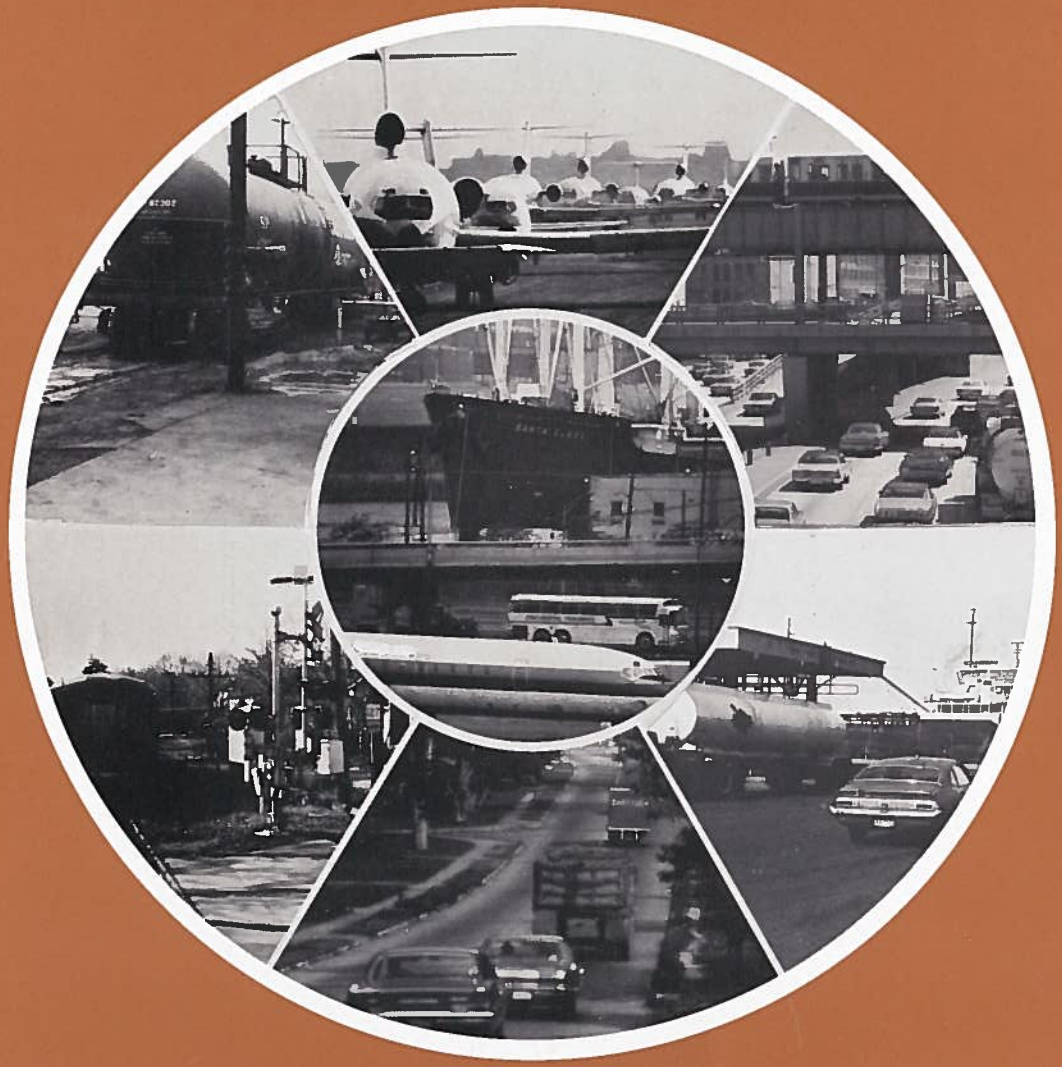




U.S. Department  
of Transportation  
**Research and  
Special Programs  
Administration**

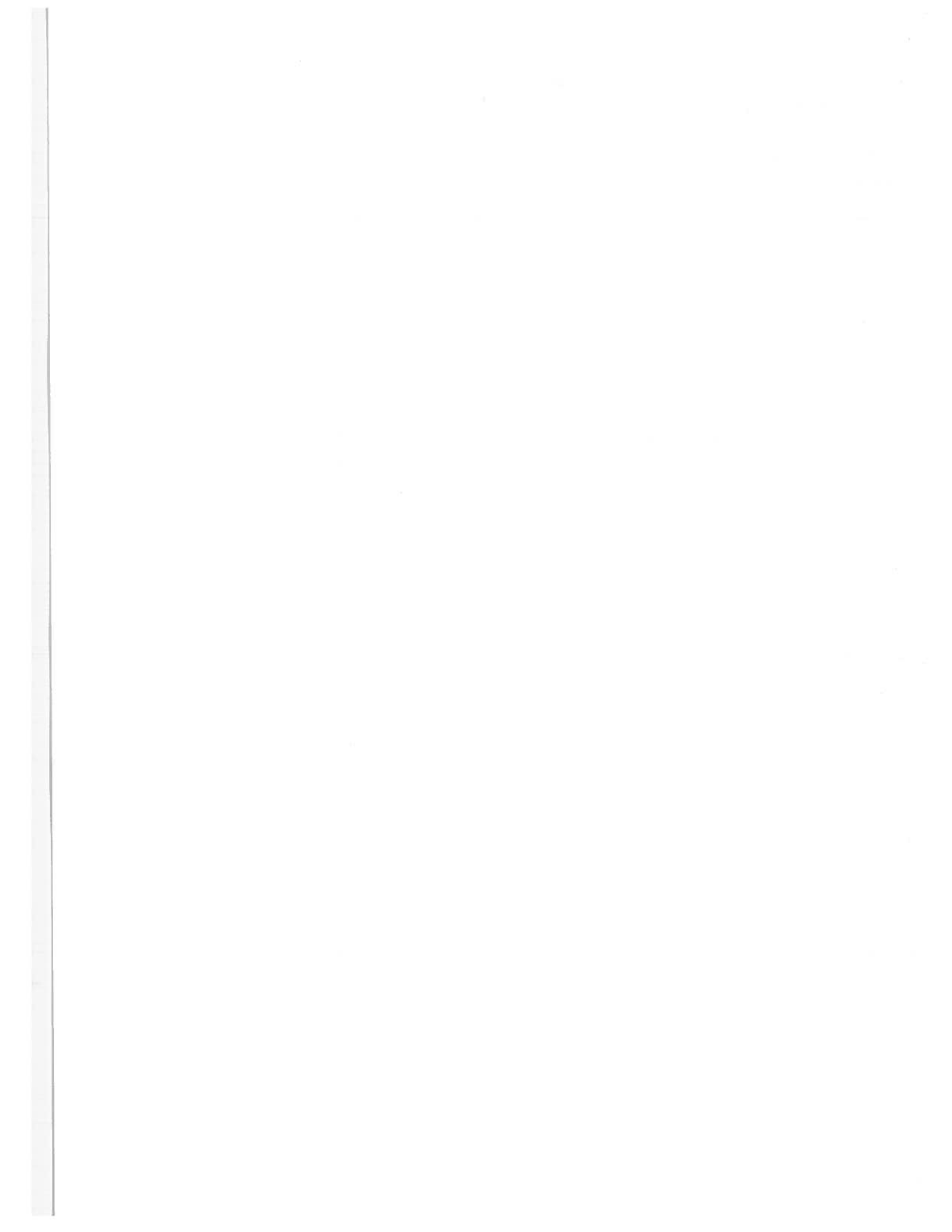
# Transportation Safety Information Report

