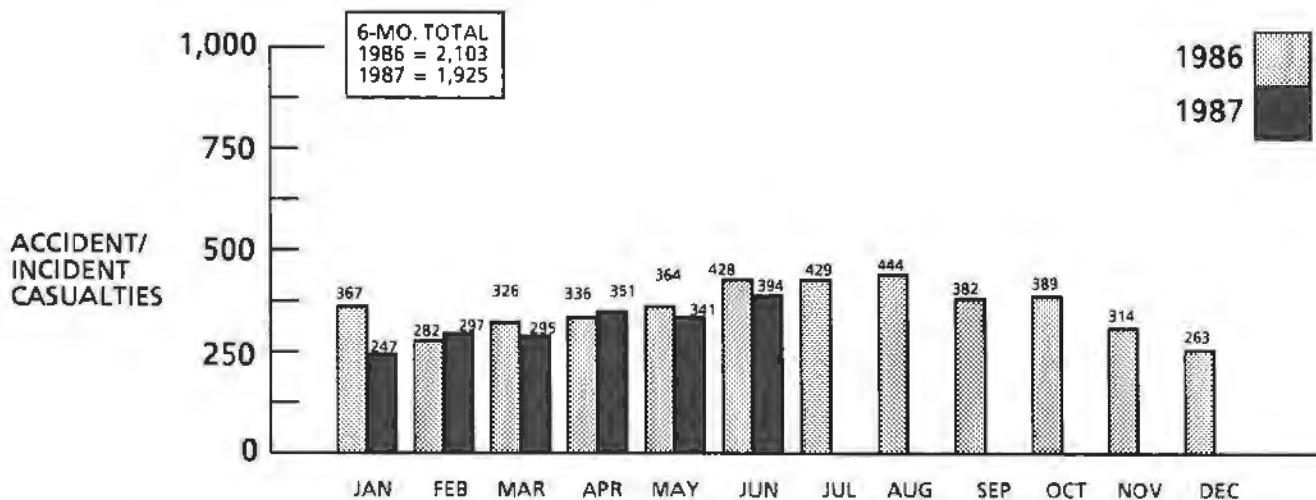
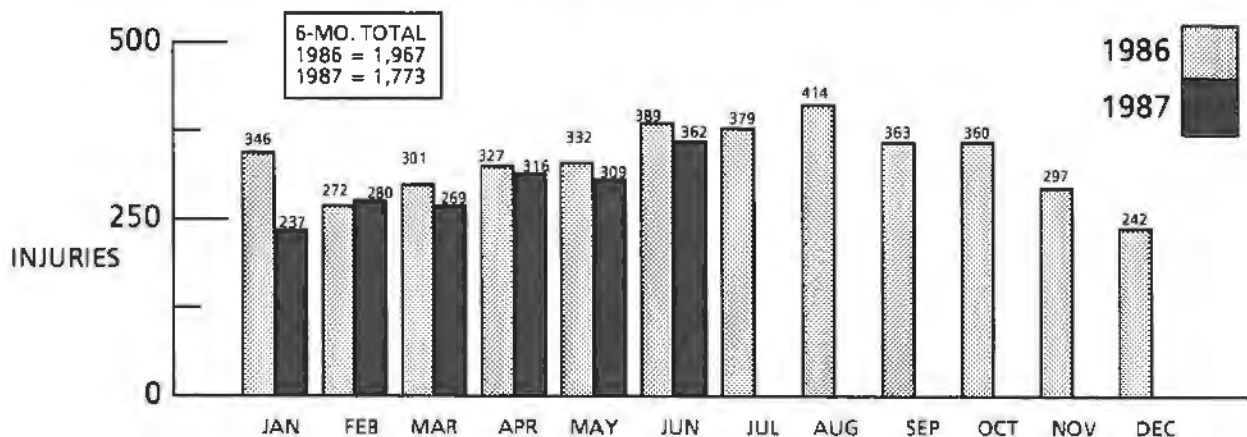
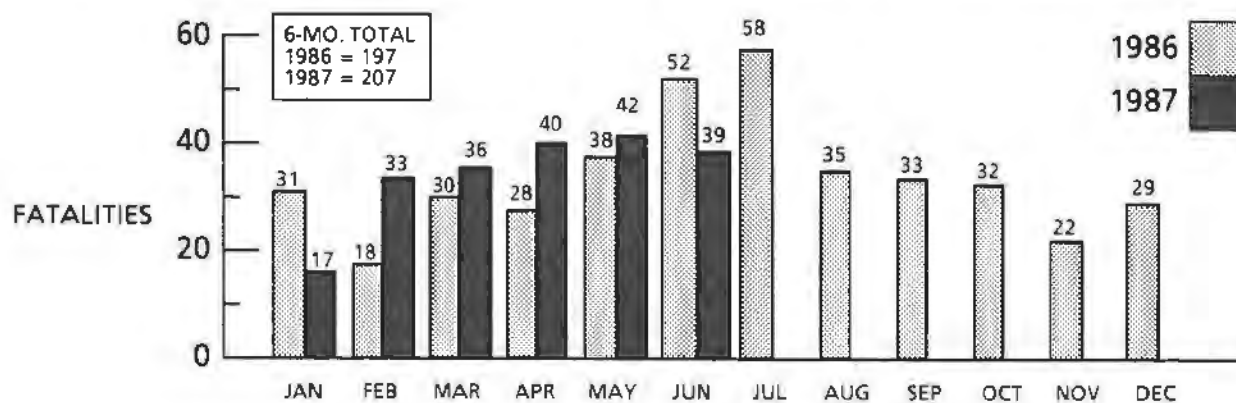


* See Glossary for Train Accident definition. This chart does not include Grade Crossings.
NOTE: 1987 data are preliminary.

SOURCE: FRA, Office of Safety Analysis, RRS-20.

CHART 5.

TRAIN* FATALITIES, INJURIES AND CASUALTIES, 1986-1987

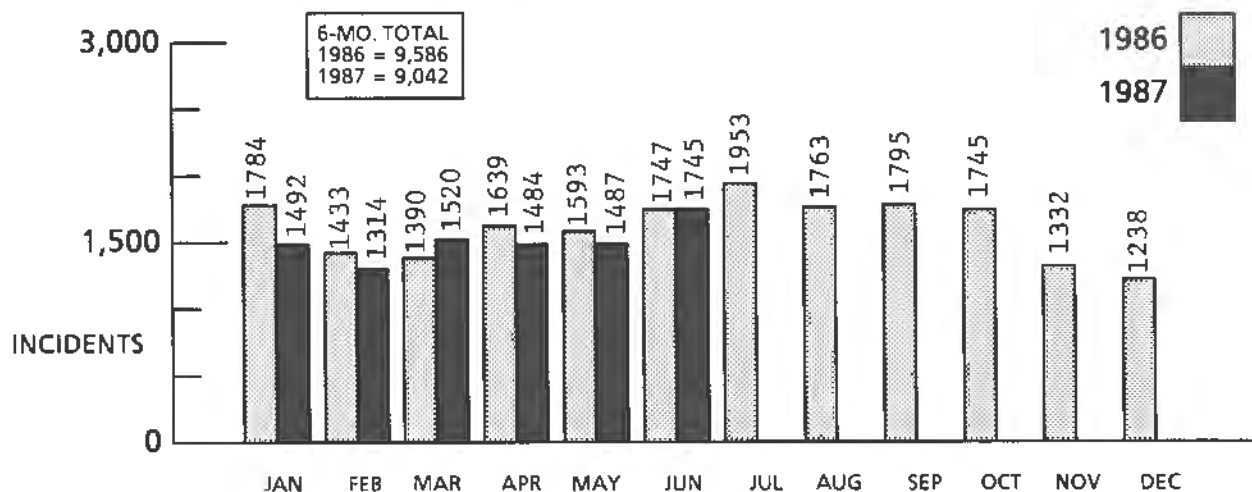
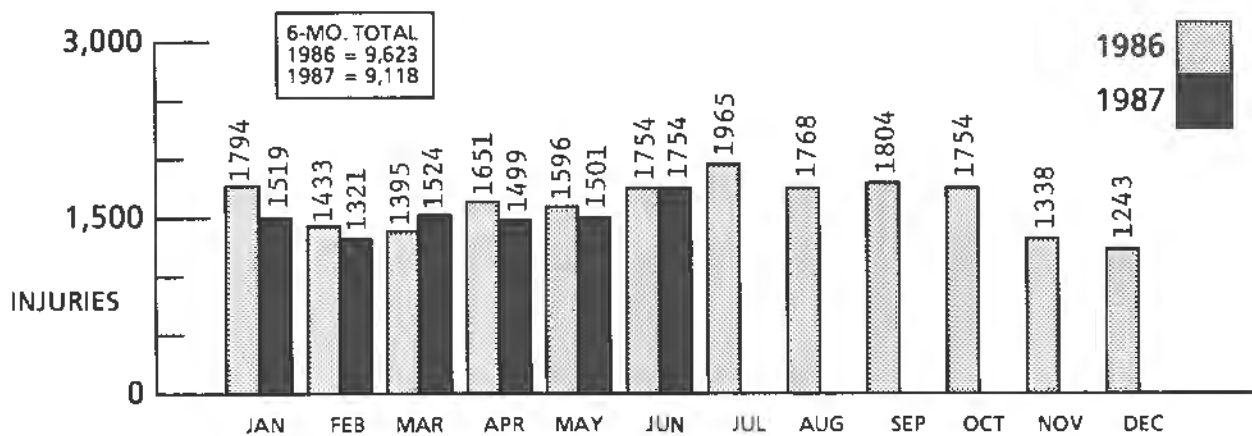
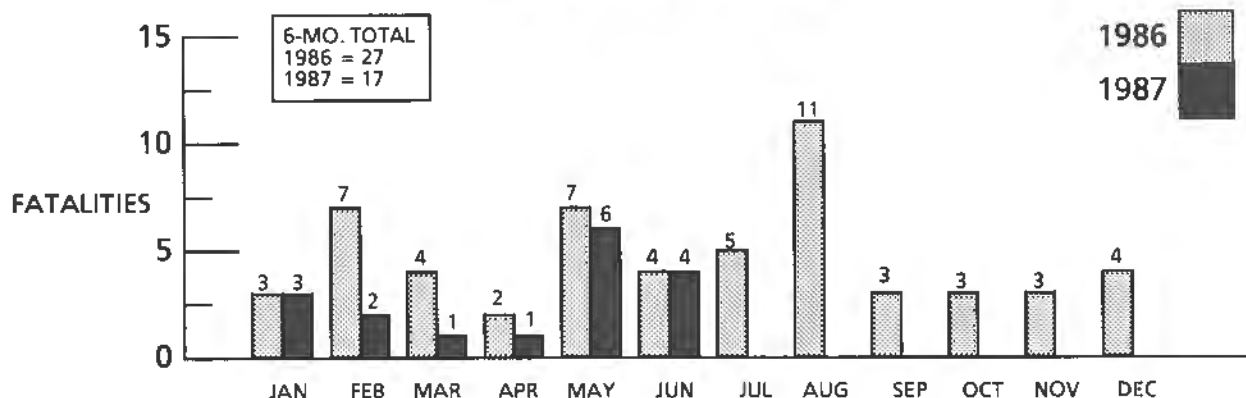


* See Glossary for Train and Nontrain incident definitions. This chart does not include Grade Crossings.
NOTE: 1987 data are preliminary.

SOURCE: FRA, Office of Safety Analysis, RRS-20.

CHART 6.

NON-TRAIN* FATALITIES, INJURIES AND INCIDENTS, 1986-1987

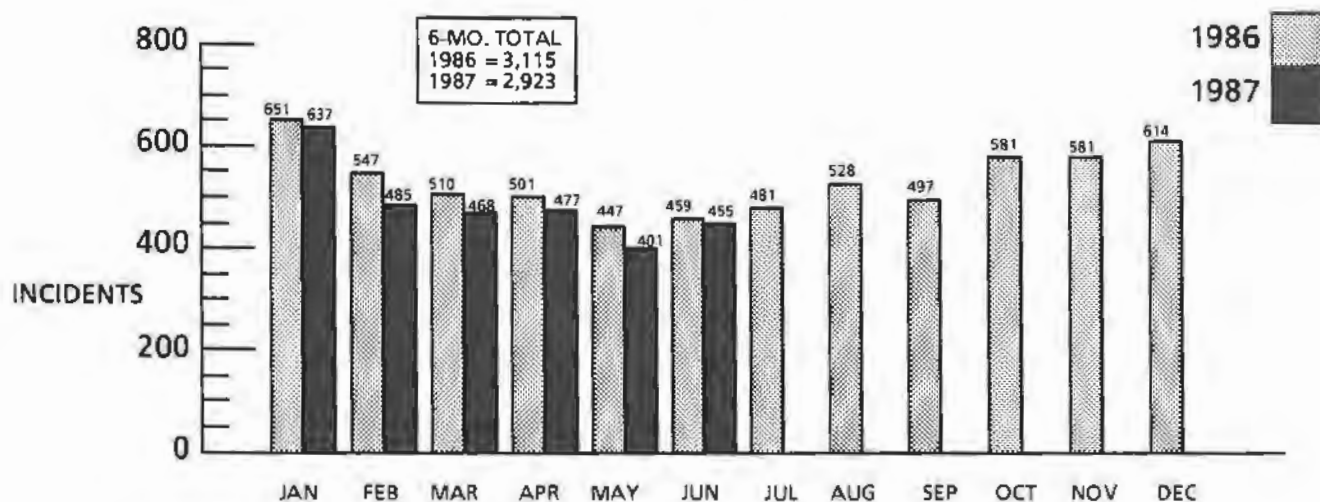
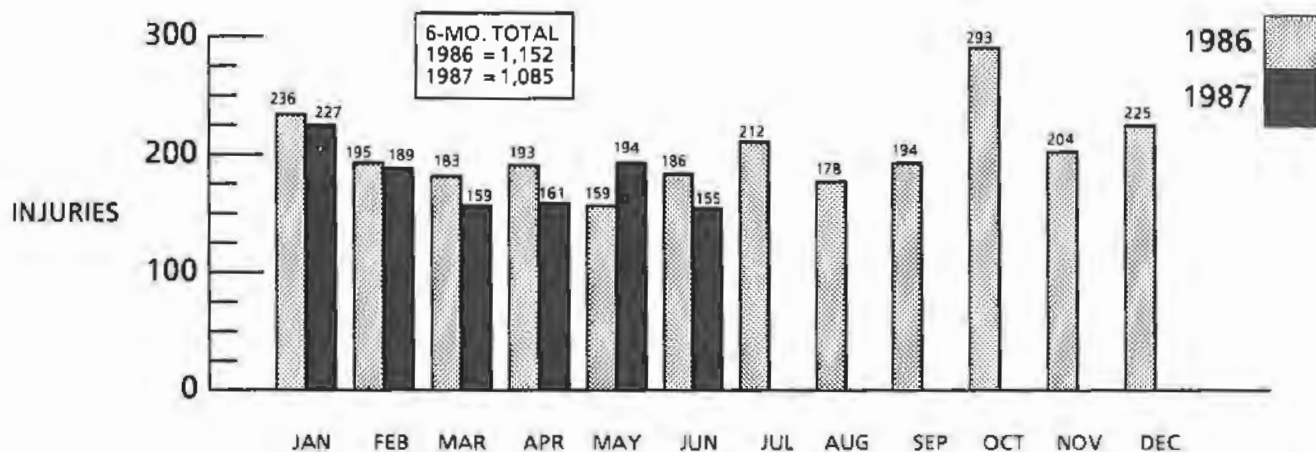
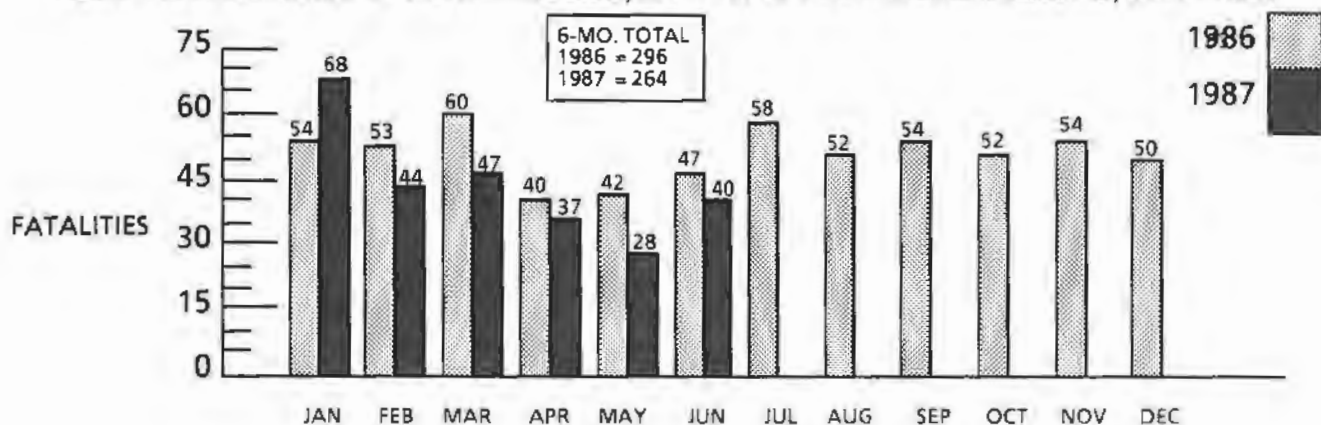


* See Glossary for Train and Nontrain Incident definitions. This chart does not include Grade Crossings.
 NOTE: 1987 data are preliminary.

SOURCE: FRA, Office of Safety Analysis, RRS-20.

CHART 7.

GRADE CROSSING* FATALITIES, INJURIES AND INCIDENTS, 1986-1987



* See Glossary for definition.
NOTE: 1987 data are preliminary.

SOURCE: FRA, Office of Safety Analysis, RRS-20.

RAIL RAPID TRANSIT

As of December 28, 1987, 12 of the 13 transit systems have submitted their statistics for the first six months of 1987.

The following comparisons are made using data which have been received as of December 28, 1987.

- There were 26 Rapid Rail Transit (RRT) revenue train accidents reported in the first 6 months of 1987.
- A total of 32 Rapid Rail Transit (RRT) revenue train accidents were reported for the same period a year earlier.

The following is a summary of train accidents by type for the first 6 months of 1986 and 1987.

	1986 FIRST 6 MONTHS	1987* FIRST 6 MONTHS
Collision with Other Train	0	3*
Collision with Obstacle	1	1*
Collision with Person	25	20*
Derailment	3	1*
Rail-Highway Crossing	3	1*
Total	32	26*

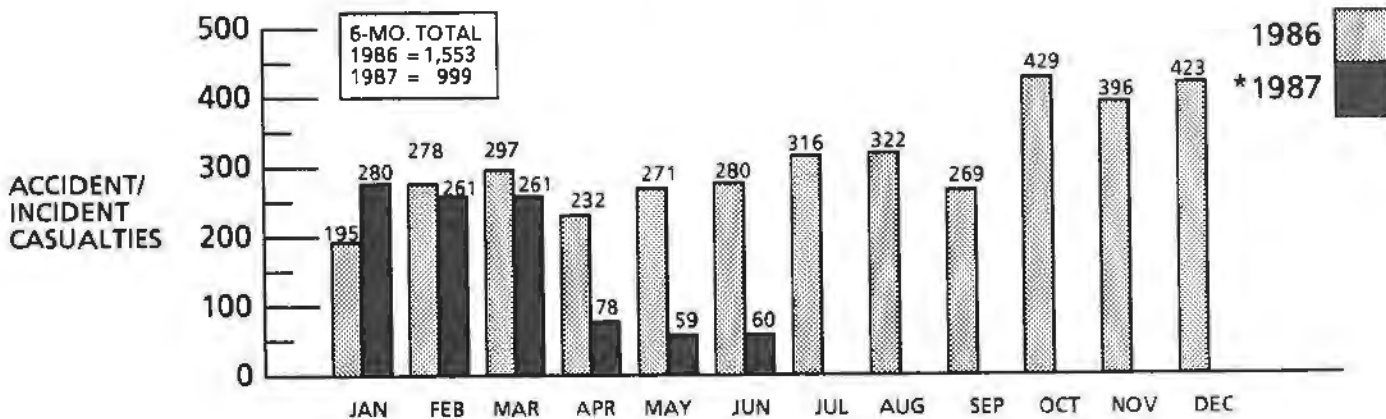
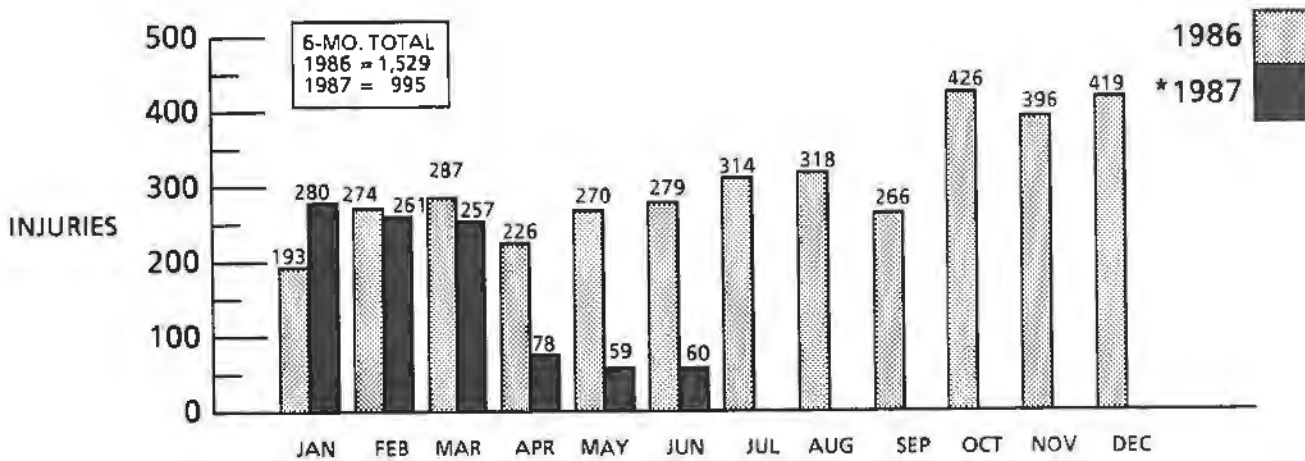
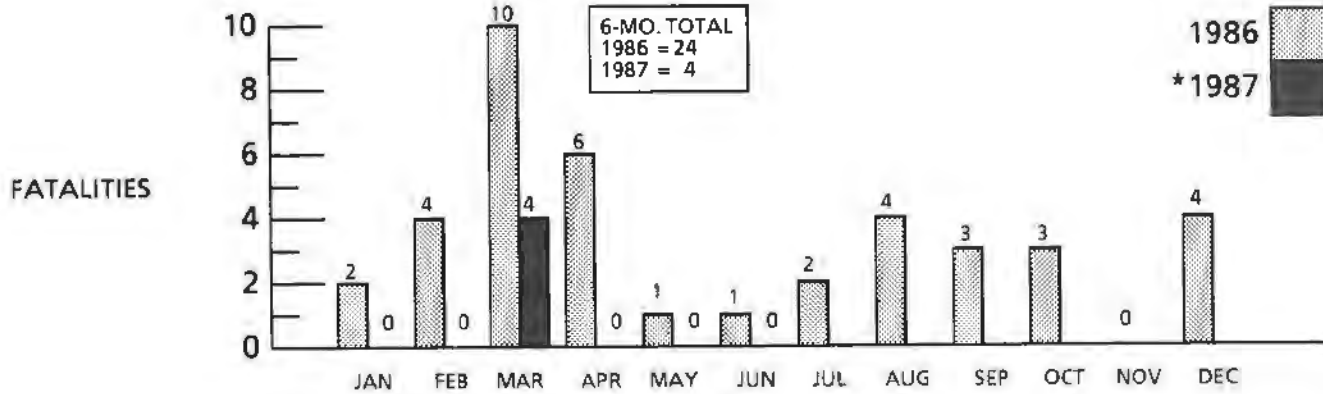
- Of the 1,553 train and non-train casualties (injuries and fatalities) reported in the first six months of 1986, a total of 492 took place on the platform.
- Of the 999 train and non-train casualties (injuries and fatalities) reported the first six months of 1987, a total of 343 took place on the platform.

* Preliminary data prior to verification.

Source: TSC, Safety and Security Systems Division, DTS-43, SIRAS.

CHART 8.

RRT TRAIN AND NON-TRAIN** FATALITIES, INJURIES AND ACCIDENTS, 1986-1987

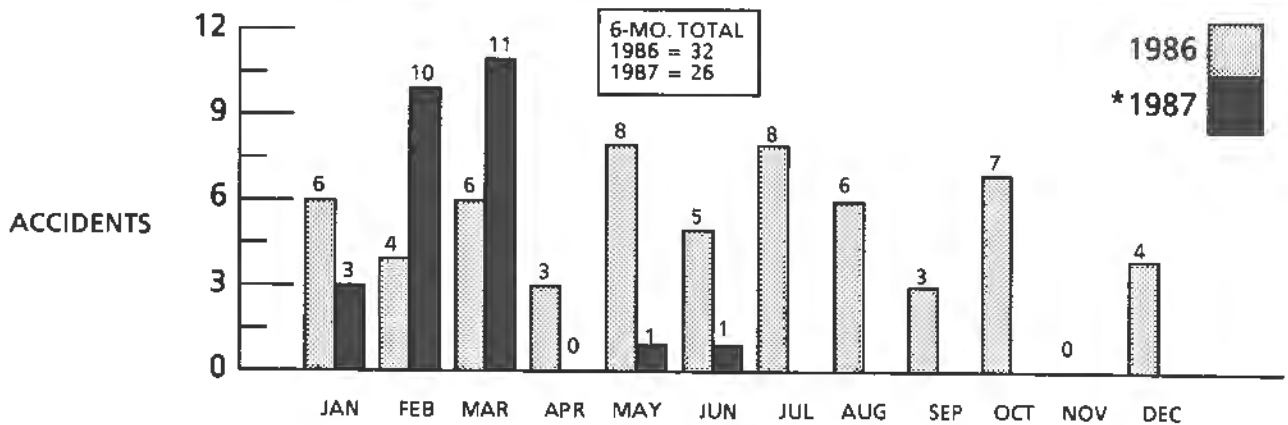
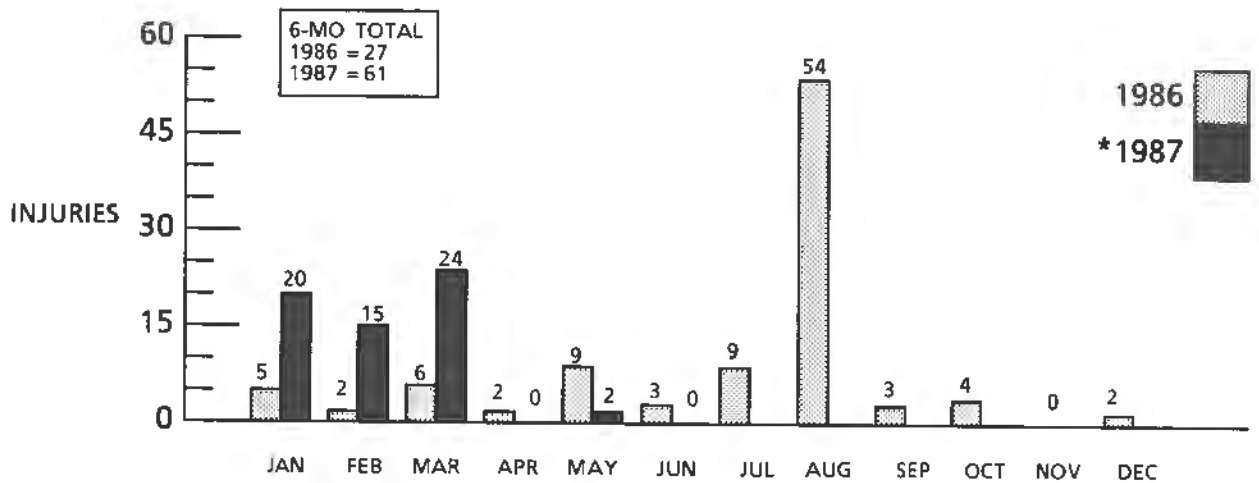
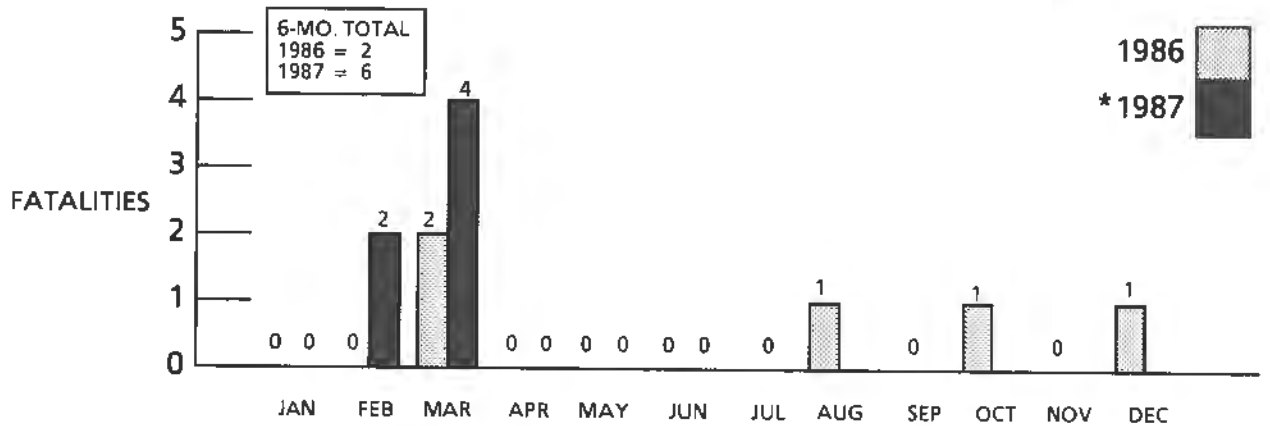


* Preliminary data prior to verification.
** See glossary for definition.

SOURCE: TSC, Safety and Security Systems Division, DTS-43, SIRAS.

CHART 9.

RRT TRAIN** FATALITIES, INJURIES AND ACCIDENTS, 1986-1987

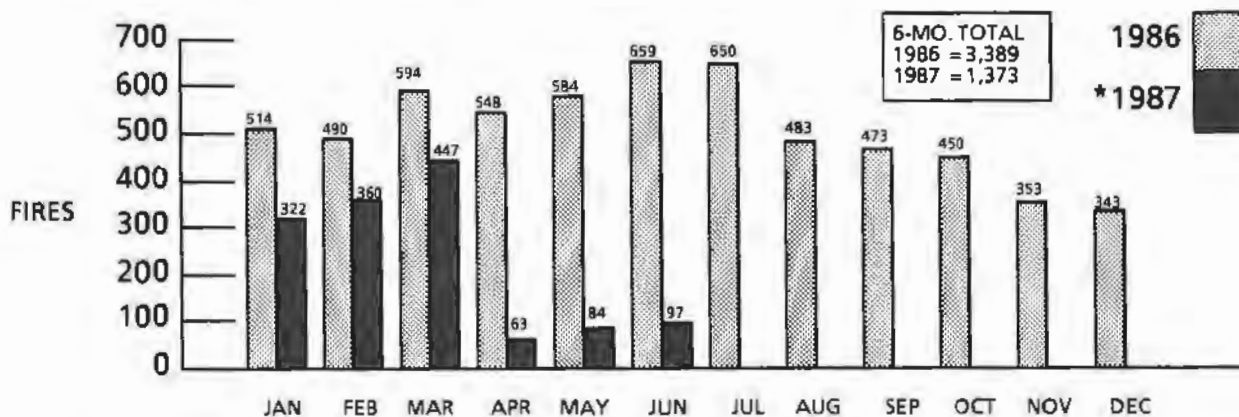
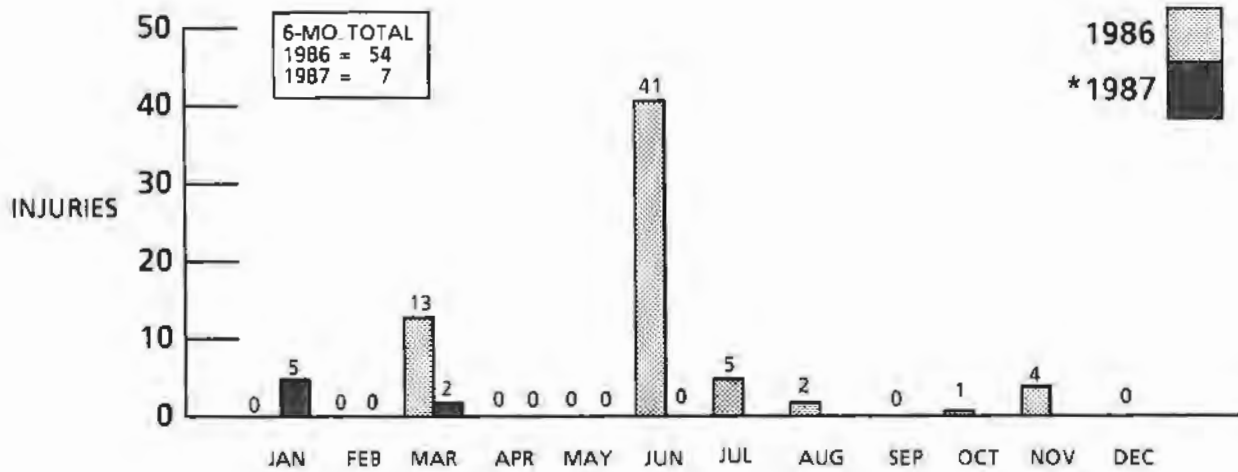
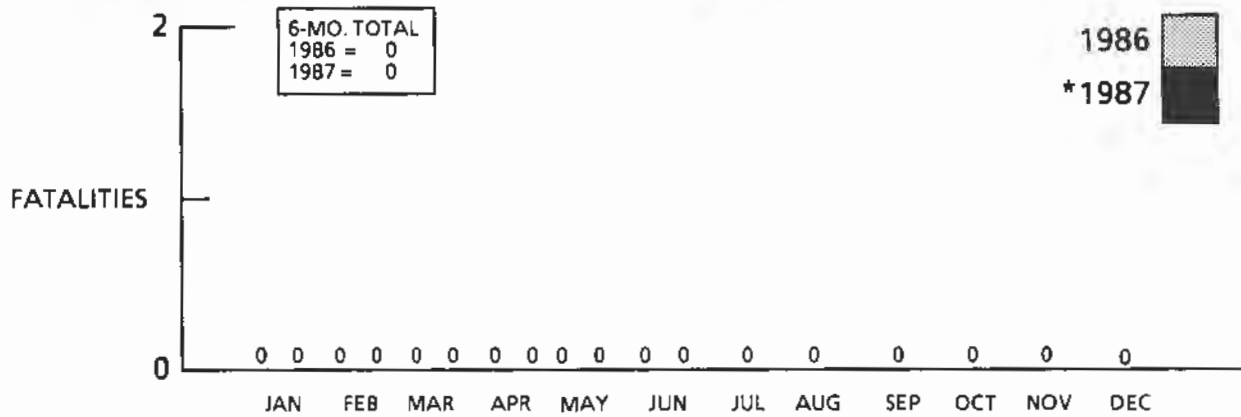


* Preliminary data prior to verification.
** See glossary for definition.

SOURCE: TSC, Safety and Security Systems Division, DTS-43, SIRAS.

CHART 10.

RRT FIRE REPORTS** FATALITIES AND INJURIES, 1986-1987



na Not available.
 * Preliminary data prior to verification.
 ** See glossary for definition.

SOURCE: TSC, Safety and Security Systems Division, DTS-43, SIRAS.

AVIATION

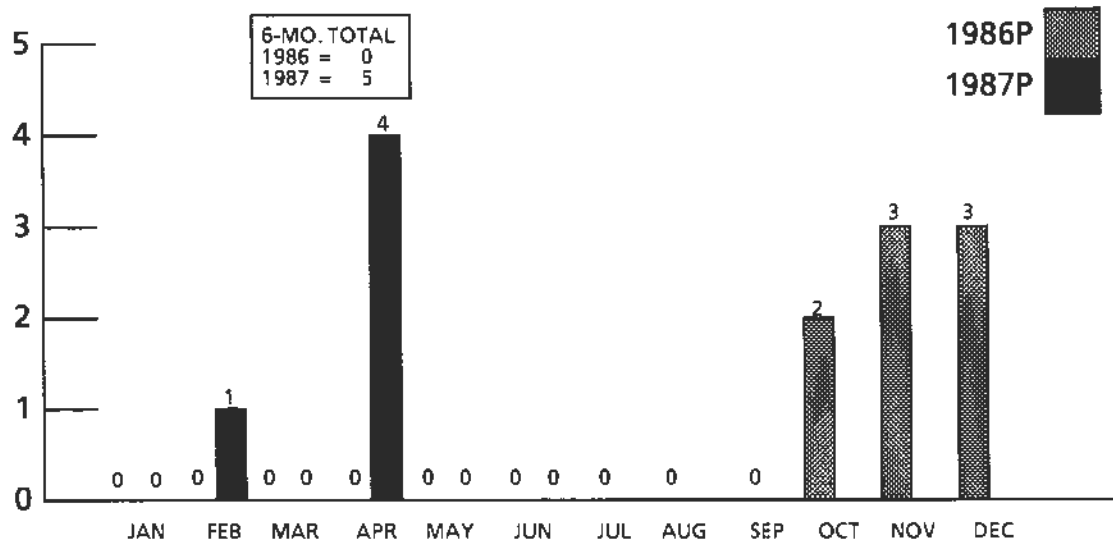
Beginning in January 1982, the National Transportation Safety Board began reporting aviation accident data according to the Federal Aviation Regulations under which the aircraft was operated at the time of an accident. Revenue operations of Air Carriers, Commercial Operators and deregulated All Cargo Carriers, using large aircraft, are conducted under 14 CFR 121, 125, and 127. Commuter Air Carriers' (scheduled) and On-Demand Air Taxi Operators' (unscheduled) revenue operations (using small aircraft) are conducted under 14 CFR 135. Accidents involving flights not being conducted under either 14 CFR 121, 125, 127, or 135 are grouped by the Safety Board into the "General Aviation" category. Classifying aviation accidents according to the operating rules should better serve aviation safety because they set the minimum levels of such safety-related areas as pilot experience, flight and duty time, and maintenance of aircraft. With the demise of the Civil Aeronautics Board on December 31, 1984, FAA definitions of such terms as air carriers and general aviation are now being used.

AIR CARRIER

- In the first 6 months of 1987, fatalities for U.S. air carriers flying large aircraft increased when compared to the same period of 1986. A total of five fatalities occurred compared to zero in the 1986 period. Serious injuries dropped during the period, from eight in 1986 to seven in 1987. The total number of accidents increased in the first 6 months of 1987, with 10 being reported for the 1986 period, compared to 16 in 1987. The number of fatal accidents also increased from zero in 1986 to two in the first half of 1987.
- Commuter carriers recorded 5 fatal accidents and 24 fatalities in the first 6 months of 1987, compared with 1 fatal accident and 3 fatalities in the same period of 1986. The total number of accidents increased from 9 in the first half of 1986 to 14 in 1987, while serious injuries remained the same at 6.
- A comparison of fatalities and fatal accidents for on-demand air taxis showed an increase in the first 6 months of 1987 compared with the same period of 1986. Fatalities increased from 24 in the 1986 period to 32 in the first 6 months of 1987. The number of fatal accidents also increased from 14 in the first half of 1986 to 18 in the same period of 1987. However, the number of total accidents dropped from 58 to 42, while serious injuries decreased from 13 to 12 in the same periods of 1986 and 1987.
- Total U.S. Air Carrier fatalities were 61 in the first 6 months of 1987 compared to 27 in the same period of 1986. This included scheduled commuter carriers and non-scheduled air taxis.