## Second Quarter 1985



**Technical Report Documentation Page**

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15. Supplementary Notes					
16. Abstract  <p>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.</p>					
17. Key Words  <b>Safety, Statistics, Transportation, Fatalities, Accidents, Injuries</b>			18. Distribution Statement  <b>Document is available to the U.S. public through the National Technical Information Service, Springfield, Virginia 22161</b>		
19. Security Classif. (of this report)  <b>Unclassified</b>		20. Security Classif. (of this page)  <b>Unclassified</b>		21. No. of Pages  <b>76</b>	22. Price



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## **TRANSIS REPRESENTATIVES AND MANAGEMENT**

<b>AGENCY</b>	<b>ROUTING SYMBOL</b>	<b>TELEPHONE</b>	<b>ROOM</b>
<b>UNITED STATES COAST GUARD</b>			
Paul Ponce	G-MMI-3	426-6251	1404(TRPT)
Albert J. Marmo	G-BP-42	426-1070	4224(TRPT)
<b>FEDERAL AVIATION ADMINISTRATION</b>			
Charles J. Hoch	ASF-200	426-8256	333(10A)
<b>FEDERAL HIGHWAY ADMINISTRATION</b>			
Phyllis Young	HHS-22	426-2171	3409
<b>FEDERAL RAILROAD ADMINISTRATION</b>			
Bruce Fine	RRS-20	426-6144	8314
<b>NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION</b>			
Grace B. Hazzard	NRD-33	472-7040	6201B
<b>URBAN MASS TRANSPORTATION ADMINISTRATION</b>			
Lloyd G. Murphy	URT-6	426-2896	6429
<b>RESEARCH &amp; SPECIAL PROGRAMS ADMINISTRATION</b>			
Richard C. Stevens	DMA-20	426-4228	8409
<b>NATIONAL TRANSPORTATION SAFETY BOARD</b>			
Bernard Loeb	SP-10	382-6623	834(10A)
<b>TRANSIS MANAGEMENT</b>			
<b>SPONSOR-RSPA/MANAGEMENT INFORMATION SYSTEMS</b>			
Richard C. Stevens	DMA-20	426-4228	8409
<b>TASK MANAGER/PROGRAM ANALYST</b>			
William Gay	DTS-32	494-2450	1163(TSC)
Marjorie Saccoccio	DTS-32	(FTS 837-2450)	1162(TSC)

# THEORY OF PROBABILITY AND STATISTICS

## CHAPTER I

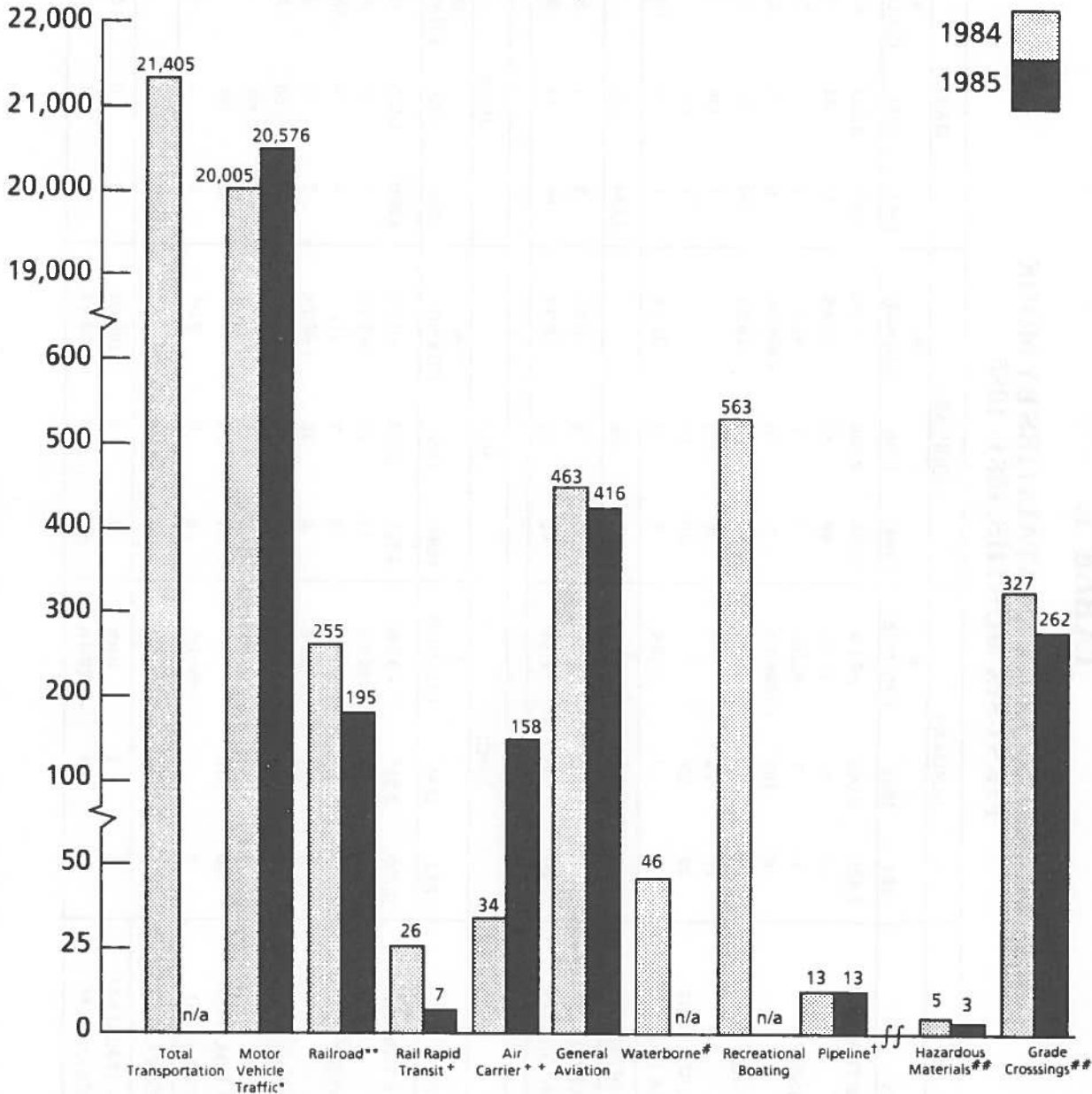
### DEFINITIONS

### EXERCISES

# SUMMARY STATISTICS OF TRANSPORTATION SAFETY

## CHART 1.

### TRANSPORTATION FATALITIES BY MODE FIRST SIX MONTHS, 1984 - 1985



Note: 1985 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 (see Glossary).
- # Waterborne data are for vessel casualties only.
- \*\* Highway-related grade crossing and hazardous materials fatalities are included in Total Transportation, but rail-related grade crossing fatalities are not included.
- † Includes gas and liquid pipeline.



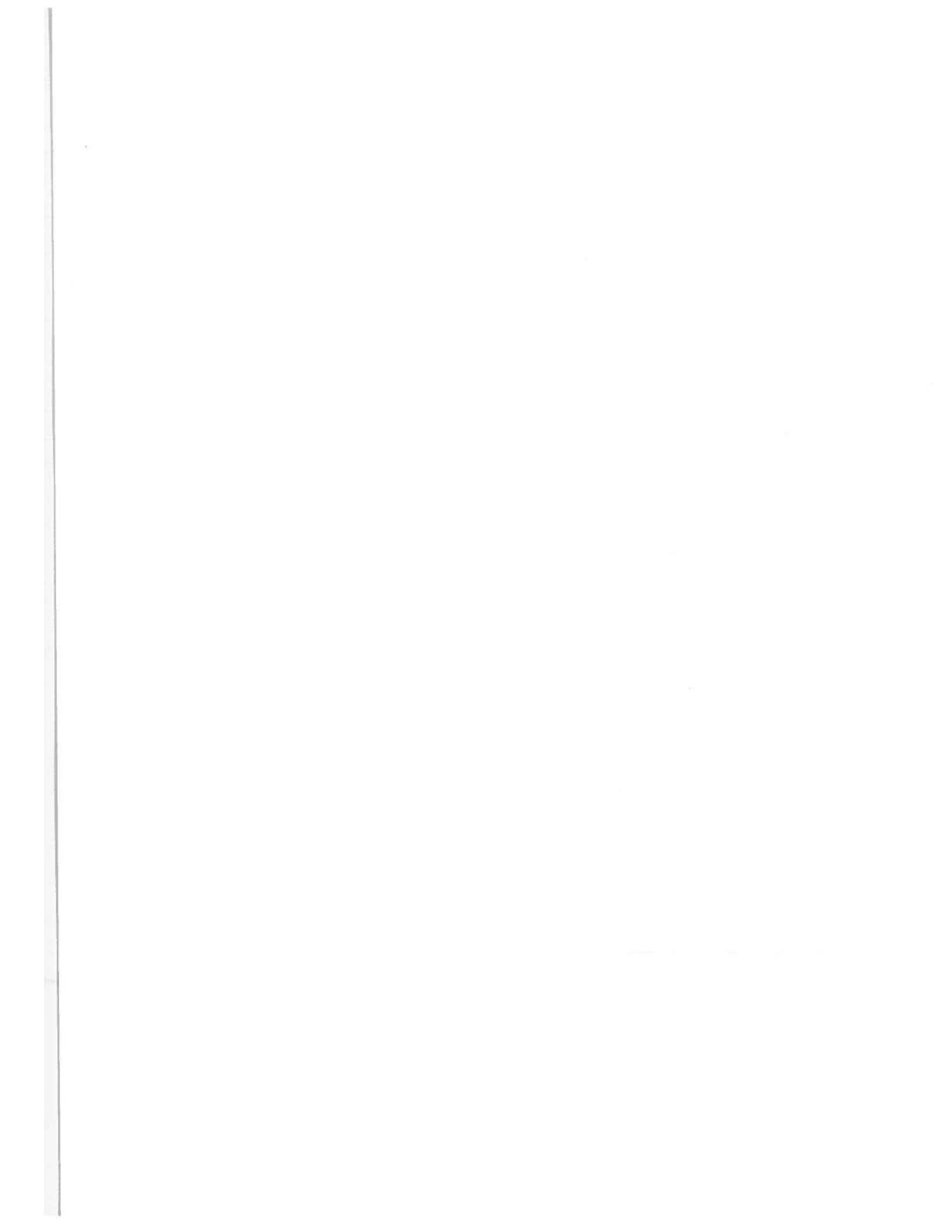
**TABLE 1.**  
**TRANSPORTATION FATALITIES BY MODE**  
**FIRST SIX MONTHS, 1984 - 1985**

CLASSIFICATION	JANUARY			FEBRUARY			MARCH		
	1984	1985	% CHANGE	1984	1985	% CHANGE	1984	1985	% CHANGE
MOTOR VEHICLE TRAFFIC*	2,830	3,002	+6.1%	2,765	2,706	-2.1%	3,305	3,333	+0.8%
RAILROAD**	25	21	-16.0%	40	15	-62.5%	35	34	-2.9%
RAIL RAPID TRANSIT+	6	1	-83.3%	7	1	-85.7%	4	1	-75.0%
AIR CARRIER++	6	106	+1666.7%	2	20	+900.0%	8	5	-37.5%
GENERAL AVIATION	72	52	-27.8%	75	63	-16.0%	99	57	-42.4%
WATERBORNE#	16	n/a	-	5	n/a	-	11	n/a	-
RECREATIONAL BOATING	30	n/a	-	59	n/a	-	71	n/a	-
PIPELINES, GAS & LIQUID	6	3	-50.0%	4	3	-25.0%	1	0	-100.0%
TOTAL TRANSPORTATION	2,991	n/a	-	2,957	n/a	-	3,534	n/a	-
HAZARDOUS MATERIALS##	0	2	[1]	0	0	0.0%	2	1	-50.0%
GRADE CROSSING ONLY##	60	59	-1.7%	43	36	-16.3%	66	44	-33.3%
CLASSIFICATION	APRIL			MAY			JUNE		
	1984	1985	% CHANGE	1984	1985	% CHANGE	1984	1985	% CHANGE
MOTOR VEHICLE TRAFFIC*	3,250	3,567	+9.8%	3,765	3,863	+2.6%	4,090	4,105	+0.4%
RAILROAD**	52	38	-26.9%	41	42	+2.4%	62	45	-27.4%
RAIL RAPID TRANSIT+	5	2	-60.0%	0	2	[1]	4	0	-100.0%
AIR CARRIER++	5	11	+120.0%	6	10	+66.7%	7	6	-14.3%
GENERAL AVIATION	69	100	+44.9%	72	76	+5.6%	76	68	-10.5%
WATERBORNE#	6	n/a	-	5	n/a	-	3	n/a	-
RECREATIONAL BOATING	90	n/a	-	161	n/a	-	152	n/a	-
PIPELINES, GAS & LIQUID	2	7	+250.0%	0	0	0.0%	0	0	0.0%
TOTAL TRANSPORTATION	3,479	n/a	-	4,050	n/a	-	4,394	n/a	-
HAZARDOUS MATERIALS##	0	0	0.0%	1	0	-100.0%	2	0	-100.0%
GRADE CROSSING ONLY##	47	33	-29.8%	64	49	-23.4%	47	41	-12.8%

TABLE 1. (Continued)

CLASSIFICATION	SECOND QUARTER TOTAL		FIRST SIX MONTHS		
	1984	1985	1984	1985	% CHANGE
MOTOR VEHICLE TRAFFIC*	11,105	11,535	20,005	20,576	+ 2.9%
RAILROAD**	155	125	255	195	-23.5%
RAIL RAPID TRANSIT+	9	4	26	7	-73.1%
AIR CARRIER++	18	27	34	158	+364.7%
GENERAL AVIATION	217	244	463	416	-10.2%
WATERBORNE#	14	n/a	46	n/a	-
RECREATIONAL BOATING	403	n/a	563	n/a	-
PIPELINES, GAS & LIQUID	2	7	13	13	0.0%
TOTAL TRANSPORTATION	11,923	n/a	21,405	n/a	-
HAZARDOUS MATERIALS##	3	0	5	3	-40.0%
GRADE CROSSING ONLY###	158	123	327	262	-19.9%

NOTE: 1985 Data are preliminary.  
 (1) Not calculable.  
 \* 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 (see Glossary).  
 # Waterborne data are for vessel casualties only.  
 ## Highway-related grade crossing and hazardous materials fatalities are included in Total Transportation, but rail-related grade crossing fatalities are not included.