CHART 11.

U.S. AIR CARRIER* FATALITIES, 1986 - 1987



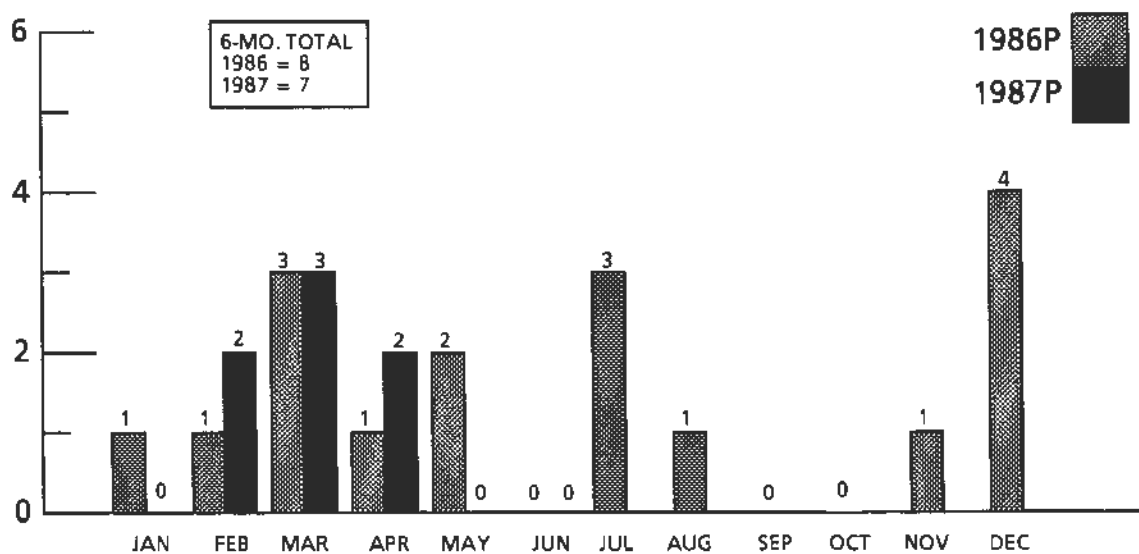
P = Preliminary.

* All large carriers operating under 14 CFR 121, 125, and 127.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

CHART 12.

U.S. AIR CARRIER* SERIOUS INJURIES, 1986 - 1987



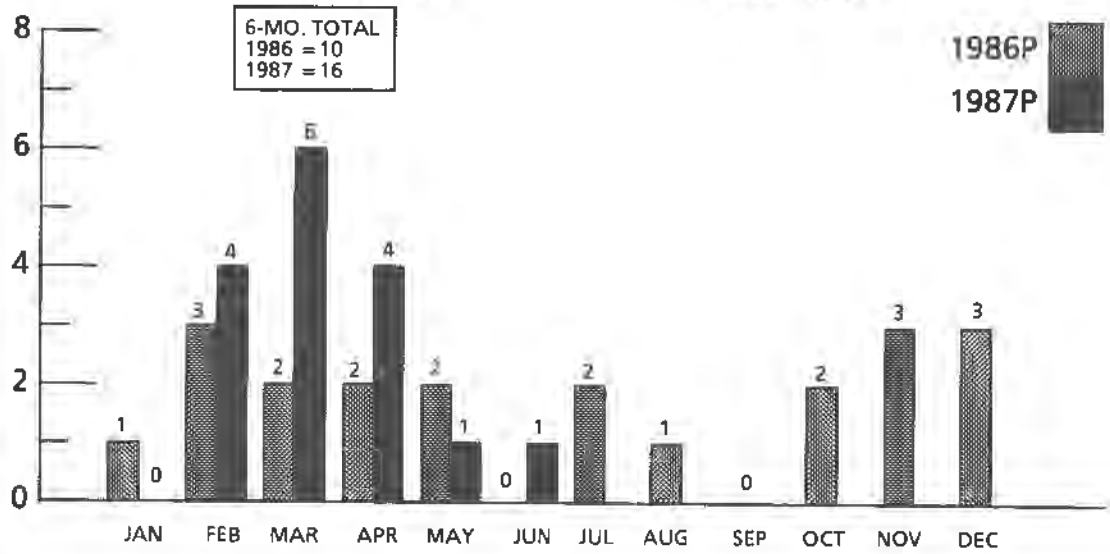
P = Preliminary.

* All large carriers operating under 14 CFR 121, 125, and 127.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

CHART 13.

U.S. AIR CARRIER ACCIDENTS*, 1986 - 1987



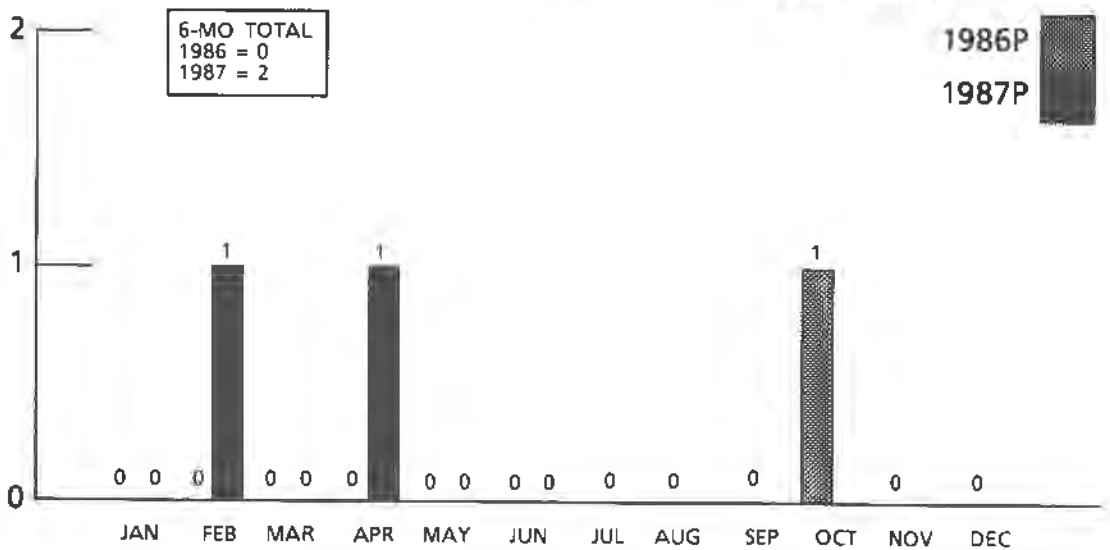
P = Preliminary.

* All large carriers operating under 14 CFR 121, 125, and 127.

SOURCE NTSB, Safety Studies & Analysis Division, SP-30.

CHART 14.

U.S. AIR CARRIER* FATAL ACCIDENTS, 1986 - 1987



P = Preliminary.

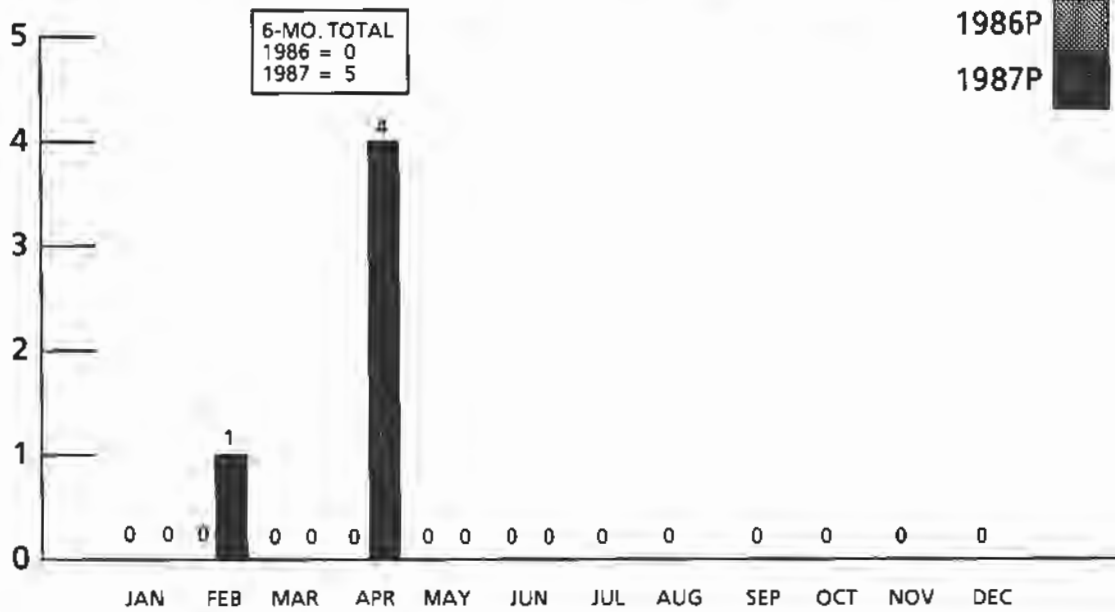
* All large carriers operating under 14 CFR 121, 125, and 127.

SOURCE NTSB, Safety Studies & Analysis Division, SP-30.

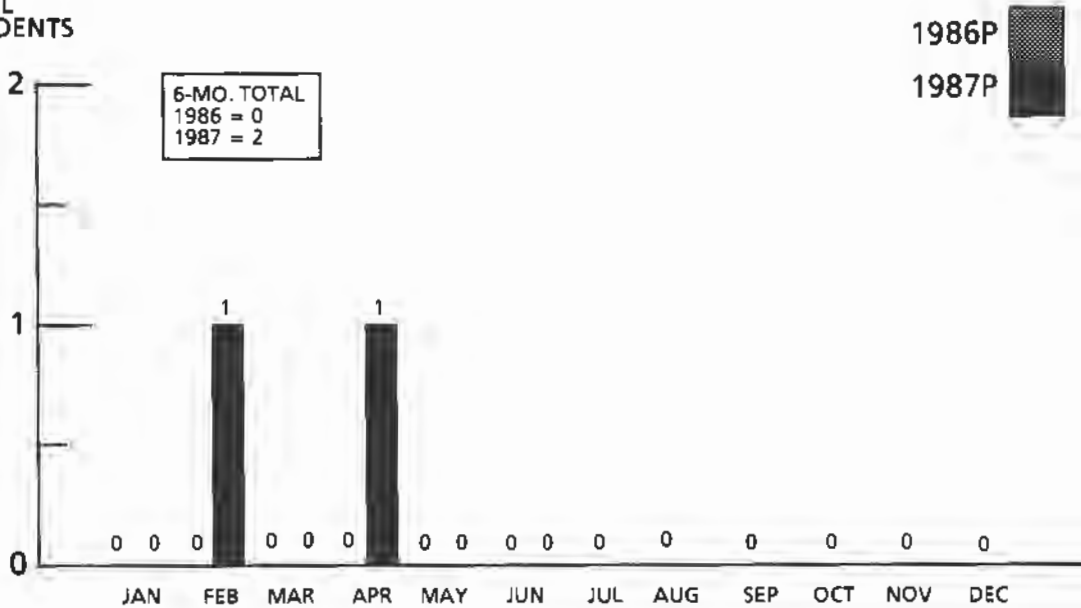
CHART 15.

U.S. AIR CARRIER FATALITIES AND FATAL ACCIDENTS, ALL SCHEDULED SERVICE*, 1986 - 1987

FATALITIES



FATAL ACCIDENTS

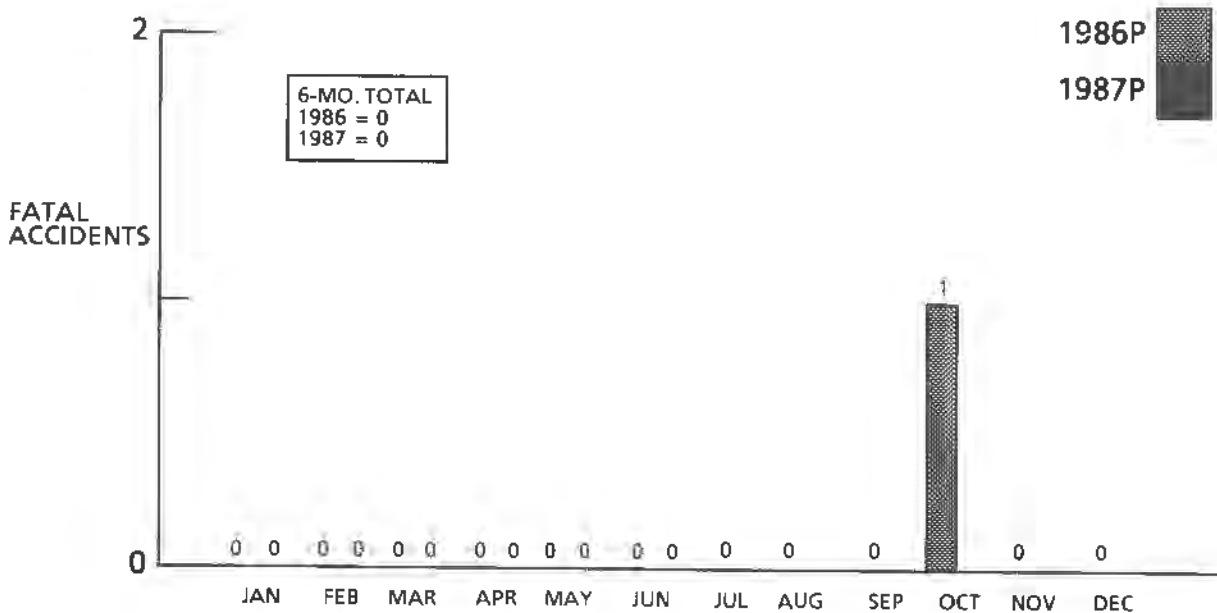
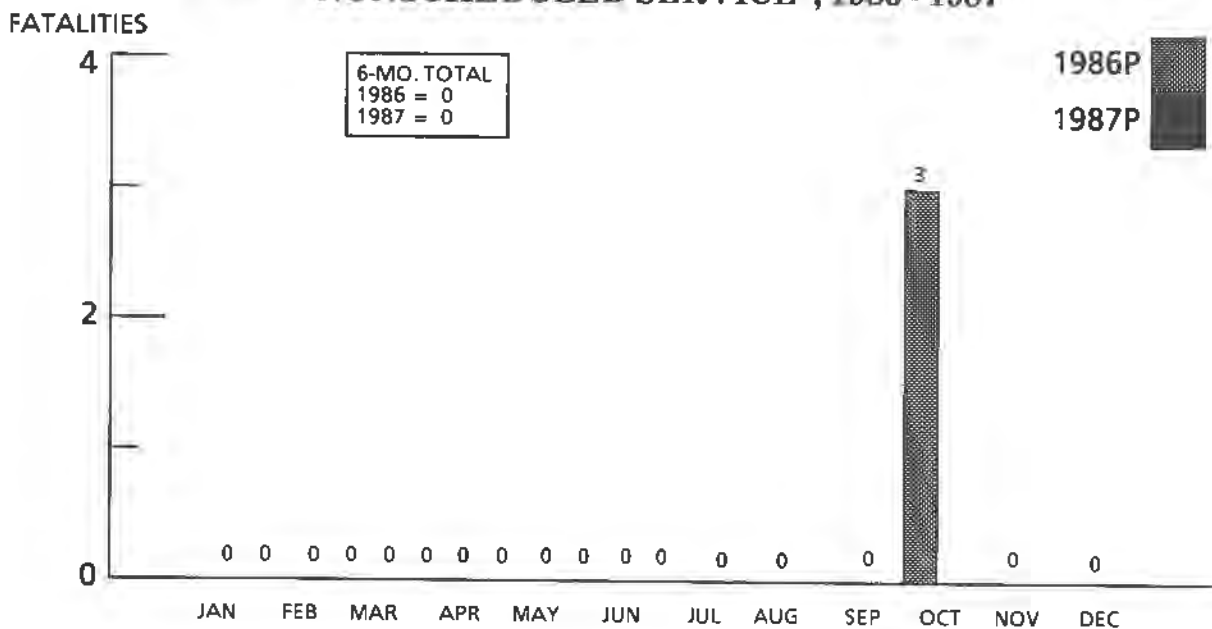


Note: 1986 and 1987 data are preliminary.
 * All scheduled service operating under 14 CFR 121, 125, and 127.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

CHART 16.

U.S. AIR CARRIER FATALITIES AND FATAL ACCIDENTS, ALL NONSCHEDULED SERVICE*, 1986 - 1987



Note: 1986 and 1987 data are preliminary.
* All nonscheduled service (charter) operating under 14 CFR 121, 125, and 127.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

TABLE 4.**COMMUTER CARRIERS* ACCIDENTS, FATALITIES AND INJURIES,
1986-1987**

CLASSIFICATION	JANUARY		FEBRUARY		MARCH	
	1986	1987	1986	1987	1986	1987
FATALITIES	0	10	0	0	3	9
FATAL ACCIDENTS	0	1	0	0	1	1
TOTAL ACCIDENTS	1	2	2	2	1	4
SERIOUS INJURIES	0	0	0	0	5	3

CLASSIFICATION	APRIL		MAY		JUNE	
	1986	1987	1986	1987	1986	1987
FATALITIES	0	2	0	3	0	0
FATAL ACCIDENTS	0	1	0	2	0	0
TOTAL ACCIDENTS	2	3	3	3	0	0
SERIOUS INJURIES	0	1	1	2	0	0

CLASSIFICATION	SECOND QUARTER			FIRST 6 MONTHS		
	1986	1987	% Chg	1986	1987	% Chg
FATALITIES	0	5	[1]	3	24	+700.0
FATAL ACCIDENTS	0	3	[1]	1	5	+400.0
TOTAL ACCIDENTS	5	6	+20.0	9	14	+55.6
SERIOUS INJURIES	1	3	+200.0	6	6	0.0

NOTE: 1986 and 1987 data are preliminary.

* All scheduled service operating under 14 CFR 135.

[1] Not calculable.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

TABLE 5.

**ON-DEMAND AIR TAXIS* ACCIDENTS, FATALITIES AND INJURIES,
1986-1987**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1986	1987	1986	1987	1986	1987
FATALITIES	7	8	4	4	1	4
FATAL ACCIDENTS	3	5	2	2	1	2
TOTAL ACCIDENTS	10	11	16	5	11	8
SERIOUS INJURIES	8	5	3	2	0	3

	APRIL		MAY		JUNE	
CLASSIFICATION	1986	1987	1986	1987	1986	1987
FATALITIES	1	3	6	3	5	10
FATAL ACCIDENTS	1	2	4	2	3	5
TOTAL ACCIDENTS	5	6	6	3	10	9
SERIOUS INJURIES	0	2	1	1	1	0

	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1986	1987	% Chg	1986	1987	% Chg
FATALITIES	12	16	+33.3	24	32	+33.3
FATAL ACCIDENTS	8	9	+12.5	14	18	+28.6
TOTAL ACCIDENTS	21	18	-14.3	58	42	-27.6
SERIOUS INJURIES	2	3	+50.0	13	12	-7.7

NOTE: 1986 and 1987 data are preliminary.
* Non-scheduled service operating under 14 CFR 135.

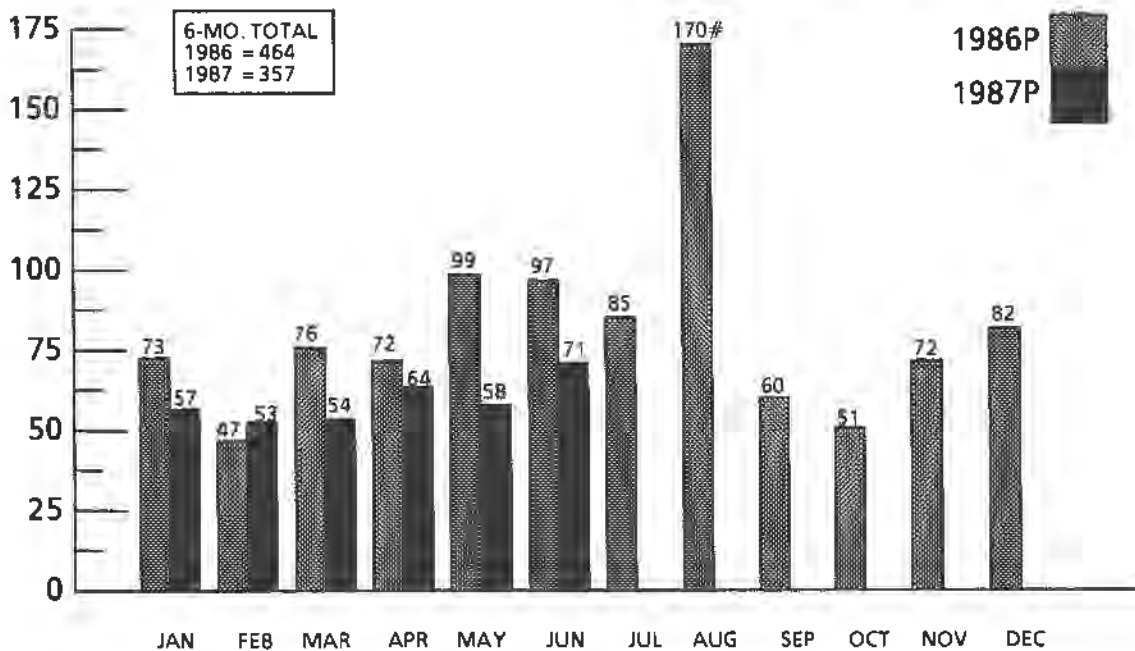
SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

GENERAL AVIATION

- In the first 6 months of 1987, the number of General Aviation fatalities, fatal accidents, and accidents, and serious injuries all experienced a decrease when compared to the same period of 1986.
- Fatalities decreased from 464 in the first 6 months of 1986 to 357 in the first half of 1987.
- The total number of General Aviation accidents decreased from 1,299 during the first 6 months of 1986 to 1,197 during the same period of 1987. In addition, the number of fatal accidents also decreased from 226 to 192 and serious injuries dropped from 289 to 198 during the corresponding periods.

CHART 17.

U.S. GENERAL AVIATION* FATALITIES, 1986 - 1987



P = Preliminary.

* All operations other than those operations under 14 CFR 121, 125, 127, and 135.

Includes 79 air carrier and ground fatalities from mid-air collision with General Aviation aircraft.

SOURCE: NTSB, Safety Study & Analysis Division, SP-30.

TABLE 6.

GENERAL AVIATION FATALITIES BY TYPE OF FLYING, 1986 - 1987

CLASSIFICATION	JANUARY		FEBRUARY		MARCH	
	1986	1987	1986	1987	1986	1987
PERSONAL	51	36	29	40	49	28
BUSINESS	19	7	9	3	13	8
CORPORATE/EXECUTIVE	0	6	0	0	0	0
AERIAL APPLICATION	1	0	0	0	0	0
INSTRUCTIONAL	0	7	3	2	7	13
OTHER	2	1	6	8	7	5
TOTAL GENERAL AVIATION	73	57	47	53	76	54

CLASSIFICATION	APRIL		MAY		JUNE	
	1986	1987	1986	1987	1986	1987
PERSONAL	40	44	66	37	50	51
BUSINESS	18	1	19	10	10	9
CORPORATE/EXECUTIVE	4	0	0	3	0	0
AERIAL APPLICATION	4	1	1	3	10	0
INSTRUCTIONAL	5	10	2	2	0	4
OTHER	1	8	11	3	27	7
TOTAL GENERAL AVIATION	72	64	99	58	97	71

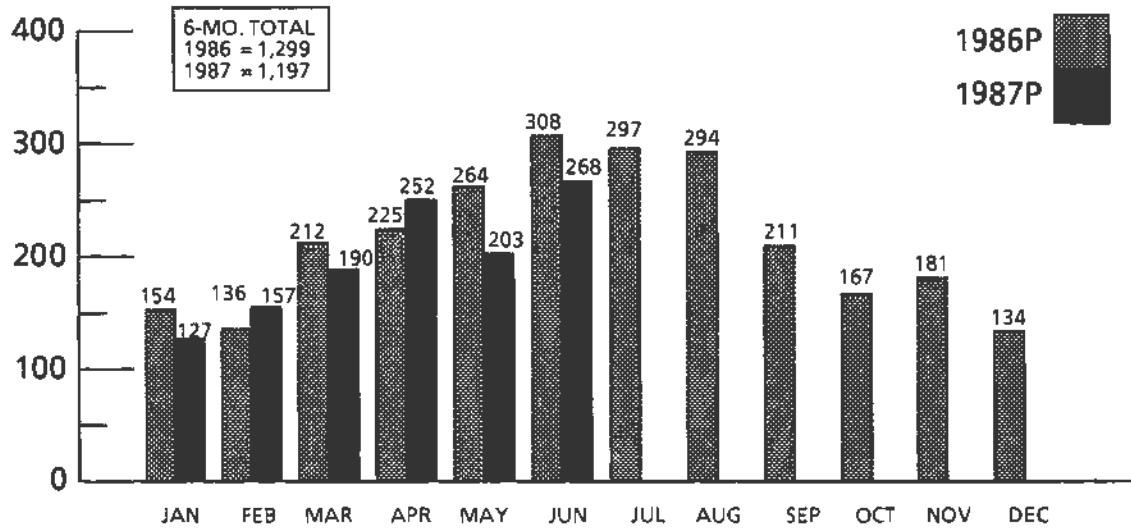
CLASSIFICATION	SECOND QUARTER			FIRST 6 MONTHS		
	1986	1987	% Chg	1986	1987	% Chg
PERSONAL	156	132	-15.4	285	236	-17.2
BUSINESS	47	20	-57.4	88	38	-56.8
CORPORATE/EXECUTIVE	4	3	-25.0	4	9	+125.0
AERIAL APPLICATION	15	4	-73.3	16	4	-75.0
INSTRUCTIONAL	7	16	+128.6	17	38	-123.5
OTHER	39	18	-53.8	54	32	-40.7
TOTAL GENERAL AVIATION	268	193	-28.0	464	357	-23.1

NOTE: 1986 and 1987 data are preliminary.
 [1] Not calculable.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

CHART 18.

U.S. GENERAL AVIATION* ACCIDENTS, 1986 - 1987



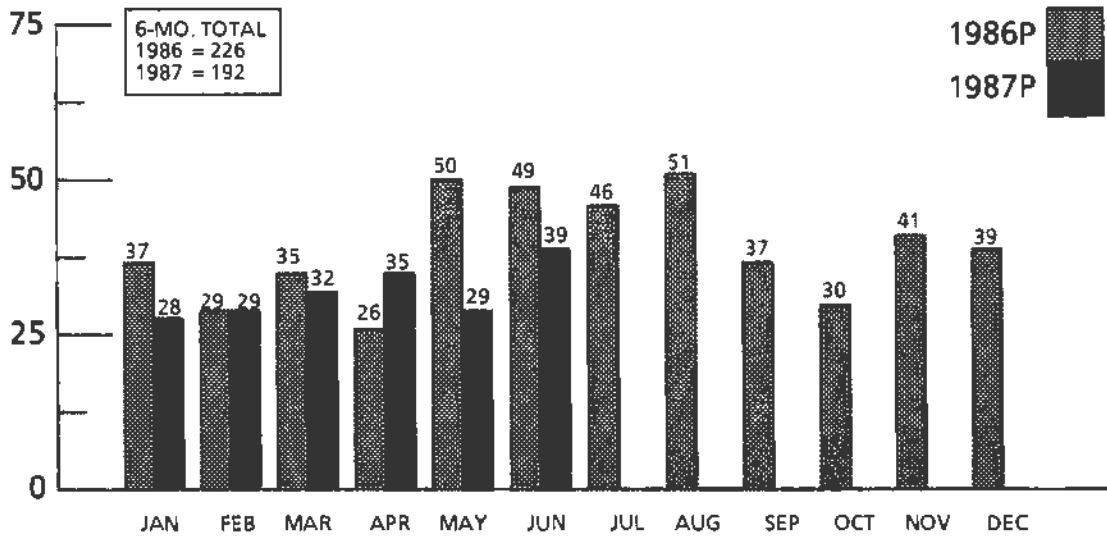
P = Preliminary.

* All operations other than those operations under 14 CFR 121, 125, 127, and 135.

SOURCE: NTSB, Safety Study & Analysis Division, SP-30.

CHART 19

U.S. GENERAL AVIATION* FATAL ACCIDENTS, 1986 - 1987



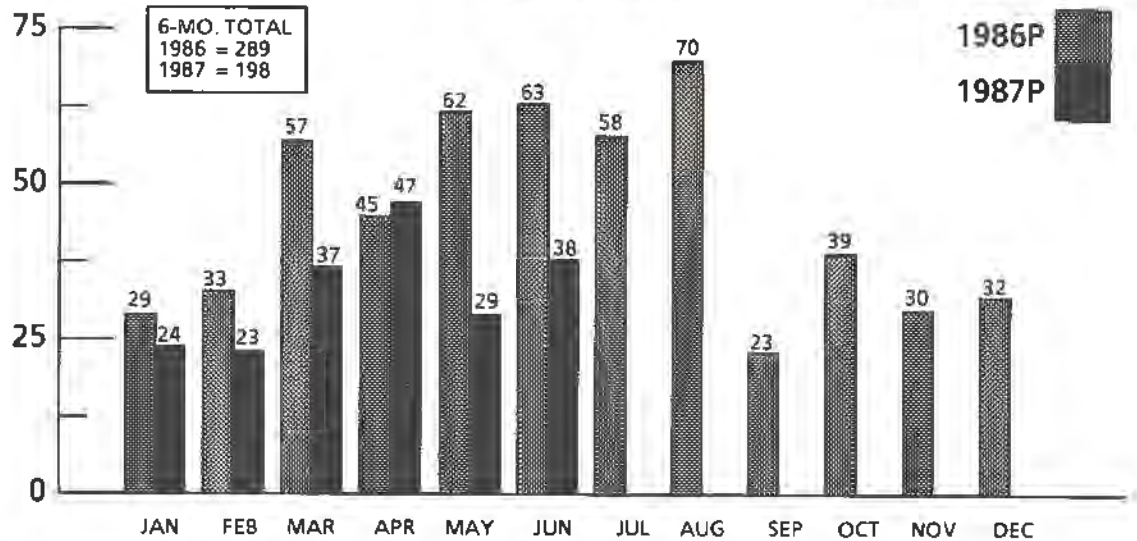
P = Preliminary.

* All operations other than those operations under 14 CFR 121, 125, 127, and 135.

SOURCE: NTSB, Safety Study & Analysis Division, SP-30.

CHART 20.

U.S. GENERAL AVIATION* SERIOUS INJURIES, 1986 - 1987



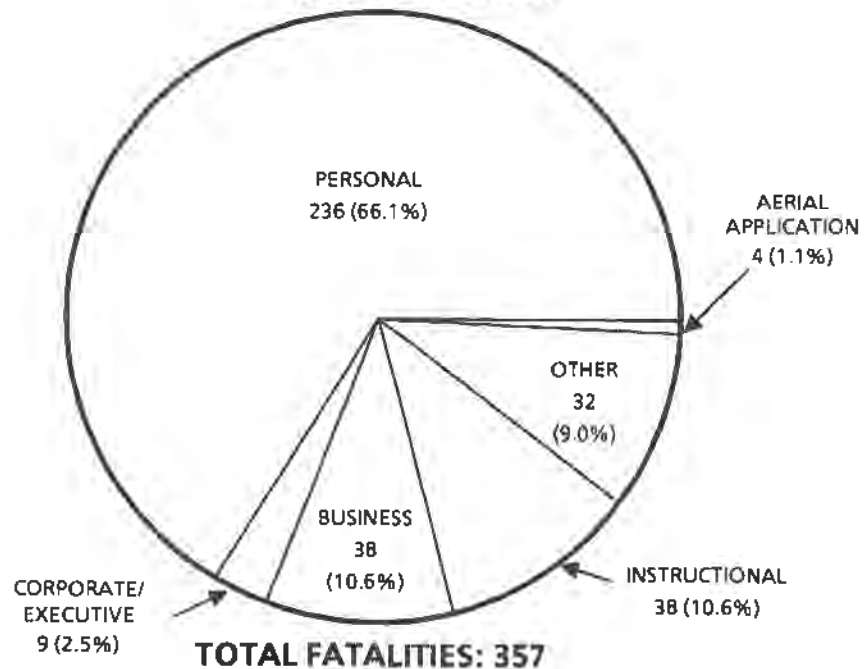
P = Preliminary

* All operations other than those operations under 14 CFR 121, 125, 127, and 135.

SOURCE: NTSB, Safety Study & Analysis Division, SP-30.

CHART 21.

GENERAL AVIATION FATALITIES BY AIRCRAFT CLASSIFICATION, FIRST 6 MONTHS 1987



Note: 1987 data are preliminary

SOURCE: NTSB, Safety Study & Analysis Division, SP-30

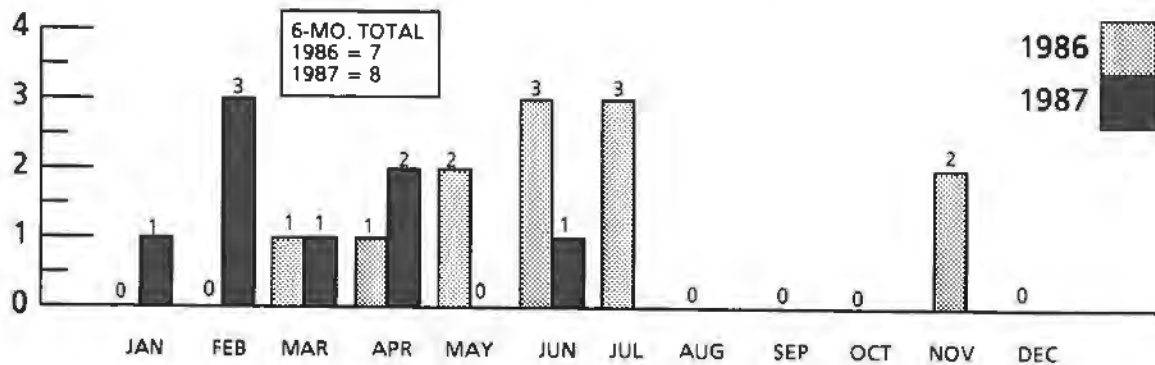
TABLE 10.
HAZARDOUS MATERIALS FATALITIES FOR 1987 COMPARED WITH 1986

JANUARY		FEBRUARY		MARCH	
1986	1987	1986	1987	1986	1987
0	1	0	3	1	1

APRIL		MAY		JUNE	
1986	1987	1986	1987	1986	1987
1	2	2	0	3	1

SECOND QUARTER			FIRST 6 MONTHS		
1986	1987	% Chg	1986	1987	%Chg
6	3	-50.0	7	8	+14.3

CHART 31.
HAZARDOUS MATERIALS FATALITIES, 1986-1987

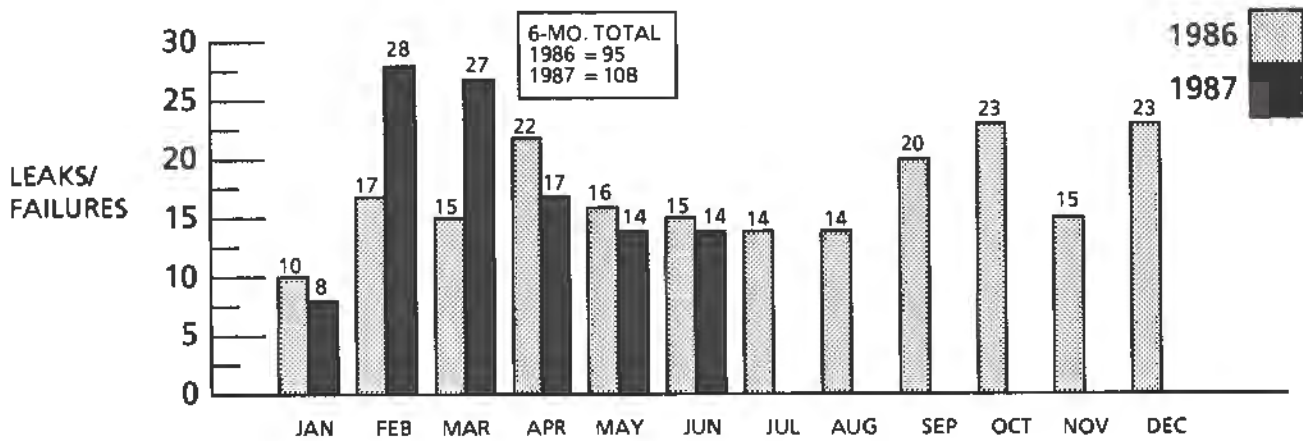
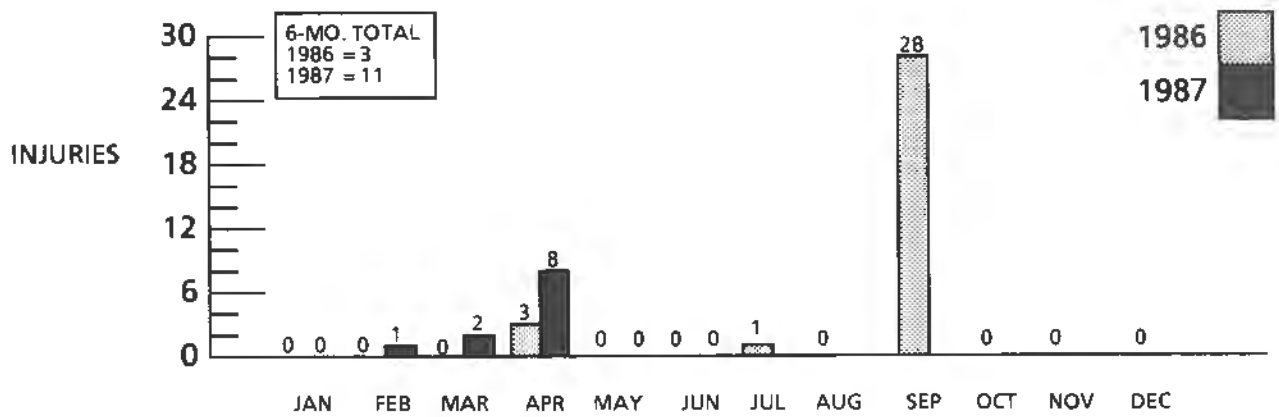
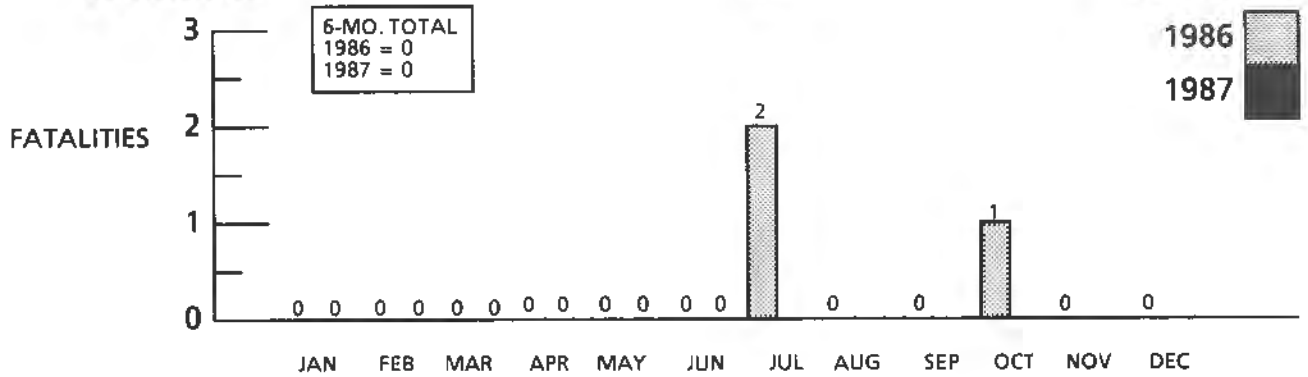


NOTE: 1987 data are preliminary. Data supplied as of 1/28/88.