## HIGHWAY

- In the second quarter of 1985, an estimated 11,535 Motor Vehicle Traffic fatalities occurred, versus 11,105 in the second quarter of 1984, which represents a 3.9 percent increase.
- Motor Vehicle Traffic fatalities rose 2.9 percent when the first six months of 1985 are compared with the same period of 1984. There were 20,005 fatalities in 1984 and 20,576 in 1985. However, the number of highway fatalities was lower than the corresponding period in 1976.
- Preliminary estimates of motor vehicle miles of travel show an increase in the second quarter and the first half of 1985 over the same periods for 1984 -- 3.4 percent and 3.2 percent, respectively.

**TABLE 2.**

**HIGHWAY FATALITIES FOR 1985 COMPARED WITH 1984 AND 1976**

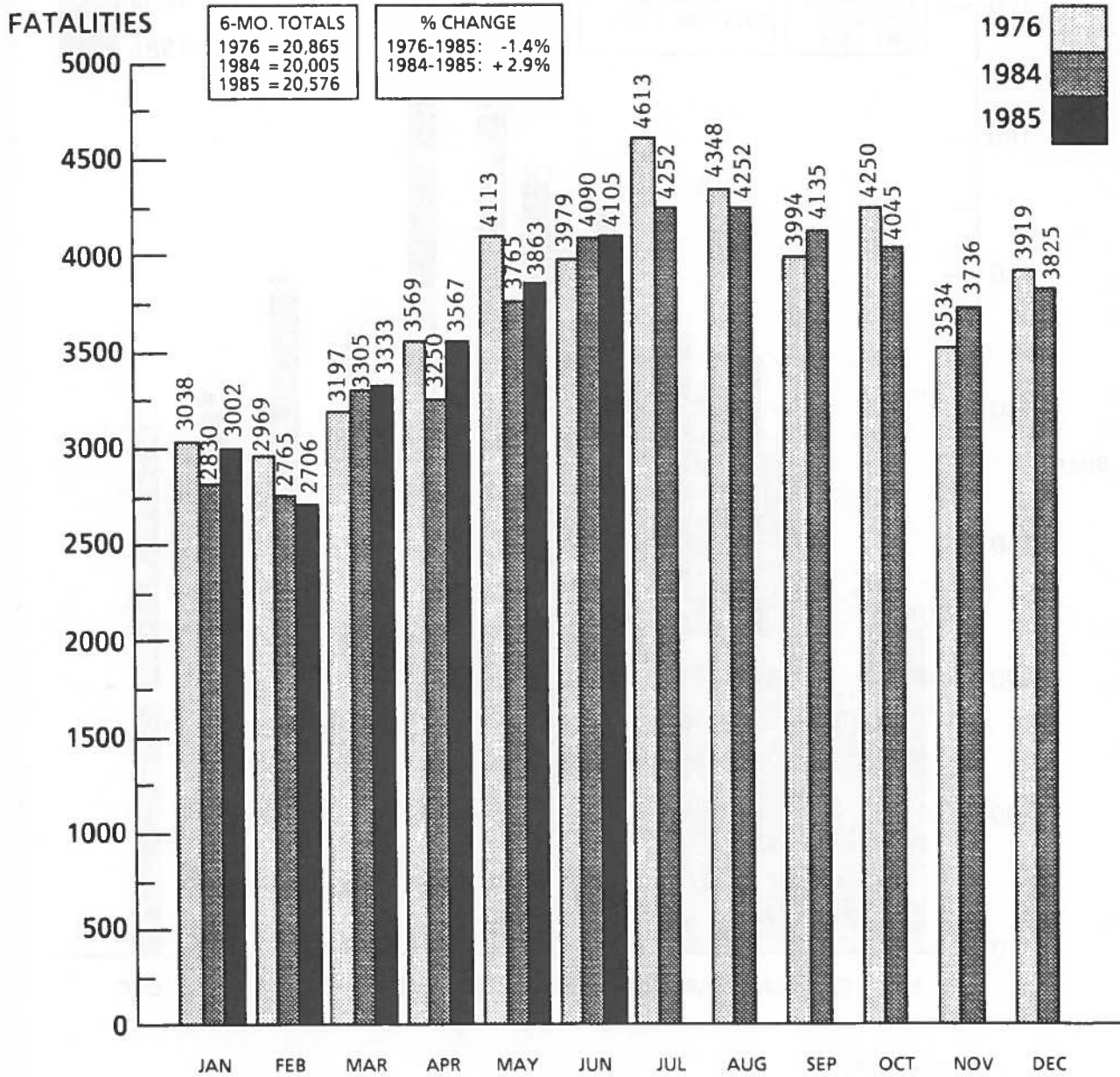
JANUARY			FEBRUARY			MARCH		
1976	1984	1985	1976	1984	1985	1976	1984	1985
3,038	2,830	3,002	2,969	2,765	2,706	3,197	3,305	3,333
% CHANGE			% CHANGE			% CHANGE		
1976-85		1984-85	1976-85		1984-85	1976-85		1984-85
-1.2		+ 6.1	-8.9		-2.1	+ 4.3		+ 0.8
APRIL			MAY			JUNE		
1976	1984	1985	1976	1984	1985	1976	1984	1985
3,569	3,250	3,567	4,113	3,765	3,863	3,979	4,090	4,105
% CHANGE			% CHANGE			% CHANGE		
1976-85		1984-85	1976-85		1984-85	1976-85		1984-85
-0.1		+ 9.8	-6.1		+ 2.6	+ 3.2		+ 0.4
SECOND QUARTER			FIRST 6 MONTHS					
1976	1984	1985	1976	1984	1985			
11,661	11,105	11,535	20,865	20,005	20,576			
% CHANGE			% CHANGE					
1976-85		1984-85	1976-85		1984-85			
-1.1		+ 3.9	-1.4		+ 2.9			

NOTE: Figures are based on 30-day fatality definition (see Glossary).  
1985 Data are preliminary.