SOURCE: RSPA, Office of Hazardous Materials Transportation, DHM-63.

CHART 30.

LIQUID PIPELINE FATALITIES, INJURIES, AND LEAKS/FAILURES, 1986-1987

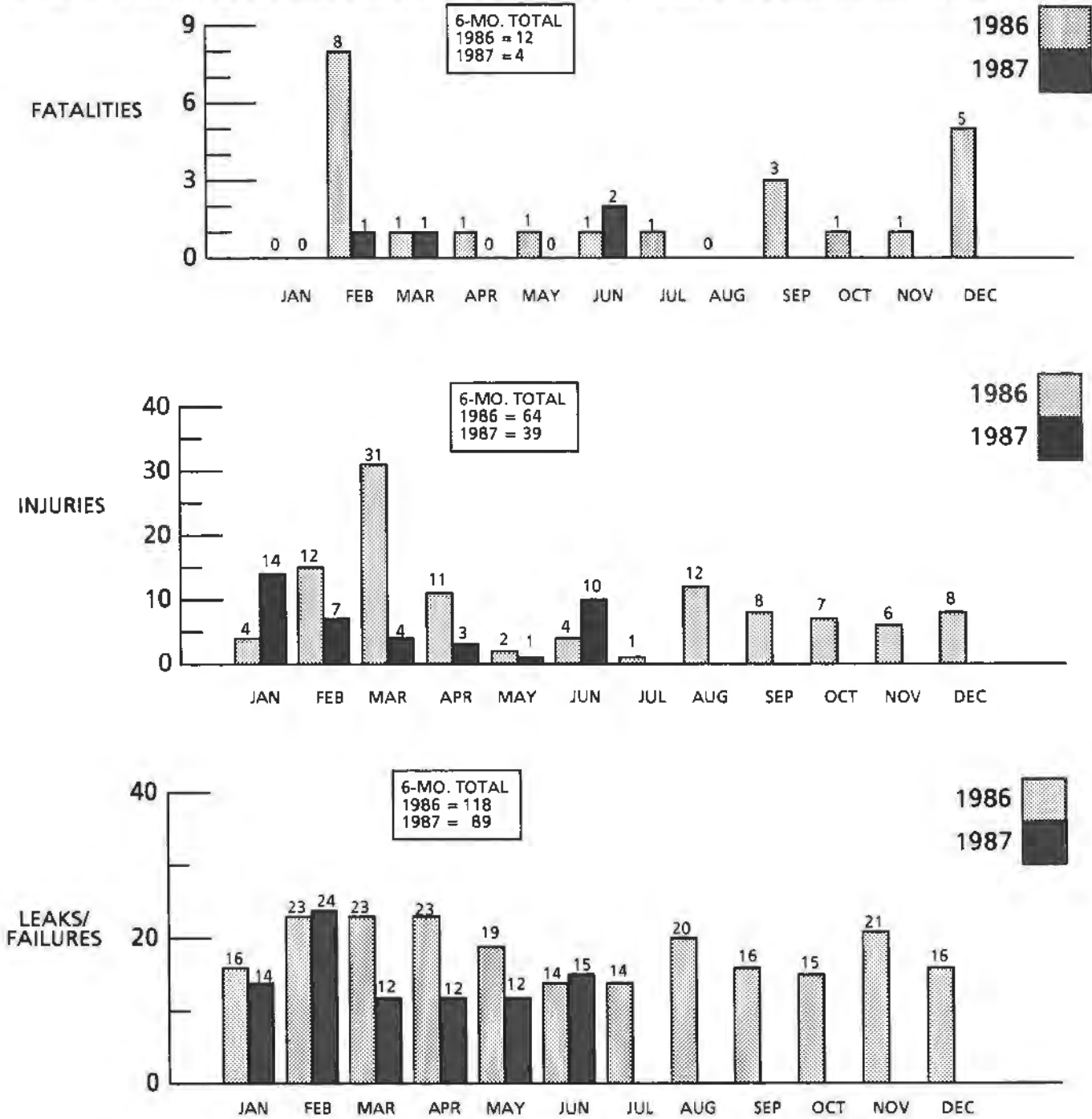


NOTE: 1987 data are preliminary. Data supplied as of 1/22/88
Pipeline incidents are credited to the year in which they occurred, not the year in which the report was received.

SOURCE: Liquid Pipeline: DOT F 7000 0.
RSPA, Office of Pipeline Safety, DPS-40.

CHART 29.

GAS PIPELINE FATALITIES, INJURIES, AND LEAKS/FAILURES, 1986-1987



NOTE: 1987 data are preliminary. Data supplied as of 1/22/88.
Pipeline incidents are credited to the year in which they occurred,
not the year in which the report was received.

SOURCE: Gas Pipeline: DOT F 7100.1 and F7100.2.
RSPA, Office of Pipeline Safety, DPS-40.

TABLE 9.**PIPELINE FATALITIES, FIRST 6 MONTHS, 1986-1987**

CLASSIFICATION	JANUARY		FEBRUARY		MARCH	
	1986	1987	1986	1987	1986	1987
GAS PIPELINE	0	0	8	1	1	1
LIQUID PIPELINE	0	0	0	0	0	0
TOTAL	0	0	8	1	1	1

CLASSIFICATION	APRIL		MAY		JUNE	
	1986	1987	1986	1987	1986	1987
GAS PIPELINE	1	0	1	0	1	2
LIQUID PIPELINE	0	0	0	0	0	0
TOTAL	1	0	1	0	1	2

CLASSIFICATION	SECOND QUARTER			FIRST 6 MONTHS		
	1986	1987	% Chg	1986	1987	%Chg
GAS PIPELINE	3	2	-33.3	12	4	-66.7
LIQUID PIPELINE	0	0	0.0	0	0	0.0
TOTAL	3	2	-33.3	12	4	-66.7

NOTE: 1987 data are preliminary. Data supplied as of 1/22/88.
Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

SOURCE: Liquid Pipeline: DOT F7000-1 Pipeline carrier report.
Gas Pipeline: DOT F7100.1 and F7100.2
RSPA, Office of Pipeline Safety, DPS-40.

MATERIALS TRANSPORT

PIPELINES

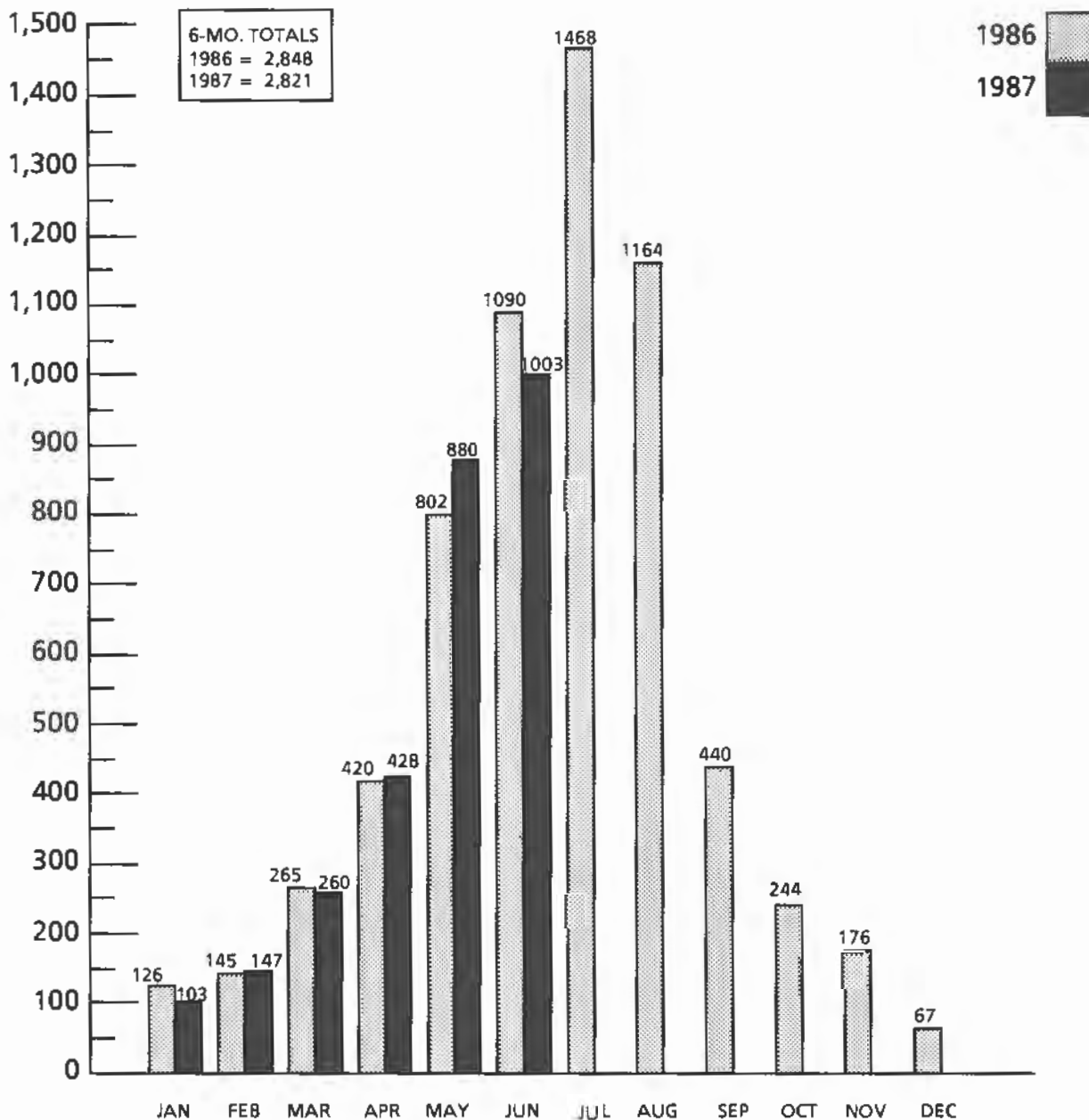
- In the first 6 months of 1987, fatalities and injuries resulting from incidents involving the transport of natural gas decreased when compared to the same period of 1986. There were 4 fatalities and 39 injuries reported in 1987 versus 12 and 64, respectively, in 1986. The number of leaks/failures also declined from 118 in the first half of 1986 to 89 in the corresponding period of 1987.
- The number of liquid pipeline leaks/failures increased from 95 in the first 6 months of 1986 to 108 in the same 1987 period. Fatalities remained at zero, while injuries increased from 3 to 11 in the same periods.

HAZARDOUS MATERIALS

- During the first 6 months of 1987, Hazardous Materials fatalities and incidents increased when compared to the first 6 months of 1986. To date, eight fatalities have been reported in 1987, while seven fatalities were reported in 1986. The number of incidents rose from 2,931 in the first 6 months of 1986 to 3,155 in 1987. Major injuries decreased from 36 in the first half of 1986 to 11 in the corresponding period of 1987, while minor injuries increased from 123 to 173 in the same periods of 1986 and 1987.

CHART 28.

RECREATIONAL BOATING REPORTED ACCIDENTS, 1986-1987



SOURCE: BAR File, USCG, Office of Boating, Public, and Consumer Affairs, G-BP-1

CHART 26.

RECREATIONAL BOATING FATALITIES, 1986-1987

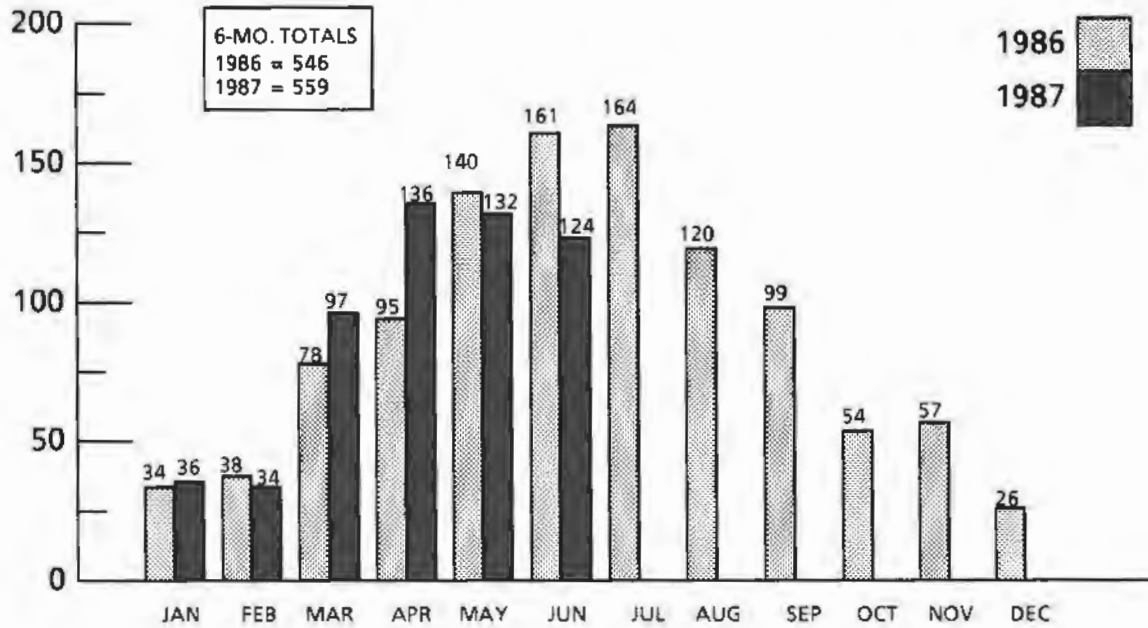
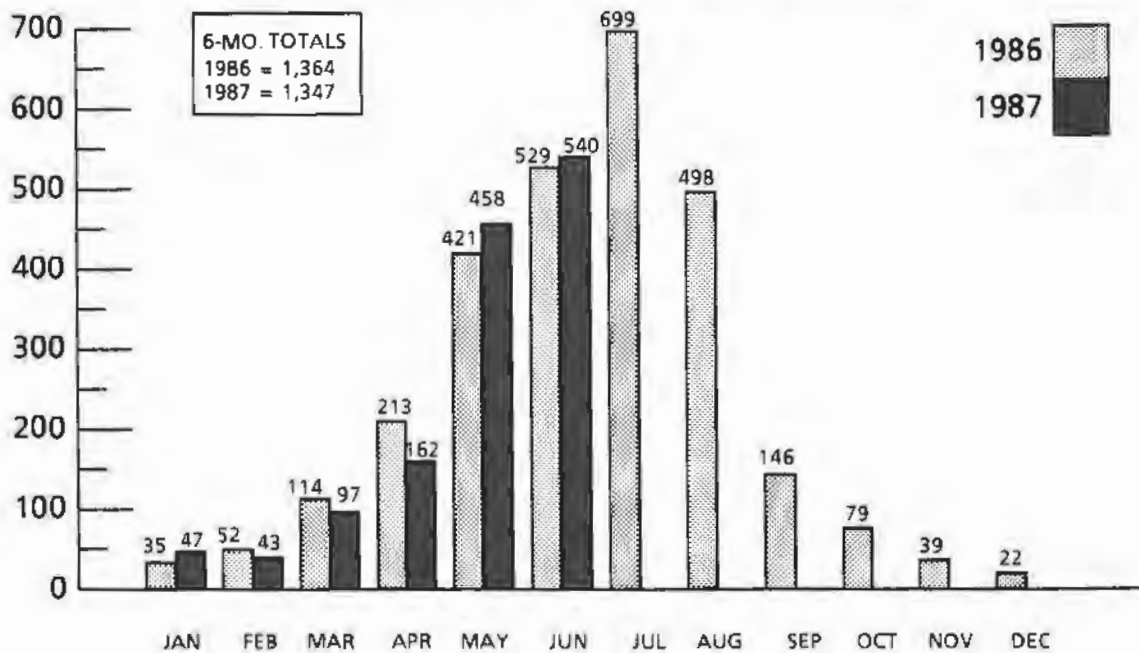


CHART 27.

RECREATIONAL BOATING INJURIES, 1986-1987



SOURCE: BAR File, USCG, Office of Boating, Public, and Consumer Affairs, G-BP-1.

RECREATIONAL BOATING

Recreational Boating accident statistics for the first half of 1987 are not complete at this time, because boating accidents are not reported immediately. Since they are not an accurate portrayal of the quarter's accident experience, they may be subject to misinterpretation. Valid boating accident statistics can only be developed annually under present or reasonably attainable reporting system conditions. Factors involved in this include the seasonal nature of boating and enforcement activity, State and Federal resource constraints, and various investigatory and processing delays.

As of December 23, 1987, the Coast Guard has received reports of 3,692 vessels being involved in accidents for the first 6 months of 1987, while in 1986, 3,708 vessels were reported to be in accidents for the same period. So far, 559 fatalities have been reported in the first half of 1987 versus 546 in the same period of 1986. The comparison of injuries is: 1987 - 1,347; 1986 - 1,364 for the January-June periods.

Preliminary data for the first 6 months of 1987 show that boating accidents decreased 0.9 percent over the same period of 1986. However, the number of fatalities increased 2.4 percent during the same periods. When noting these comparisons, it must be remembered that reports are not yet complete.

TABLE 8.

RECREATIONAL BOATING FATALITIES, *FIRST 6 MONTHS, 1986-1987

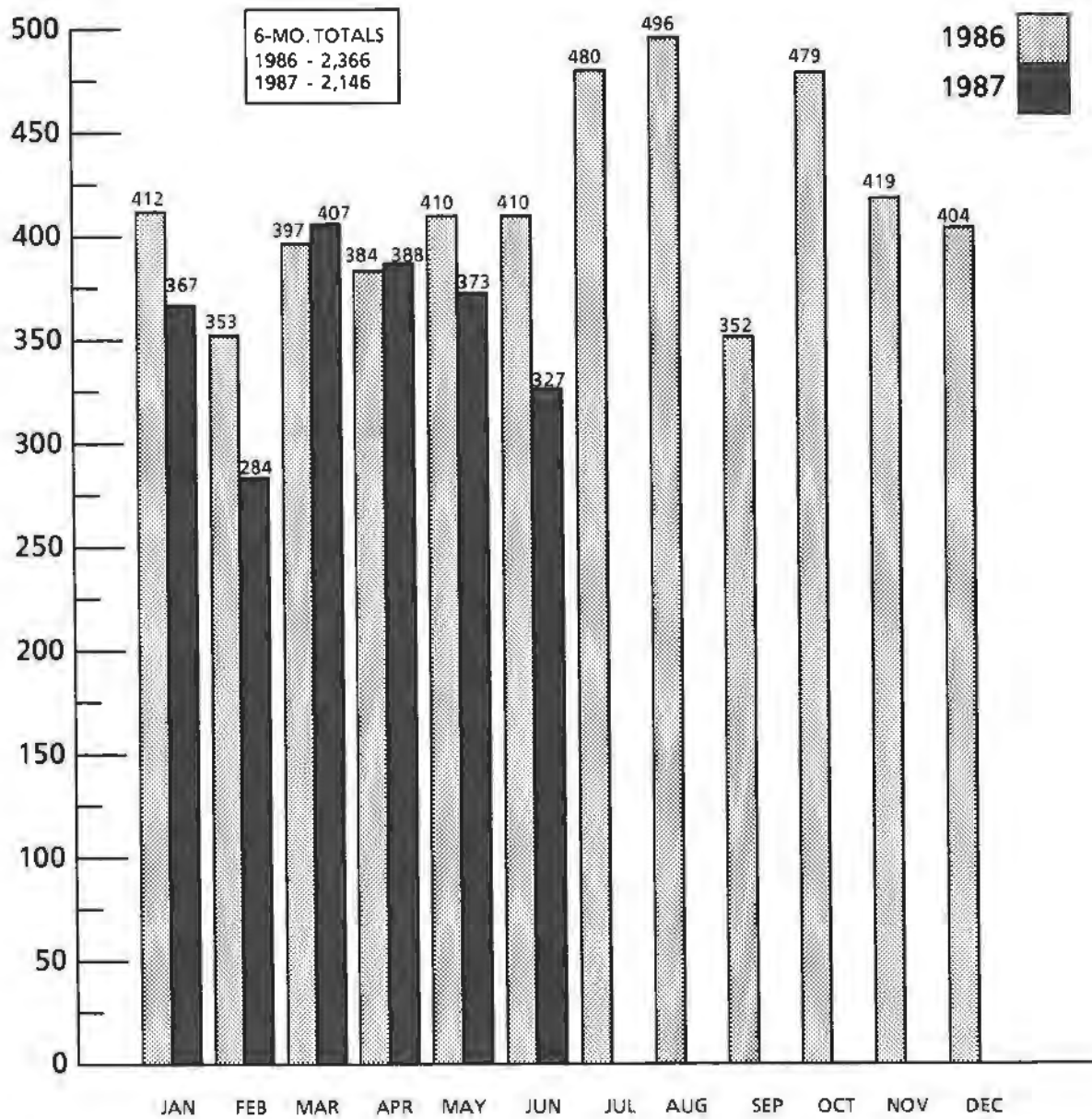
	1986	1987	% Change
January	34	36	+ 5.9
February	38	34	-10.5
March	78	97	+24.4
April	95	136	+43.2
May	140	132	-5.7
June	161	124	-23.0
Total	546	559	+ 2.4

NOTE: 1987 data are incomplete.

SOURCE: BAR File, USCG, Office of Boating, Public, and Consumer Affairs, G-BP-1.

CHART 25.

VESSELS* INVOLVED IN WATERBORNE ACCIDENTS, 1986-1987^P



* Includes foreign vessels having casualties in U.S. navigable waters.

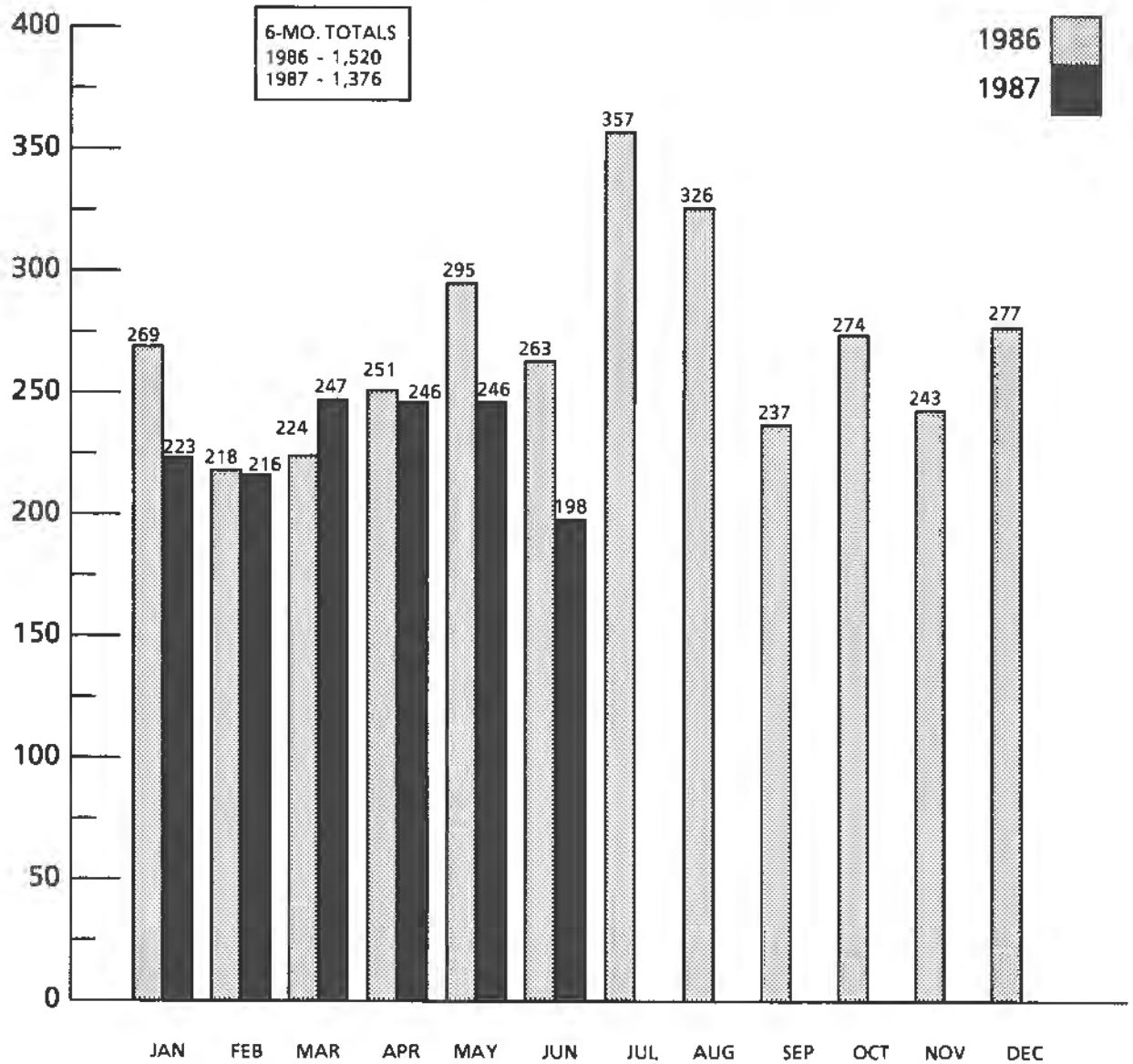
^P: Data for 1986 and 1987 are preliminary and incomplete.

NOTE: More than one vessel may be involved in a marine accident.

SOURCE: USCG, Marine Investigation Division, G-MMI-3.

CHART 24.

WATERBORNE ACCIDENTS, 1986-1987P



NOTE: More than one vessel may be involved in a marine accident.
P: Data for 1986 and 1987 are preliminary and incomplete.

SOURCE: USCG, Marine Investigation Division, G-MMI-3.

CHART 22.

WATERBORNE FATALITIES RESULTING FROM VESSEL CASUALTIES*, 1986 - 1987^P

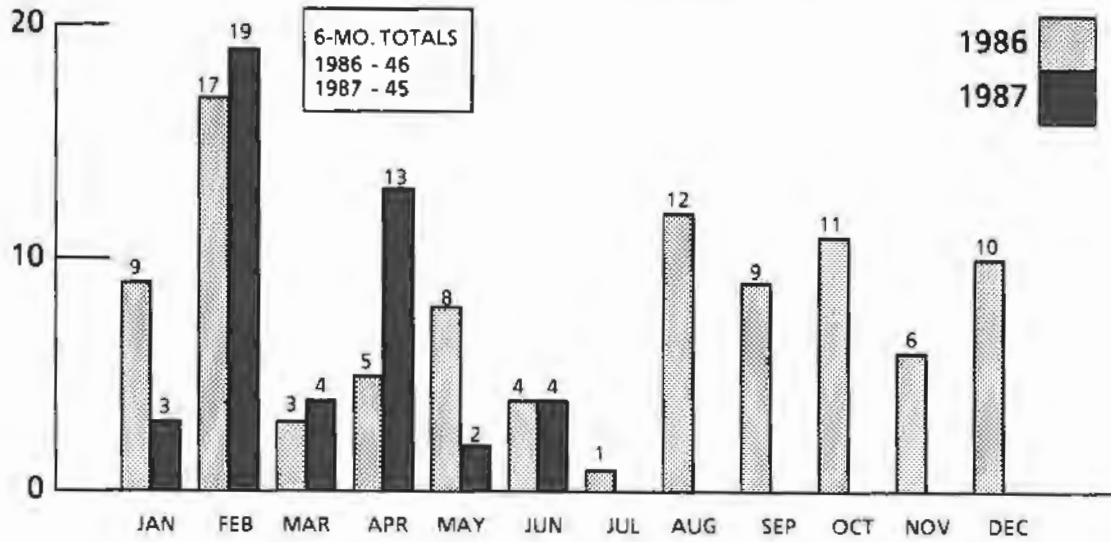
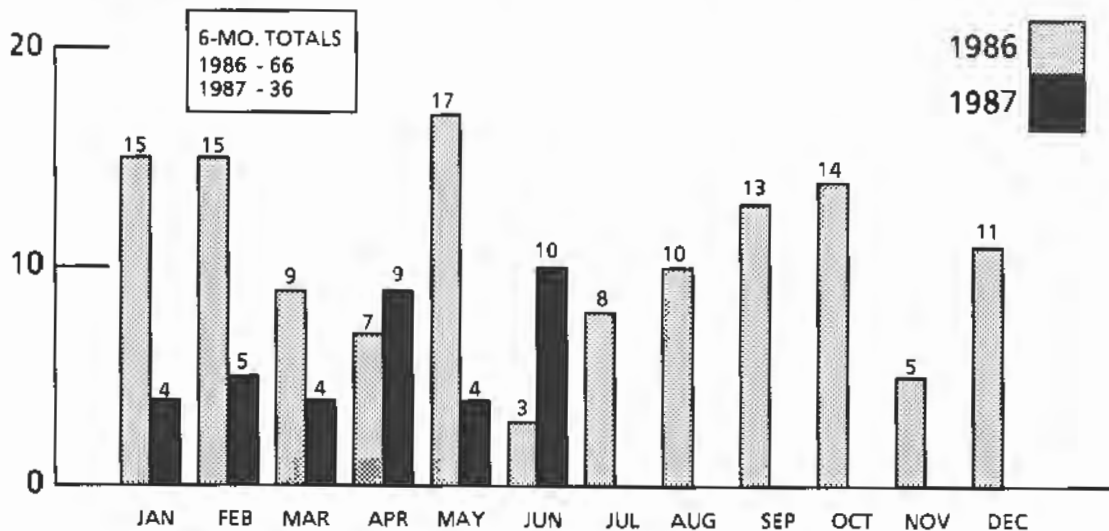


CHART 23.

WATERBORNE INJURIES RESULTING FROM VESSEL CASUALTIES*, 1986 - 1987^P



* Includes foreign vessels having casualties in U.S. navigable waters.
P Data for 1986 and 1987 are preliminary and incomplete.

SOURCE: USCG, Marine Investigation Division, G-MMI-3.

MARINE WATERBORNE

Users of Waterborne statistics should exercise caution when comparing accident, fatality and injury data for the first 6 months of 1986 and 1987. Data for 1986 and 1987 shown in the following charts are incomplete at this time, since many of the marine casualties are still being investigated or are in various stages of completion.

- Approximately 93 percent of all U.S. vessel losses in 1986 were uninspected vessels. Fishing vessels accounted for 67 percent of the total number of losses.

TABLE 7.
**WATERBORNE FATALITIES RESULTING FROM VESSEL
CASUALTIES*, FIRST 6 MONTHS, 1986-1987^P**

	1986	1987	% Change
January	9	3	-66.7
February	17	19	+ 11.8
March	3	4	+ 33.3
April	5	13	+160.0
May	8	2	-75.0
June	4	4	0.0
Total	46	45	-2.2

* Includes foreign vessels having casualties in U.S. navigable waters.

^P Data for 1986 and 1987 are preliminary and incomplete.

SOURCE: USCG, Marine Investigation Division, G-MM1-3.

CHART 32.

HAZARDOUS MATERIALS MAJOR AND MINOR INJURIES*, 1986-1987

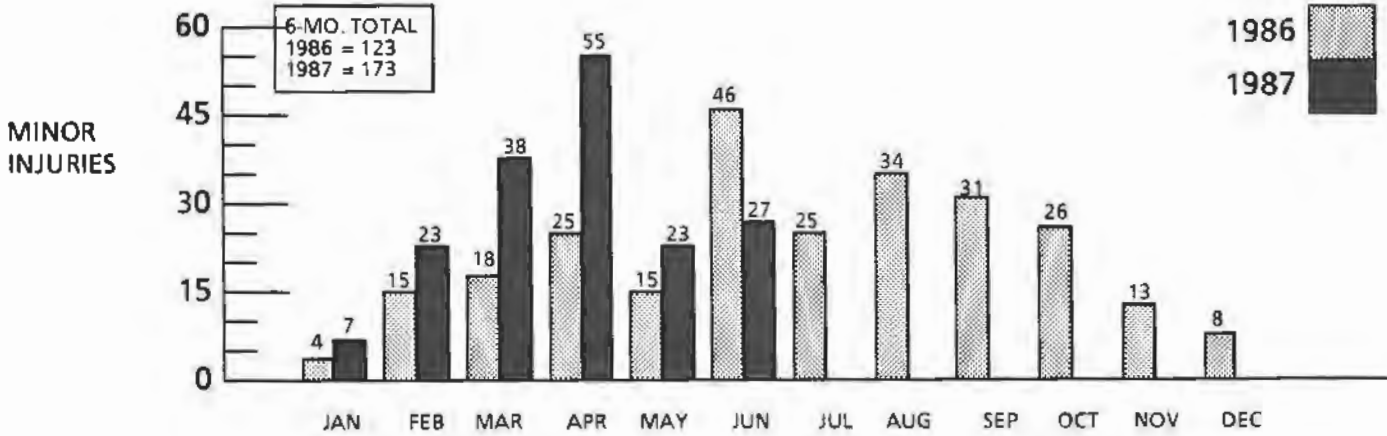
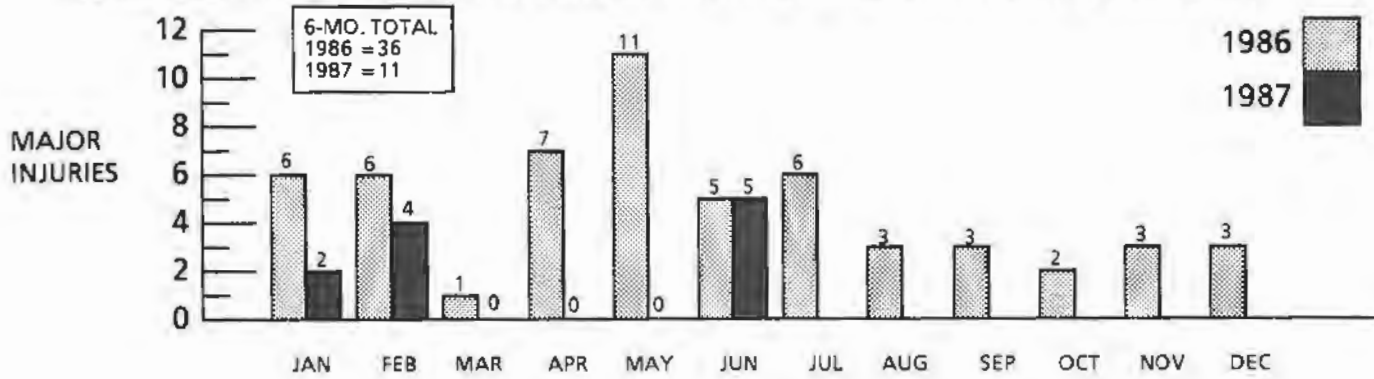
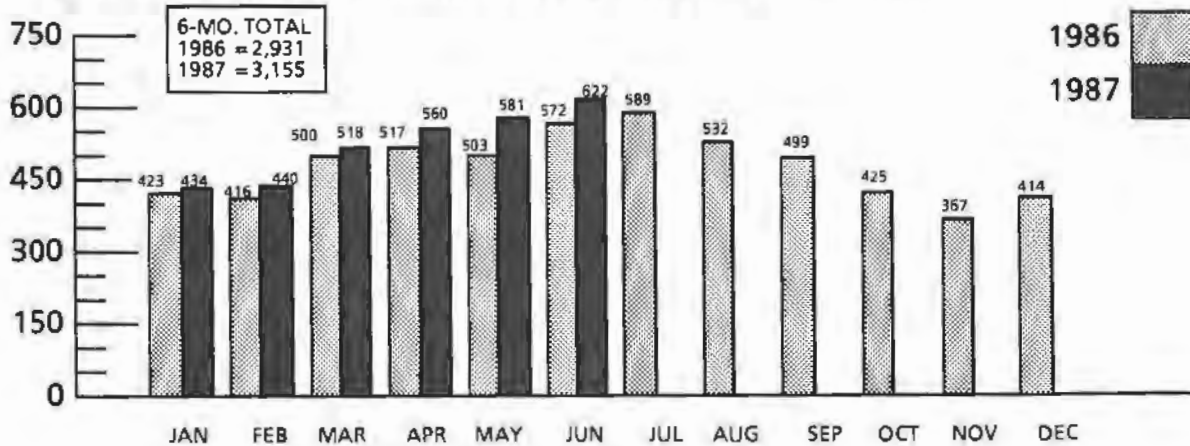


CHART 33.

HAZARDOUS MATERIALS INCIDENTS**, 1986-1987



* See Glossary for definition.

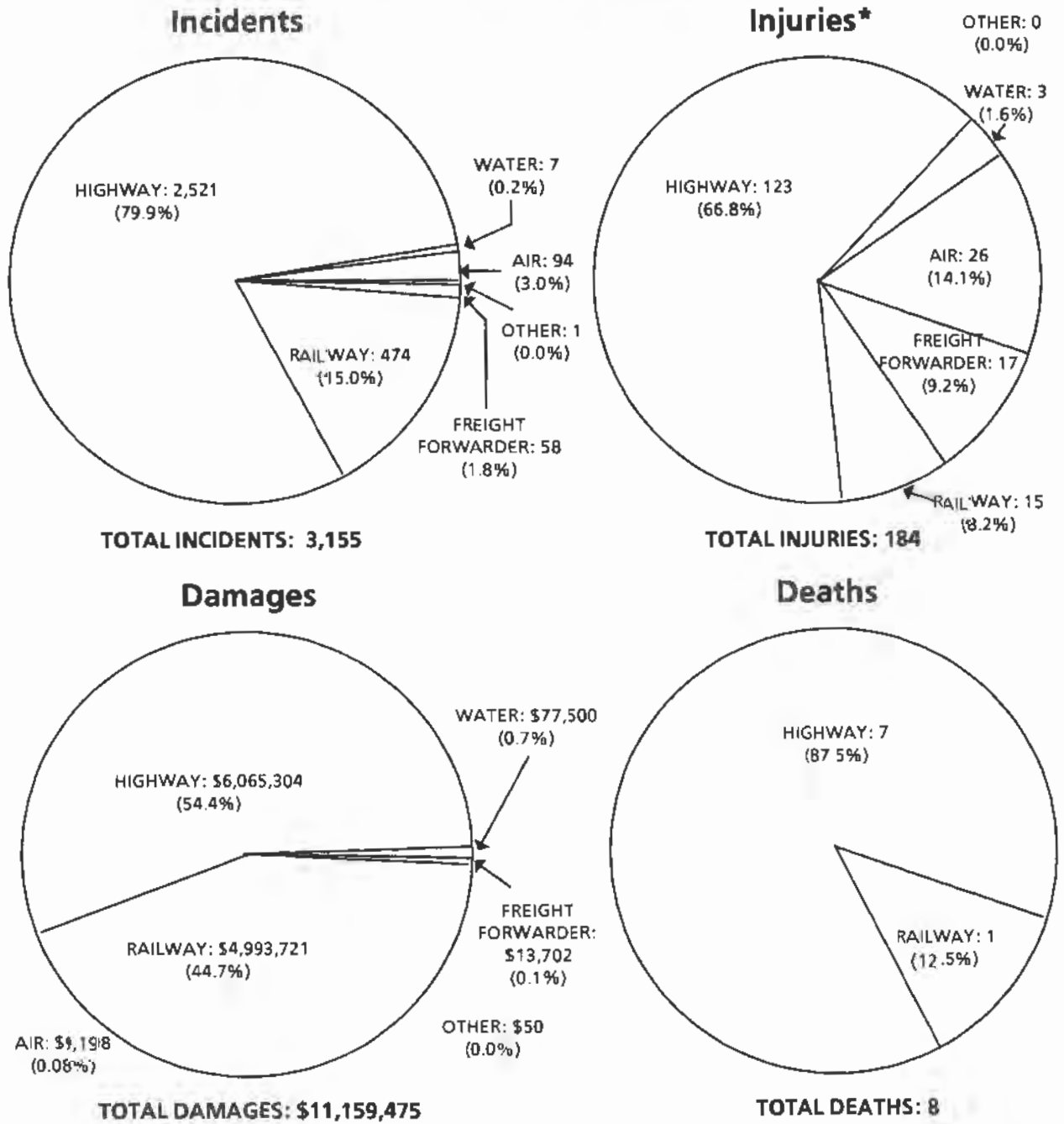
** Hazardous Materials Incidents are reported in the year in which they occurred.