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

## CHART 2.

### MOTOR VEHICLE TRAFFIC FATALITIES BY MONTH 1976, 1984 AND 1985

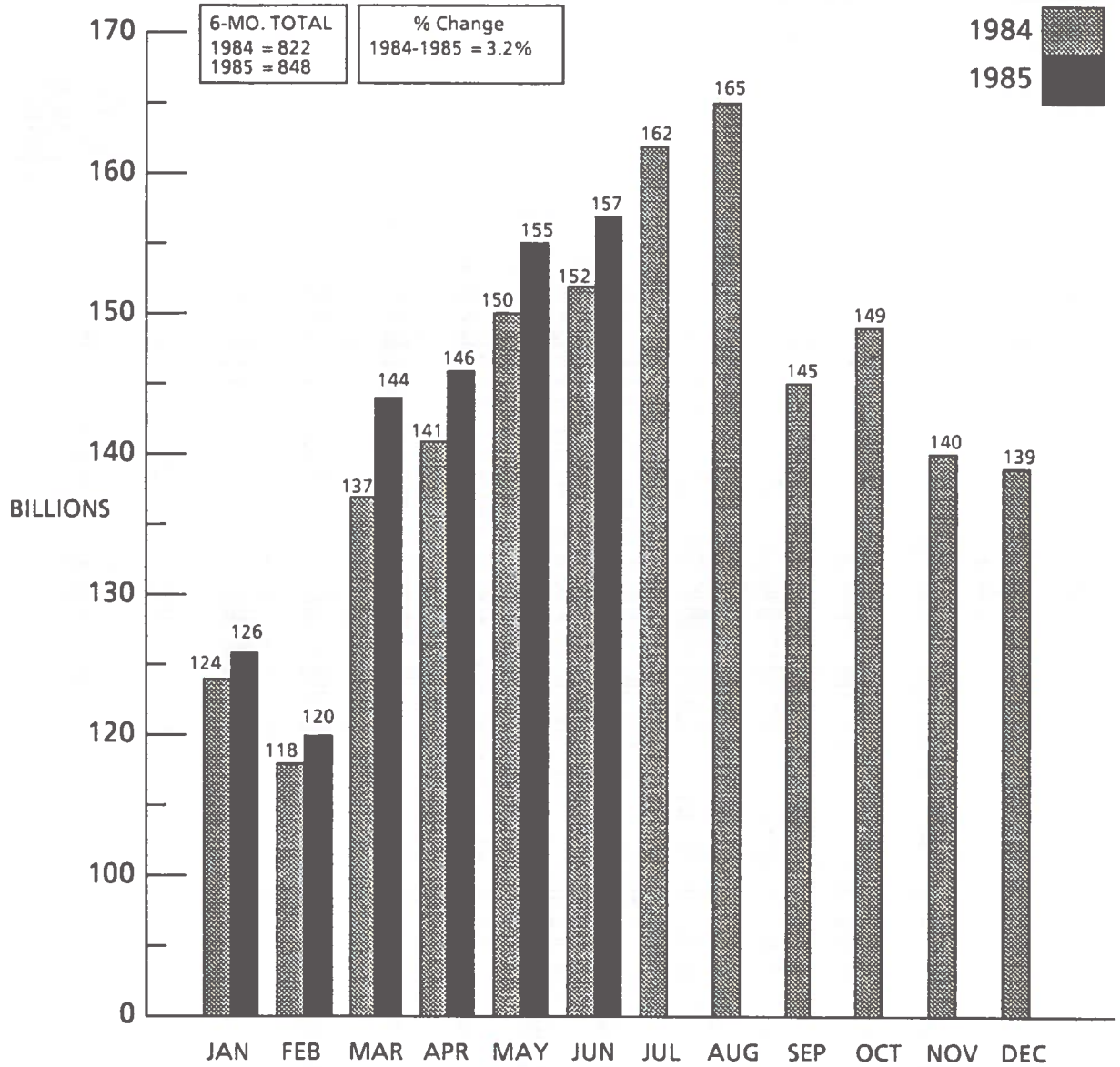


NOTE: Figures are based on 30-day fatality definition (see Glossary).  
 1985 Data are preliminary.

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

# CHART 3.

## MOTOR VEHICLE MILES OF TRAVEL, 1984 - 1985<sup>P</sup>



<sup>P</sup> = Preliminary.

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

# RAILROAD

- Railroad\* and Rail-Highway Grade Crossing fatality data for the second quarter and for the first six months of 1985 showed a significant decline from the same periods of 1984, as shown in Table 3.
- In the second quarter and the first half of 1985, the number of train accidents, train incidents, and nontrain incidents dropped when compared with the same 1984 periods. In addition, the number of fatalities in each of these categories also experienced a decline.
- Injuries resulting from train and nontrain incidents also decreased during the second quarter and the first half of 1985. However, injuries resulting from train accidents increased in the first half of 1985, while they remained constant during the second quarter when compared with the same periods a year ago. This increase in train accident injuries was attributed to two separate train collisions in which 132 passengers/railroad employees were injured.
- Rail-Highway Grade Crossing accidents and injuries also experienced a decline in the second quarter and in the first six months of 1985, when compared with 1984.

\* Includes train accident, train incident, and nontrain incident data.

Category	1984 (1st Half)	1985 (1st Half)	1984 (2nd Quarter)	1985 (2nd Quarter)
Fatalities	10	5	12	6
Accidents	15	8	18	9
Incidents	20	10	22	11
Injuries	30	15	35	18



**TABLE 3.****RAILROAD\* FATALITIES FOR 1985 COMPARED WITH 1984**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
RAILROAD*	25	21	40	15	35	34
GRADE CROSSING	60	59	43	36	66	44
TOTAL RR AND GC	85	80	83	51	101	78

	APRIL		MAY		JUNE	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
RAILROAD*	52	38	41	42	62	45
GRADE CROSSING	47	33	64	49	47	41
TOTAL RR AND GC	99	71	105	91	109	86

	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1984	1985	% Chg	1984	1985	% Chg
RAILROAD*	155	125	-19.4	255	195	-23.5
GRADE CROSSING	158	123	-22.2	327	262	-19.9
TOTAL RR AND GC	313	248	-20.8	582	457	-21.5

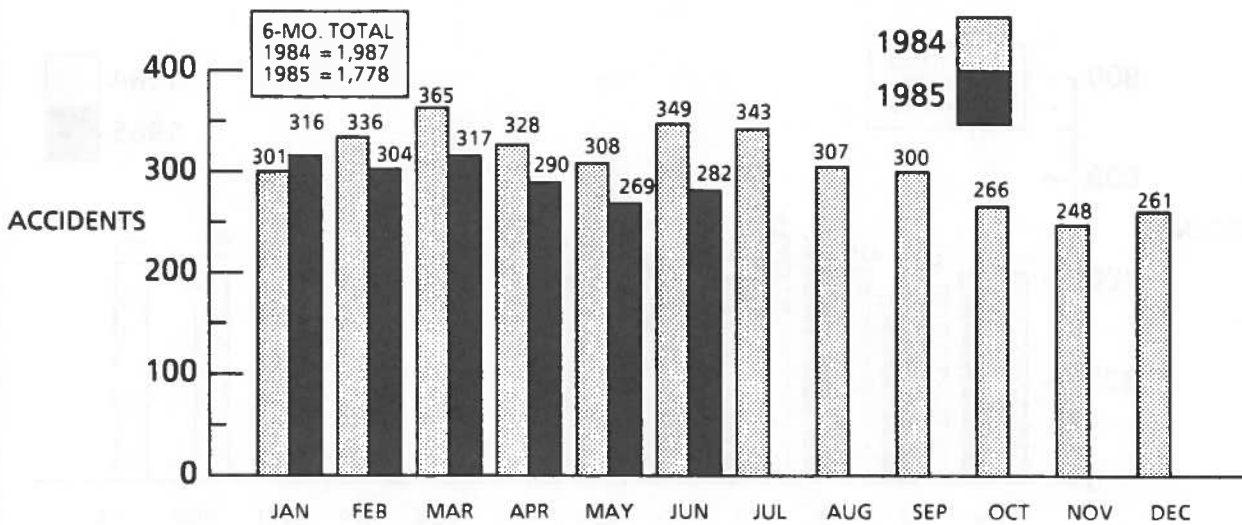
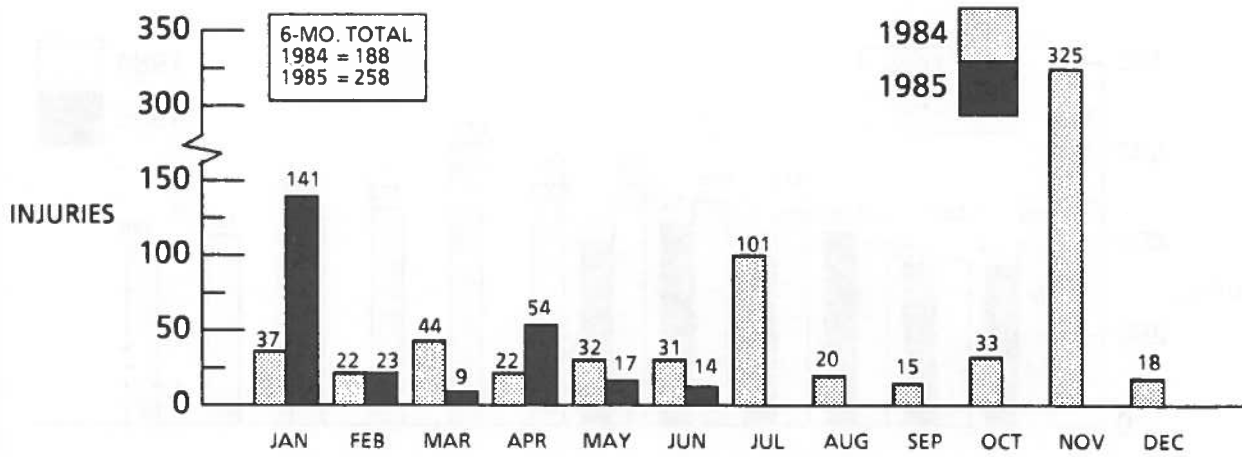
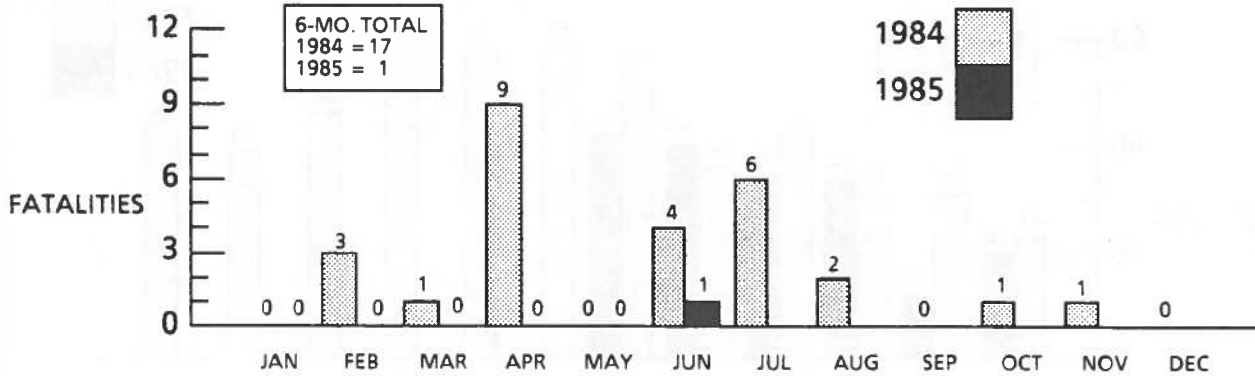
\* Includes train accident, train incident, and nontrain incident data.

NOTE: 1985 Data are preliminary.

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

# CHART 4.

## TRAIN ACCIDENT\* FATALITIES, INJURIES AND ACCIDENTS, 1984-1985

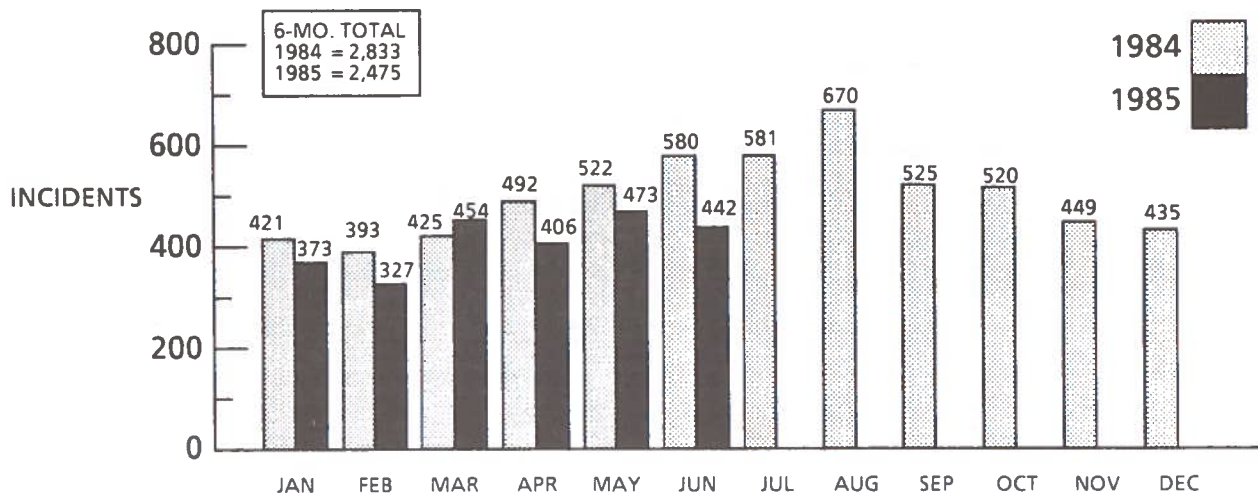
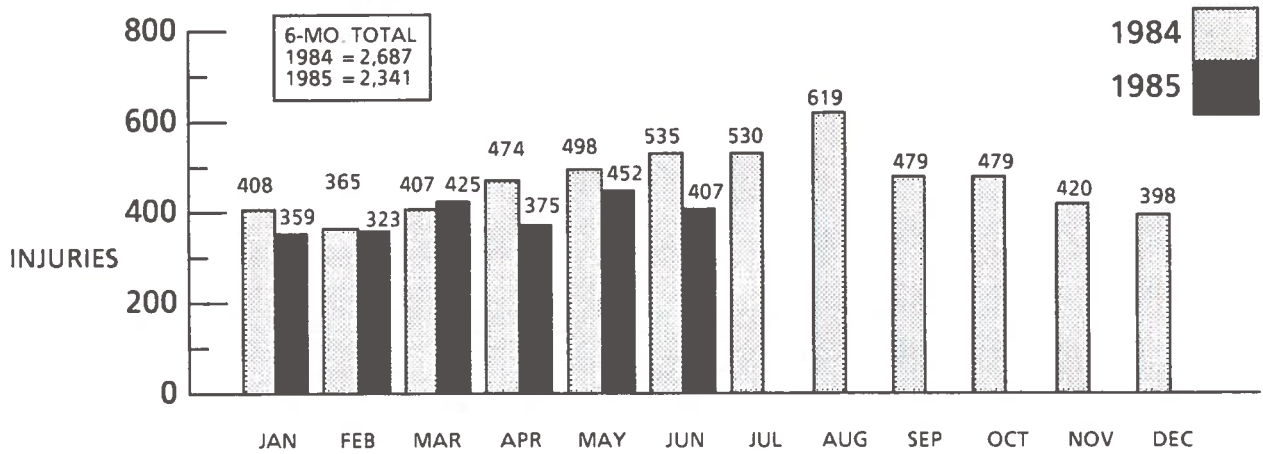
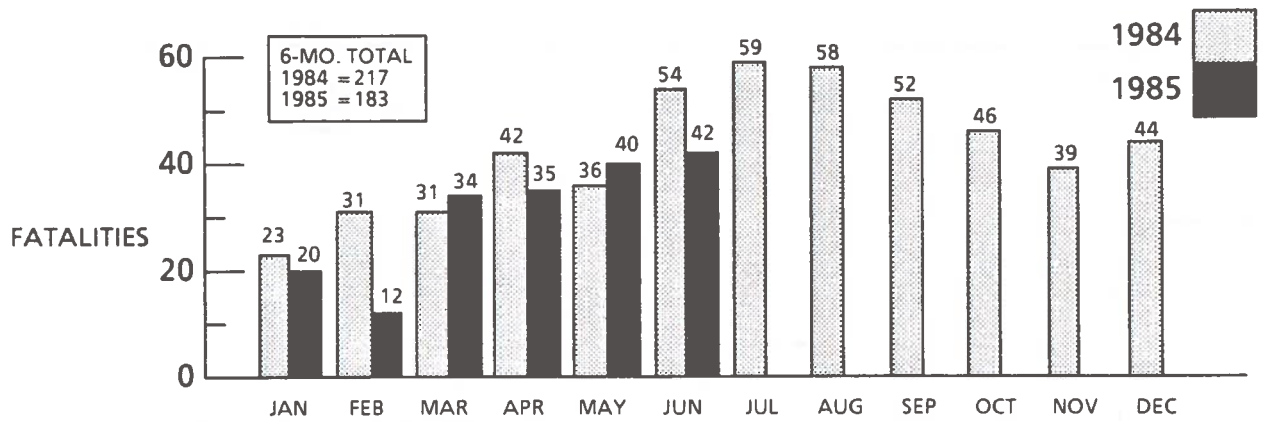