NOTE: 1987 data are preliminary. Data supplied as of 1/28/88.

SOURCE: RSPA, Office of Hazardous Materials Transportation, DHM-63.

CHART 34.

HAZARDOUS MATERIALS INCIDENTS, INJURIES, DEATHS AND DAMAGES BY MODE, FIRST 6 MONTHS 1987^P



^P = Preliminary.
* Includes Major and Minor Injuries.

NOTE: 1987 Data are preliminary. Data supplied as of 1/28/88.

SOURCE: RSPA, Office of Hazardous Materials Transportation, DHM-63.

MAJOR DOT SAFETY REGULATIONS

JANUARY 1, 1987 - JUNE 30, 1987

The actions below are selected and summarized from the final rules and regulations published in the Federal Register (FR) during the period covered by this report. These regulations amend the designated titles and sections of the Code of Federal Regulations (CFR).

U.S. COAST GUARD

46 CFR Part 160 -- Lifesaving Equipment; Immersion Suits

The Coast Guard is revising the specifications for approval of exposure suits. Existing approvals for exposure suits under 46 CFR 160.071 will be terminated on the effective date of these regulations and new approvals will be issued for immersion suits under 46 CFR 160.171 after supplemental testing. Existing vessels may continue to use exposure suits approved under 46 CFR 160.071 as long as the suits remain serviceable. Ships, the construction or conversion of which started on or after July 1, 1986, will be required to have immersion suits approved under 46 CFR 160.171. The changes are needed to conform the regulations to the International Convention for Safety of Life at Sea, 1974 (SOLAS 74), as amended. Effective date: April 13, 1987 (52 FR 1185, January 12, 1987.)

33 CFR Part 183 - Boating Safety; Fuel System Standard

This rule amends the Fuel System Standard in Subpart J of Part 183 by requiring the gasoline fuel hose installed in new recreational boats be tested under SAE Standard J1527DEC85 instead of SAE Standard J30C. The increasing level of aromatics in gasoline and the use of alcohols in gasoline have raised safety questions over the permeation rates and longevity of hose meeting SAE Standard J30C. The purpose of these amendments is to specify four grades of fuel hose that are more resistant to alcohol permeation. Additional editorial changes to Subpart A of Part 183 reflect changes to the names and addresses of organizations whose standards are incorporated by reference in Part 183. Effective date: November 23, 1987. (52 FR 19726, May 27, 1987.)

46 CFR Part 150 -- Compatibility of Cargoes

This rule amends the requirements for compatible stowage of bulk liquid hazardous materials on tank vessels by adding materials recently authorized by the Coast Guard for carriage and by making minor technical changes. This action updates the current regulations and better informs persons loading bulk liquid chemical cargoes of their compatibility. Effective date: July 6, 1987. (52 FR 21036, June 4, 1987.)

FEDERAL AVIATION ADMINISTRATION

14 CFR Parts 43, 91, 121, 127, and 135 -- Air Traffic Control Radar Beacon System and Mode S Transponder Requirements in the National Airspace System

This action establishes requirements pertaining to the use, installation, inspection, and testing of Air Traffic Control Radar Beacon System (ATCRBS) and Mode S transponders in U.S.-registered civil aircraft. The rule adopted continues to require a transponder for operation in each terminal control area (TCA) and in the airspace of the 48 contiguous states and the District of Columbia above 12,500 feet above ground level (AGL). Automatic pressure altitude reporting equipment, which is currently required in all of the above airspace except Group II TCA's, will be required in Group II TCA's effective December 1, 1987. The rule provides for a phased transition from ATCRBS to Mode S transponders in the National Airspace System (NAS) by limiting the manufacture and installation of ATCRBS transponders. After January 1, 1992, all newly installed transponders in U.S.-registered civil aircraft are required to meet the requirements of the technical standard order (TSO) for airborne Mode S transponder equipment. The rule also permits ATCRBS transponders already installed on that date to be used indefinitely. Projected increases in air traffic will require improved aircraft location and identification information, which will be provided by the Mode S and automatic pressure altitude reporting equipment. These requirements are an essential component of the NAS Plan. Mode S is also a necessary technical prerequisite to obtain data link services which allow digital exchange of information between aircraft and the ground. The FAA will provide these services beginning on/about 1990. This action also sets forth test and inspection requirements for the Mode S transponder and a new output power test requirement for the ATCRBS transponder. Effective date: April 6, 1987. (52 FR 3380, February 3, 1987.)

14 CFR Parts 91, 121, 125, and 135 -- Flight Recorders and Cockpit Voice Recorders

This amendment requires improved (digital) flight recorders with additional data parameters for airplanes type certificated before 1969 and operated in Part 121 operations. Review of National Transportation Safety Board accident/incident files for January 1983 to February 1986 revealed the high failure rate of the metal foil flight recorders. The data revealed that 37 recorders (48 percent) had one or more malfunctioning parameters preceding the accident/incident preventing the recording or readout pertinent data. As a result, post-accident flight recorder examination cannot be relied upon to provide accident investigators with sufficient information to accurately assess the causal interrelationship between man, machine, and environment. The requirement of a digital flight recorder with additional data parameters is deemed the minimum standard necessary to ensure that all of the underlying causal factors of an accident are identified. The amendment also requires cockpit voice recorders on newly manufactured multiengine, turbine-powered airplanes certificated to carry six or more passengers, requiring two pilots by type certification or operating rules for those operations conducted under Part 135. The amendment also specifies that for those operators conducting operations under Part 91 and Part 125 that have installed approved cockpit voice recorders, the Administrator will not use the record in any civil penalty or certificate action. These amendments were based on recommendations from a study conducted by Trans Systems Corporation and a number of safety recommendations by the National Transportation Safety Board. Effective date: May 26, 1987. (52 FR 9622, March 25, 1987.)

AIRWORTHINESS DIRECTIVES

14 CFR Part 39 -- General Electric Company (GE) CF6-50 and -45 Series Turbofan Engines

This action publishes in the Federal Register and makes effective as to all persons an amendment adopting a new airworthiness directive (AD) which incorporates and amends Telegraphic Airworthiness Directive (TAD) T85-25-56 which was previously made effective as to all known U.S. owners and operators of certain GE CF6-50 and -45 engines by individual telegram. The TAD required a one time inspection of the left hand side seventh stage low pressure turbine (LPT) cooling air manifold tube and attachment hardware for distress, and replacement as required, on GE CF6-50

and -45 engines. The TAD was needed to prevent left hand side seventh stage LPT cooling air manifold tube failures which could result in an LPT overtemperature condition and subsequent LPT stage 1 disk rupture. This new AD amends the TAD by adding a requirement for repetitive visual inspection of the left hand side seventh stage LPT cooling air system hardware on GE CP6-50 and -45 engines. Effective date: January 13, 1987. (52 FR 1318, January 13, 1987.)

14 CFR 39 - Boeing Model 727 Series Airplanes

This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 727 series airplanes, which currently requires repetitive inspections for cracks and repair, if necessary, of the wing rear spar terminal fitting, and identifies terminating action described in the existing AD. This assessment has determined that the terminating action is inappropriate, and that it is necessary to periodically inspect the modified or repaired wing rear spar terminal fittings for cracks. Failure to detect cracks prior to reaching critical length may severely reduce the load carrying capability of the wing. Effective date: March 13, 1987. (52 FR 3419, February 4, 1987.)

14 CFR Part 39 -- Boeing Model 747 Series Airplanes

This amendment adds a new airworthiness directive (AD) which requires an inspection for cracking and repair or replacement, as necessary, of the pylon midspar attach fitting horizontal clevis on certain Boeing Model 747 airplanes. This action is prompted by reports of cracks and corrosion in fastener holes of the attach fitting that, if not corrected, could result in possible separation of the pylon and engine from the wing. Effective date: March 13, 1987. (52 FR 3420, February 4, 1987.)

14 CFR Part 39 -- Lockheed-California Company Model L-1011 Series Airplanes, Equipped with Carbon Fibre Cowls

This amendment adopts a new airworthiness directive (AD) applicable to Lockheed Model L-1011 series airplanes equipped with carbon fibre cowls that requires modification of the left rear cowl door support stowage mechanism to prevent the potential jamming of the throttle controls. This AD is prompted by nine reports of engine throttle control mechanism jamming caused by an unrestrained left rear fan cowl door support that fell among the throttle mechanism linkages. This condition, if not corrected, could result in loss of engine control. Effective date: March 9, 1987. (52 FR 3421, February 4, 1987.)

14 CFR Part 39 - Boeing Model 747 Series Airplanes

This amendment adds a new airworthiness directive (AD), applicable to certain Boeing Model 747 airplanes equipped with General Electric CF6 engines, which requires repetitive inspections of the pylon skin aft of the precooler exhaust vent for cracks on the inboard and outboard pylons, and repair, if necessary. This action also provides for an optional modification of the pylons which, if incorporated, will terminate the repetitive inspection requirement. This action is prompted by recent reports of extensive damage to pylons on several airplanes. This action is necessary since overheating and subsequent cracking, if not corrected, could result in failure of the pylon and separation of the engine from the airplane. Effective date: March 31, 1987. (52 FR 3793, February 6, 1987.)

14 CFR Part 39 -- Pratt & Whitney (PW) JT8D-209, -217, and -217A Turbofan Engines

This amendment adopts a new airworthiness directive (AD) that requires the removal and replacement of stage 5 low pressure compressor (LPC) blades on certain PW JT8D-200 series engines. A stage 5 LPC blade flutter boundary has been identified in the engine operating envelope within the LPC rotor speed redline limit. The AD is needed to prevent flutter induced high cycle fatigue (HCF) failure of stage 5 LPC blades which could result in the loss of engine power. Effective date: February 16, 1987. (52 FR 3999, February 9, 1987.)

14 CFR Part 39 - Lockheed-California Model L-1011 Series Airplanes

This amendment adopts a new airworthiness directive (AD) that requires inspections and replacement of the pylon attach fitting-to-skate-angle bolts on Lockheed L-1011 airplanes. This action is necessary to detect broken H-11 bolts that have failed due to stress corrosion. Failure of two or more bolts, in combination with maximum limit load conditions, could lead to engine separation from the wing. Effective date: April 2, 1987. (52 FR 5943, February 27, 1987.)

14 CFR Part 39 -- Model 727 Series Airplanes

This amendment adopts a new airworthiness directive (AD), applicable to all Boeing Model 727 airplanes, that requires the periodic replacement of the sealed needle bearings in the downlock outer link of the side strut upper segment of the main landing gear assembly. This action is necessary because of reports of deterioration of the bearings by corrosion which, if not corrected, can prevent the proper extension of the landing gear. Effective date: April 13, 1987. (52 FR 6953, March 6, 1987.)

14 CFR Part 39 -- Boeing Model 737 Series Airplanes

This amendment adopts a new airworthiness directive (AD) which requires structural inspections and repair, as necessary, of the aft lower cargo doorway frames on certain Boeing Model 737 airplanes. This AD is prompted by numerous reports of cracking in both vertical frame members at the aft lower cargo doorway. Continued operation with undetected cracked frames could result in skin cracks and rapid decompression of the airplane. Effective date: April 16, 1987. (52 FR 7566, March 12, 1987.)

14 CFR Part 39 -- McDonnell Douglas Model DC-10-10, -10F, -15, -30, -30F, and KC-10A (Military) Series Airplanes, Fuselage Numbers 1 Through 412

This amendment adopts a new airworthiness directive, applicable to certain McDonnell Douglas Model DC-10, and KC-10A (Military) series airplanes, which requires installation of a secondary retention system for the engine core cowl doors. This amendment is prompted by incidents in which failure occurred to the engine core cowl door latches. This AD is necessary because improper engagement of the engine core cowl door latches, without the secondary retention system, may result in separation of the door, which in turn may cause structural damage to the airplane during flight. Effective date: April 27, 1987. (52 FR 8581, March 19, 1987.)

14 CFR Part 39 -- Pratt & Whitney (PW) JT9D-7R4D, D1, E, E1, E4, and H1 Turbofan Engines Installed on Boeing Company B767, and Airbus Industrie A310 and A300 Aircraft

This action publishes in the Federal Register and makes effective as to all persons an amendment adopting a new airworthiness directive (AD) which was previously made effective as to all known U.S. owners and operators of certain PW JT9D-7R4 engines installed on B767, A310, and A300

aircraft. The AD requires at least one engine installed on B767, A310, or A300 aircraft to be configured with inlet guide vane (IGV) through stage 7 variable stator vane synchronizing ring runners with a Class 2 average or more. Aircraft so configured must be operated in accordance with a specified thrust management procedure. It also requires complete fleet modification by December 31, 1987. The AD was needed to prevent a low altitude surge which could result in an inflight shutdown following a power reduction shortly after takeoff. Effective date: March 20, 1987. (52 FR 8872, March 20, 1987.)

14 CFR Part 39 - Lockheed-California Company Model L-1011-385 Series Airplanes

This action publishes in the Federal Register and makes effective to all persons an amendment adopting a new airworthiness directive (AD) which was previously made effective as to all known U.S. owners and operators of Lockheed-California Company Model L-1011-385 series airplanes by individual telegrams. This AD requires ultrasonic inspection of the wing rear spar web at intervals not to exceed 300 landings. This inspection is required to ensure timely detection of fatigue cracks. Failure to detect a crack before it grows to critical size can result in failure of the wing rear spar. Effective date: May 1, 1987. (52 FR 11985, April 14, 1987.)

14 CFR Part 39 - McDonnell Model DC-9-81, -82, and -83 Airplanes

This amendment adopts a new airworthiness directive (AD), applicable to McDonnell Douglas Model DC-9-81, -82, and -83 airplanes, equipped with certain Goodyear Aerospace Corporation main landing gear wheels, which requires inspection of the main landing gear wheels, to assure that cracked wheels are removed from service. This amendment is prompted by numerous reports of cracks found in wheels. This condition, if not corrected, could result in wheel failure and potential damage to adjacent tires, engines, or the airplane. Effective date: May 11, 1987. (52 FR 13332, April 22, 1987.)

14 CFR Part 39 - Boeing Model 747 Series Airplanes

This amendment amends an existing airworthiness directive (AD), applicable to certain Boeing Model 747 series airplanes, which currently requires ultrasonic inspection of trailing edge flap tracks numbers 1, 2, 7 and 8 for cracking adjacent to the first four fastener holes. Since issuance of that AD, the FAA has determined that cracking may develop that would not be detected by ultrasonic inspection techniques. Therefore, this AD requires a concurrent visual inspection. Cracks, if allowed to progress undetected, could lead to failure of the flap track and separation of the flap, which could result in partial loss of controllability of the airplane. Effective date: May 11, 1987. (52 FR 13632, April 24, 1987.)

14 CFR Part 39 - Boeing Model 737 Series Airplanes

This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 737 series airplanes, which requires inspection of the forward service doorway aft frame around the lower four door stop fittings and repair, if necessary. This action is prompted by recent reports of cracks in the lower door stop support structure. This condition, if not corrected, could result in loss of pressurization, substantial structural damage, and loss of the door. Effective date: June 1, 1987. (52 FR 17935, May 13, 1987.)

14 CFR Part 39 -- Boeing Model 737-100 and 737-200 Series Airplanes

This action publishes in the Federal Register and makes effective as to all persons an amendment adopting a new airworthiness directive (AD) which was previously made effective as to all known U.S. owners and operators of the Boeing model 737-100 and 737-200 series airplanes by individual telegrams. This AD requires inspections and repair, if necessary, for cracks in the front spar upper chord of the wing from the side of the body to front spar station 110 and from front spar station 195 to 206. This action is prompted by reports of cracks greater than two inches in length found in this area of the wing. This condition, if not corrected, could compromise the ultimate load capability of the wing. Effective date: June 6, 1987. (52 FR 18902, May 20, 1987.)

14 CFR Part 39 - McDonnell Douglas Model DC-10 and KC-10A (Military) Series Airplanes

This amendment adopts a new airworthiness directive (AD), applicable to DC-10 and KC-10A (Military) series airplanes, which requires inspections of the pylon aft clevis fitting attach bolts, and replacement, if necessary. This amendment is prompted by a report of a failed H-11 bolt. This action is necessary to detect broken H-11 bolts that have failed due to stress-corrosion. Failure of two or more bolts, in combination with maximum limit load conditions, could lead to separation of the engine from the wing. Effective date: June 15, 1987. (52 FR 20699, June 3, 1987.)

14 CFR Part 39 - Boeing Model 747 Airplanes

This amendment adopts a new airworthiness directive (AD), applicable to Boeing Model 747 series airplanes, which requires the installation of a hydraulic fuse in the number 4 hydraulic system. This amendment is prompted by a report of loss of all four hydraulic systems when failure of the rear pressure bulkhead resulted in loss of the vertical stabilizer, which in turn severed the hydraulic lines. This condition, if not corrected, could result in loss of all four hydraulic systems and inability to control the airplane if the vertical stabilizer were lost or severely damaged. Effective date: July 13, 1987.) (52 FR 21243, June 5, 1987.)

14 CFR Part 39 -- Boeing Model 767 Series Airplanes

This amendment supersedes Airworthiness Directive (AD) 86-06-01, applicable to Boeing Model 767 series airplanes, which currently requires repetitive inspections of certain pneumatic system 8th stage check valves, and repair or replacement of the valves as necessary. This amendment requires repetitive inspections of additional pneumatic system 8th stage check valves, repair or replacement of these valves as necessary, replacement of certain valves with more than 9,500 hours time in service, and provides a terminating action. This amendment is prompted by two recent reports of engine shutdown due to engine surging resulting from failed 8th stage check valves. This condition, if not corrected could result in engine shutdown, engine damage, or damage to the pneumatic system. Effective date: July 27, 1987. (52 FR 23641, June 24, 1987.)

14 CFR Part 539 -- Pratt & Whitney (PW) JT8D-1, -1A, -1B, -7, -7A, -7B, -9, -9A, -11, -15, and -17 Turbofan Engines

This amendment adopts a new airworthiness directive (AD) which requires inspection of second stage fan blades on certain PW JT8D engines. The AD requires initial and repetitive ultrasonic inspections of second stage fan blade root attachment straps, and supersedes AD 80-11-03 R1, Amendment 39-3773 (45 FR 34259) as amended by Amendment 39-4148 (46 FR 33228). The AD is needed to detect cracks in the second stage fan blade root attachment straps which could result in fracture of the blade

and subsequent cowl penetration, fire, and/or aircraft damage. Effective date: July 27, 1987. (52 FR 24138, June 29, 1987.)

FEDERAL HIGHWAY ADMINISTRATION

49 CFR 393 -- Parts and Accessories Necessary for Safe Operation; Front Wheel Brakes

As directed by the 99th Congress in the Commercial Motor Vehicle Safety Act of 1986, the Office of Motor Carrier Standards, FHWA, is amending the Federal Motor Carrier Safety Regulations (FMCSR) to require operational brakes on all wheels of commercial motor vehicles of over 10,000 pounds gross vehicle weight rating (GVWR) and manufactured after July 24, 1980. This action is needed to enhance the operational safety of commercial motor vehicles on the Nation's highways by establishing rules that are consistent with those of the National Highway Traffic Safety Administration (NHTSA) that govern the manufacture of new motor vehicles. Effective date: February 26, 1987. (52 FR 2801, January 27, 1987.)

49 CFR Parts 383 and 391 - Commercial Driver Licensing Standards; Requirements and Penalties

The FHWA is amending the Federal Motor Carrier Safety Regulations (FMCSR) to implement the requirements of the Commercial Motor Vehicle Safety Act of 1986 (the Act). The FHWA, with this rulemaking, is requiring that operators of commercial motor vehicles possess only a single driver's license; is establishing disqualification requirements for driving under the influence of alcohol, leaving the scene of an accident, certain felonies, including controlled substance felonies, and serious traffic violations; is establishing requirements for a driver to notify his/her home State and employer of driving violations and license suspensions; and is prohibiting employers from using a driver whose license has been suspended. The FHWA is also requesting comments on a possible expansion of the rule's applicability to include drivers of commercial motor vehicles not now subject to this final rule and to further define the term "serious traffic violations," as used in the section providing the disqualification of drivers. These actions are being taken to improve the safe operation of commercial motor vehicles, and to help reduce truck and bus accidents and injuries by disqualifying unsafe drivers who operate commercial motor vehicles. The Secretary of Transportation (the Secretary) has delegated responsibility for implementation of the Act to the FHWA. Effective date: July 1, 1987. (52 FR 20574, June 1, 1987.)

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

49 CFR Part 571 -- Federal Motor Vehicle Safety Standards; Seating Systems

This notice amends Federal Motor Vehicle Safety Standard No. 207, *Seating Systems*, to remove an unnecessary restriction. The standard requires most folding seats to be equipped with a self-locking device for restraining the hinged or folding seat or seat back and with a specific control, such as a knob, lever, push button, etc., for releasing that restraining device. The purpose of the latter requirement is to ensure that the restraining device can be released to enable occupants seated behind such seats to exit the vehicle. The requirement was worded so it applied to a folding or hinged seat regardless of whether anyone can sit behind that seat. The agency concluded that this requirement was unnecessarily restrictive and is therefore amending the standard to make it clear that a specific control is not required if there are no seats behind the folding seat. Effective date: April 13, 1987. (52 FR 7867, March 13, 1987.)

49 CFR Part 571 --- Federal Motor Vehicles Safety Standards; Occupant Crash Protection

Standard No. 208, *Occupant Crash Protection*, provides for the phased-in implementation of an automatic restraint requirement for the front outboard seats in passenger cars, beginning on September 1, 1986, with full implementation to take place on September 1, 1989. To encourage the development of a variety of automatic restraint systems, the standard provides that a manufacturer that installs a non-belt automatic restraint system, such as an air bag system, at the driver's seating position and a manual lap/shoulder belt at the front right passenger seating position will receive credit for producing one automatic restraint-equipped passenger car ("one car credit") during the phase-in period.

In response to a petition from the Ford Motor Company, NHTSA proposed amending Standard No. 208, *Occupant Crash Protection*, to extend the current one car credit beyond the phase-in period. Today's final rule amends Standard No. 208 to provide, until September 1, 1993, a one car credit to a manufacturer that produces a car with a non-belt automatic restraint system for the driver and a dynamically-tested manual lap/shoulder belt for the right front passenger.

The limited extension adopted in today's final rule will not affect the requirement that all cars have automatic restraints beginning September 1, 1989. It only means that manufacturers can meet that requirement by installing a non-belt system for the driver position, where almost three-quarters of the front seat fatalities occur, and a dynamically-tested manual lap/shoulder belt for the right front passenger in vehicles that receive a one car credit beyond September 1, 1989.

The agency believes that a several year extension is warranted by the various technical, engineering and supplier resource problems, identified by Ford and other vehicle manufacturers and automatic restraint system suppliers, that currently hinder the widespread installation of full-front (driver and passenger) air bag systems. Today's final rule will encourage the orderly development and production of passenger cars with full-front air bag systems. The agency decided that the availability of the one car credit should be limited to the time necessary to complete the development and installation of passenger side air bag systems, which the agency believes should be September 1, 1993. Effective dates: March 30, 1987. This rule effects vehicles manufactured on or after September 1, 1989, and until September 1, 1993. (52 FR 10096, March 30, 1987)

49 CFR Part 571 - Federal Motor Vehicle Safety Standards; Air Brake Systems

This notice amends Federal Motor Vehicle Safety Standard No. 121, *Air Brake Systems*, to suspend the stopping distance requirements of S5.3.1 of the standard for buses other than school buses (non-school buses). Currently, S5.3.1 applies only to those non-school buses. The agency is taking this action because NHTSA has concluded that there is no safety need for the standard to be applied more stringently to manufacturers of non-school buses than to manufacturers of school buses. The agency will consider reinstating these requirements when it addresses the issue of reinstating stopping distance requirements for all heavy vehicles. Effective date: June 2, 1987. (52 FR 20602, June 2, 1987.)

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

49 CFR Part 193 - Fire Protection and Security of Waterfront Liquefied Natural Gas Facilities

This amendment extends the scope of the existing standards governing fire protection and security of liquefied natural gas (LNG) facilities to cover facilities at waterfront LNG plants other than facilities that involve marine cargo transfer operations and facilities located in navigable waters. The amendment is needed to comply with mandatory provisions of the Pipeline Safety Act of 1979 and to conform the existing standards with new responsibilities for regulating fire protection and security under a revised memorandum of understanding (MOU) with the United States Coast Guard (USCG). The amendment requires that the affected facilities at waterfront LNG plants meet the same standards for fire protection and security that now apply to similar facilities at more than 100 non-waterfront LNG plants in the United States. Effective date: January 8, 1988. (52 FR 674, January 8, 1987.)

49 CFR Part 173 -- Hazardous Materials; Uranium Hexafluoride

This document revises the final rule published on November 18, 1986 in the Federal Register (51 FR 41631) under Docket HM-166V, by removing the requirement that all uranium hexafluoride (UF₆) cylinders be cleaned in accordance with specific procedures contained in Appendix A of the American National Standards Institute (ANSI) Standard N14.1-1982. This action is necessary on an emergency basis, due to health and safety hazards that may be associated with use of cleaning procedures in Appendix A, ANSI Standard N14.1-1982 for packaging other than new packaging. The effect of this action is to remove potential hazards identified with required cleaning procedures for packagings containing UF₆. Effective date: March 12, 1987. (52 FR 7581, March 12, 1987.)

49 CFR Parts 171, 173, 174, 175, 176, and 177 -- Reportable Quantity of Hazardous Substances

This document removes an obsolete hazardous substance discharge reporting requirement from the Hazardous Materials Regulations and adopts a note in place thereof that draws attention to existing reporting requirements contained in U.S. Environmental Protection Agency Regulations. This action is necessary to remove an obsolete and misleading requirement from the regulations. Effective date: April 20, 1987. (52 FR 8591, March 19, 1987.)

49 CFR Part 173 -- Exceptions for Specified Quantities of Radioactive Materials

The Research and Special Programs Administration (RSPA) is renewing for two years the exceptions (statutory exemptions) for specified quantities of radioactive materials found in 49 CFR 173.4, 173.421-1 and 173.421-2. These amendments are necessary to permit the transportation by passenger-carrying aircraft of certain quantities of radioactive materials under existing provisions. Renewal of these exemptions will prevent the disruption of routine and ongoing shipments which have been made safely for 12 years under the existing exceptions. These materials do not present a significant hazard to passengers or crew on an aircraft. Effective date: May 2, 1987. (52 FR 15948, May 1, 1987.)

GLOSSARY

AVIATION

Air Carrier - beginning with 1975*, air carriers comprise three operational categories:

- (1) **Certificated Route Air Carrier** - one of a class of air carriers holding a certificate of public convenience and necessity issued by the Civil Aeronautics Board to conduct scheduled services over specified routes and a limited amount of nonscheduled charter operations.
- (2) **Supplemental Air Carrier** - one of a class of air carriers holding operating certificates issued by the Civil Aeronautics Board, authorizing them to perform passenger and cargo charter services supplementing the scheduled service of the Certificated Route Air Carriers.
- (3) **Commercial Operator (of large aircraft)** - one of a class of air carriers operating on a private for-hire basis, as distinguished from a public or common air carrier, holding a commercial operator certificate, issued by the Administrator of the Federal Aviation Administration (pursuant to Part 45 of the Civil Air Regulations) authorizing it to operate (large) aircraft in air commerce for the transportation of goods or passengers for compensation or hire.

Air Taxi - any use of an aircraft by the holder of an air carrier operating certificate authorized by the certificate, or carries mail on contract (see Paragraph 298.3 of FAR 38).

Aircraft Accident - is an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, and in which any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or in which the aircraft receives substantial damage.

Aviation Mid-Air Near-Collision - is broken down into three categories:

- (1) **Critical** - where collision avoidance was due to chance rather than any action taken by either pilot. Less than 100 feet of aircraft separation would be considered critical.
- (2) **Potential** - where a collision would have resulted had no action been taken by either pilot. Closest proximity of less than 500 feet would usually be required in this case.
- (3) **No Hazard** - where a report was made, but subsequent investigation determined that direction and altitude would have made a mid-air collision improbable regardless of evasive action taken.

Commuter Carrier - any operator who performs, pursuant to published schedule, at least five round trips per week between two or more points (see Paragraph 298.2 of FAR 38).

Fatal Injury - is any injury which results in death within seven days of the accident.

14 CFR 121 - all air carriers certificated for commercial operations with large aircraft.

*Prior to 1975, air carriers did not comprise commercial operators.

14 CFR 125 - aircraft with a seating capacity of 20 or more passengers or a maximum payload of 6,000 pounds or more.

14 CFR 127 - scheduled air carriers with helicopters.

General Aviation - refers to all civil aircraft operations except those classified as air carrier operations.

General Aviation Flying:

- o **Personal** - any use of an aircraft for personal purposes not associated with business or profession, and not for hire. This includes maintenance of pilot proficiency.
- o **Business** - any use of an aircraft, not for compensation or hire, by an individual for the purposes of transportation required by a business in which he is engaged.
- o **Executive** - any use of an aircraft by a corporation, a company or other organization for the purposes of transporting its employees and/or property not for compensation or hire and employing professional pilots for the operation of the aircraft.
- o **Instructional** - any use of an aircraft for the purposes of formal flight instruction with or without the flight instructor aboard.
- o **Aerial Application** - any use of an aircraft in agriculture to discharge material in flight and to perform activities such as antifrost agitation, agitating fruit trees, chasing birds from crops, checking crops, restocking of fish, animal and other wildlife, etc.
- o **Other** - any use of an aircraft not specified in the preceding uses. It includes research and development, demonstration, sport parachuting, ferry flight and industrial/special.

Serious Injury - an injury on an Air Carrier which:

- (1) Requires hospitalization for more than 48 hours commencing within seven days from the date when the injury was received;
- (2) Results in a fracture of any bone except fractures of fingers, toes or nose;
- (3) Involves a laceration which causes a severe hemorrhage, nerve, tendon or muscle damage;
- (4) Involves injury to any external organ; and
- (5) Involves second or third degree burns or any burn affecting more than 50 percent of the body surface.

HAZARDOUS MATERIALS

Fatality - the information received indicated that the death was due to the hazardous material involved.

Hazardous Material - a substance or material which has been designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated.

Incident - refers to any unintentional release of hazardous material while in transit or storage.

Major/Minor Injury - (1) injuries requiring hospitalization; (2) injuries involving second or third degree burns; (3) injury-related lost time at work of one or more days such as would be caused by inhalation of strong, irritating vapors are classified as major injuries. All other reported injuries are considered minor.

HIGHWAY

Motor Vehicle Occupant - is a driver of or passenger in a motor vehicle other than a motorcycle or motorscooter. For reporting purposes, this category also includes riders of animals, occupants of animal-drawn vehicles, occupants of streetcars, unauthorized riders, etc.

Motor Vehicle Traffic Accident - is any motor vehicle accident that occurs on a trafficway or that occurs after the motor vehicle runs off the roadway but before events are stabilized.

Motor Vehicle Traffic Fatality - is a death resulting from motor vehicle accident injuries occurring on a trafficway within 30 days of the accident.

Motorcycle - is a two-wheeled motor vehicle having one or more riding saddles, and sometimes a third wheel for the support of a sidecar. The sidecar is considered a part of the motorcycle. "Motorcycle" includes motorized bicycle, scooter, or tricycle.

Pedalcycle - is a vehicle operated solely by pedals, and propelled by human power.

Includes: Bicycle (any size, with two wheels in tandem), tricycle, unicycle, and sidecar or trailer attached to any of these devices.

Excludes: These devices when towed by a motor vehicle, including hitching.

Pedestrian - is any person not in or upon a motor vehicle or other road vehicle.

Includes: Person afoot, sitting, lying or working upon a land way or place; person in or operating a pedestrian conveyance.

Excludes: Person boarding or alighting from another conveyance, except pedestrian conveyance; person jumping or falling from a motor vehicle in transport.

Trafficway - is the entire width between property lines, or other boundary lines, of every way or place, of which any part is open to the public for purposes of vehicular travel as a matter of right or custom.

PIPELINES

Gas Distribution - refers to pipelines transporting natural gas, flammable gas or gas which is toxic or corrosive in distribution operations. (Injury, fatality or accident definitions as shown under "Gas Transmission" below.)

Gas Transmission - refers to pipelines transporting natural gas, flammable gas or gas which is toxic or corrosive in transmission or gathering operations.

- o Injury - refers to an injury involving lost time or other than on site medical treatment.
- o Fatality - is a death resulting from the failure or escape of gas.
- o Accident - is (1) an event that involves the release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility resulting in a death, or personal injury necessitating in-patient hospitalization; or estimated property damage, including cost of gas lost, of the operator or others, or both, of \$50,000 or more; (2) an event that results in an emergency shutdown of an LNG facility; or (3) an event that is significant, in the judgement of the operator, even though it did not meet the criteria of (1) or (2).

Liquid Transmission - refers to pipelines carrying hazardous material, petroleum and petroleum products in liquid form.

- o Injury - refers to an injury requiring medical treatment other than on site first aid.
- o Fatality - is a death resulting from the escape of liquid.
- o Accident - is a release of the commodity transported as presented in 49 CFR Section 195.50.

RAIL RAPID TRANSIT (RRT)

RRT Accident - is any accident which satisfies the following threshold levels:

A. Train Collisions

1. All rail transit revenue train collisions involving other rail transit equipment (such as revenue or non-revenue trains, work trains or work equipment), persons and/or rail-highway crossings.
2. Collisions between revenue trains and other obstacles (shopping carts, foreign objects, etc.) which result in \$5,000 or greater property damage, or casualties.

"Property Damage" refers to the estimated cost to repair or replace damaged property (vehicles, equipment, right-of-way, etc.) to a state equivalent to that which existed prior to the accident. Property damage does not include the cost of clearing wreckage.

B. Train Derailments

1. All rail transit revenue train derailments regardless of severity.

C. Exclusions

1. Accidents (collisions or derailments) occurring in yards and non-revenue service areas which do not involve revenue trains; accidents (collisions or derailments) which involve only work trains and servicing equipment; and collisions between train cars resulting from coupling operations which do not involve passenger casualties are excluded.

RRT Casualty - is any casualty which satisfies the following threshold levels:

A. Employee Casualties

Employees who are on-duty and who are killed or sustain lost workdays resulting from reportable train accidents.

"Lost workday" means any full day or part of a day (consecutive or not) other than the day of the injury, that an employee is away from work because of the injury. The day of the reportable train accident is not to be reported as a lost workday even though the injured employee does not complete the work assignment that day.

B. Passenger and Other Casualties

Casualties involving passengers or other personnel (off-duty employees, contractors, etc.) which occur at or in exclusive approaches to or from faregates, or equivalent, or within the normal "paid" area, and which result in:

A. Fatalities, or

B. Personal injuries which require immediate medical treatment beyond first aid.

"Medical treatment" means treatment requiring the attention of a physician or registered professional medical personnel. "Medical treatment" as used here, does not refer to minor first aid treatment (one-time treatment), precautionary measures such as tetanus shots, or subsequent observation of minor scratches, cuts, bruises or splinters.

C. Exclusions

Assaults, attempted suicides, and suicides are excluded.

Fire -Reportable fires are all fires in stations, on trains in revenue service or on the right-of-way when the fire requires extinguishment by fire suppression system or person. Each fire is reported regardless of damage.

RAILROAD

Fatality -

- (1) The death of any person from an injury within 365 days of the accident/incident;
- (2) The death of a railroad employee from occupational illness within 365 days after the occupational illness was diagnosed by a physician.
- (3) Occupational illness of a railroad employee, as diagnosed by a physician.

Injury -

- (1) Injury to any person other than a railroad employee that requires medical treatment;
- (2) Injury to a railroad employee that requires medical treatment or results in restriction of work or motion for one or more workdays, one or more lost workdays, termination of employment, transfer to another job, or loss of consciousness; or

Non-Train Incident - is any event arising from the operation of a railroad, but not from the movement of equipment, which results in a reportable death, injury or illness.

Nontrespassers - are persons who are lawfully on that part of railroad property which is used in railroad operation and persons adjacent to railroad premises and injured as the result of the operation of a railroad.

Rail-Highway Grade Crossing - is a location where one or more railroad tracks cross a public highway, road, or street or a private roadway at grade, including sidewalks and pathways at, or associated with, the crossing.

Rail-Highway Grade-Crossing Accident/Incident - is any impact between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian, at a rail-highway grade crossing.

Train Accident - is a collision, derailment, fire, explosion, act of God, or other event involving operation of railroad on-track equipment which, while it does not necessarily result in a reportable death, injury, or illness, results in more than \$4,900 in damages to railroad on-track equipment, signals, track, track structures, or roadbed. Prior to 1985, this threshold stood at \$4,500; prior to 1983, at \$3,700; prior to 1981, at \$2,900; prior to 1979, at \$2,300; prior to 1977, at \$1,750; and prior to 1975, at \$750.

Train Incident - is a collision, derailment, fire, explosion, act of God, or other event involving operation of railroad on-track equipment, which results in a reportable death, injury, or illness, but involves less than \$4,900 in damages to railroad on-track equipment, signals, track, track structures, or roadbed. Prior to 1985, this threshold stood at \$4,500; prior to 1983, at \$3,700, prior to 1981, at \$2,900; prior to 1979, at \$2,300; prior to 1977, at \$1,750; and prior to 1975, at \$750.

Trespassers - are persons who are on that part of railroad property used in railroad operation, and whose presence is prohibited, forbidden or unlawful. A person on a rail-highway grade crossing is classified as a trespasser if the crossing is protected by gates or other similar barriers which were closed when the person entered the crossing. He is also a trespasser if he attempts to pass over or under trains or cars at the crossings.

RECREATIONAL BOATING

Accident - occurrences involving recreational vessels or their equipment are required to be reported whenever they result in any of the following:

- a. A death;
- b. A person is injured and requires medical treatment beyond first aid;
- c. Damage to the vessel and other property damage totaling more than \$200; or
- d. A person's disappearing from the vessel under circumstances indicating death or injury.

Fatality - refers to all deaths (other than deaths by natural causes) and missing persons resulting from an occurrence that involves a vessel or its equipment.

Injury - refers to all injuries meeting the criteria set forth in b. above, resulting from an occurrence that involves a vessel or its equipment.

WATERBORNE TRANSPORTATION

Casualty - casualties involving commercial vessels are required to be reported to the Coast Guard whenever the casualty results in the following:

- a. Actual physical damage to property in excess of \$25,000.
- b. Material damage affecting the seaworthiness or efficiency of a vessel.
- c. Stranding or grounding.
- d. Loss of life.
- e. Injury causing any persons to remain incapacitated for a period in excess of 72 hours, except injury to harbor workers not resulting in death and not resulting from vessel casualty or vessel equipment casualty.

Fatality - refers to all deaths and missing persons resulting from a vessel casualty.

Injury - this term refers to all personal injuries resulting from a vessel casualty.

Non-Vessel-Casualty-Related Death - is one which occurs on board a commercial vessel, but not as a result of a vessel casualty, such as collision, fire, or explosion.

Vessel-Casualty-Related Death - is one which occurs on board a commercial vessel as a result of a vessel casualty, such as collision, fire, or explosion.

Waterborne Transportation - is the transport of freight and/or people by commercial vessels under USCG jurisdiction.