\* See Glossary for Train Accident definition. This chart does not include Grade Crossings.  
 NOTE: 1985 Data are preliminary.

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

# CHART 5.

## TRAIN INCIDENT\* FATALITIES, INJURIES AND INCIDENTS, 1984-1985

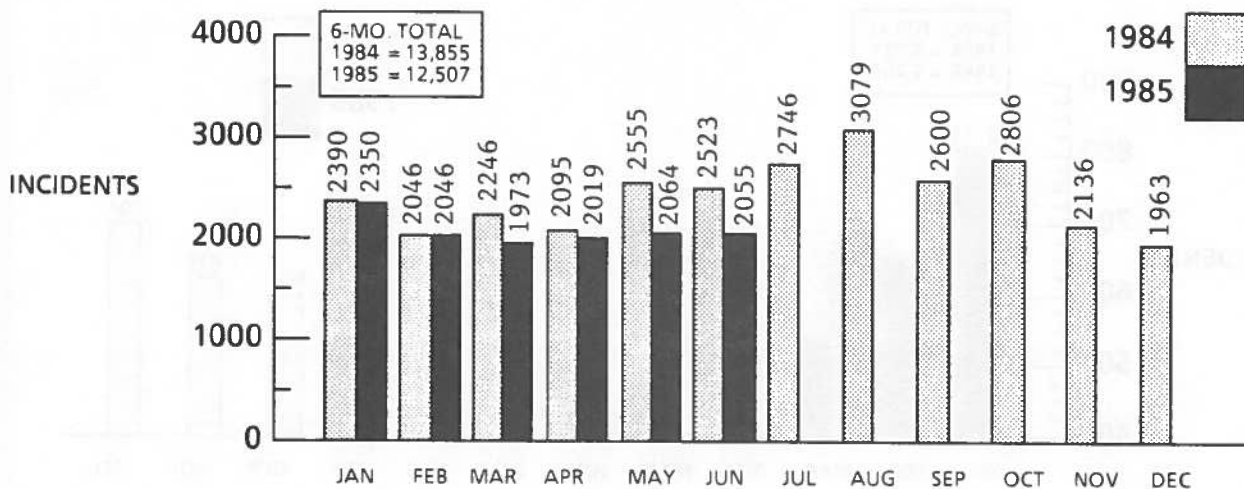
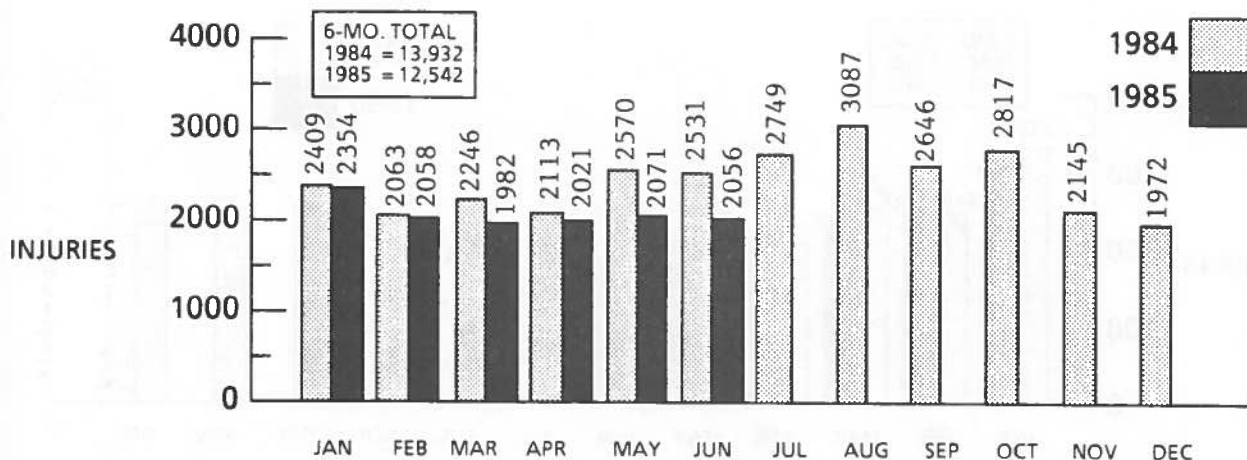
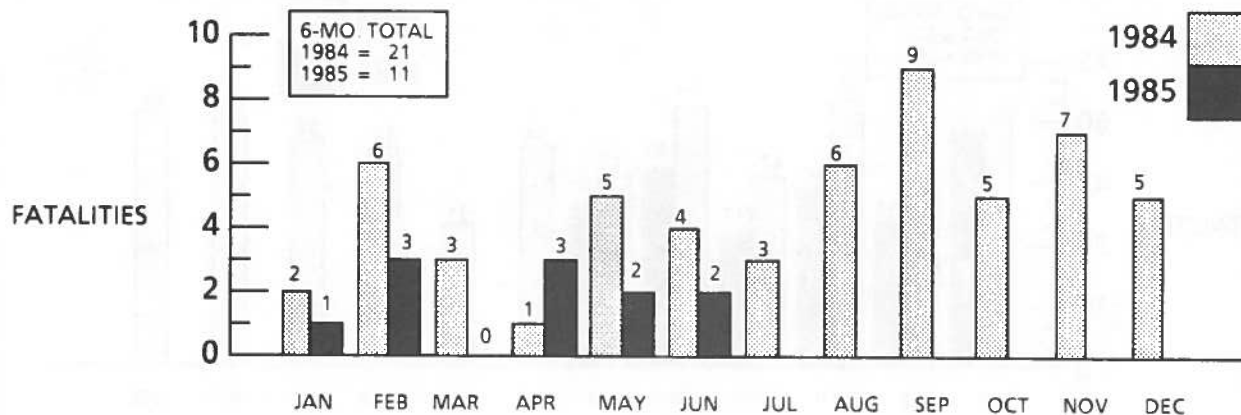


\* See Glossary for Train Incident definition. This chart does not include Grade Crossings.  
 NOTE: 1985 Data are preliminary.

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

## CHART 6.

### NONTRAIN\* FATALITIES, INJURIES AND INCIDENTS, 1984-1985

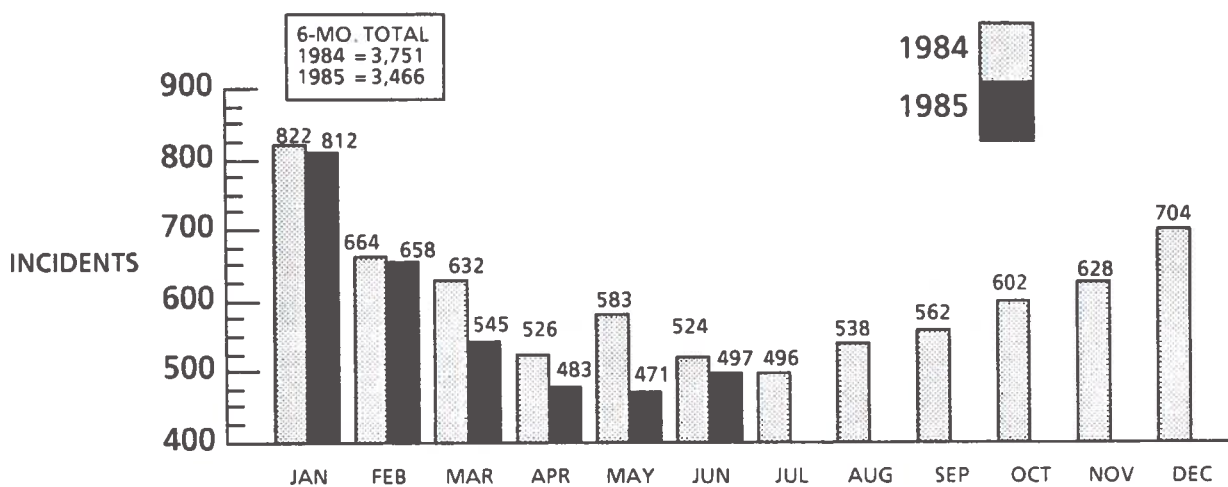
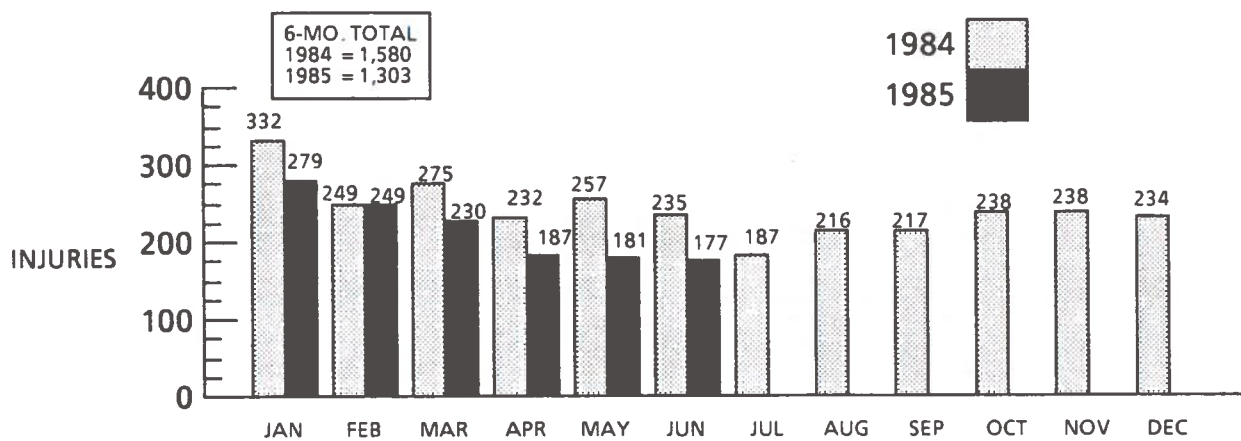
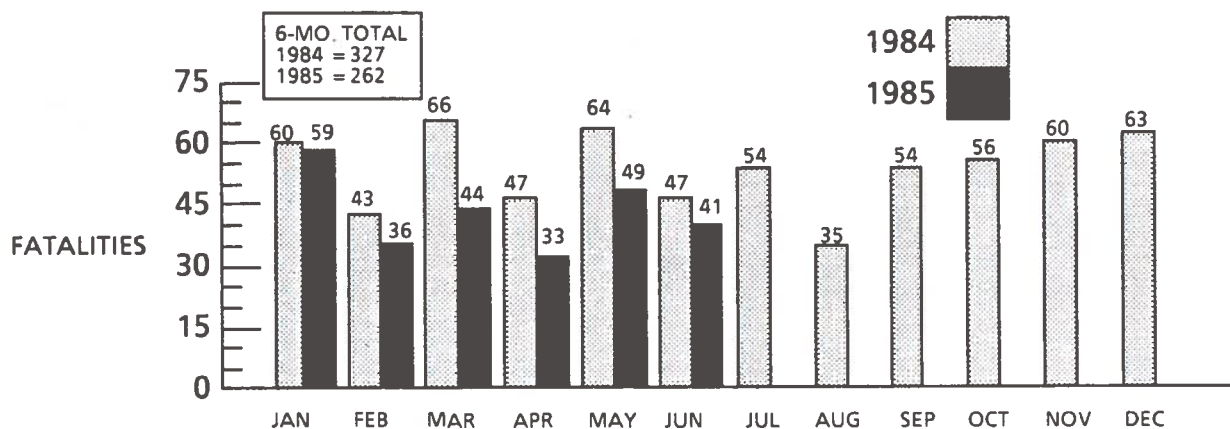


\* See Glossary for definition. This chart does not include Grade Crossings.  
NOTE: 1985 Data are preliminary.

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

## CHART 7.

### GRADE CROSSING\* FATALITIES, INJURIES AND INCIDENTS, 1984-1985



\* See Glossary for definition.  
NOTE: 1985 Data are preliminary.

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

## RAIL RAPID TRANSIT

Users of Rail Rapid Transit (RRT) statistics should exercise caution when comparing accident, fatality, and injury data for the first six months of 1984 and 1985. Data have not been received from the New York City Transit Authority and the New Jersey Port Authority Transit Corporation for the first six months of 1985. In addition, some monthly data for 1985 have not been received from the following properties: the Massachusetts Bay Transit Authority, the Mass Transit Authority of Maryland, the Port Authority Trans-Hudson Corporation, and the Washington Metropolitan Area Transit Authority. The following comparisons are made using data which have been received as of September 13, 1985.

- There were two RRT revenue train accidents reported in the second quarter of 1985, compared with twelve in the second quarter of 1984, six of which were the result of collisions with persons.

The following table summarizes train accidents by type for the second quarter of 1984 and 1985.

	1984* SECOND QUARTER	1985* SECOND QUARTER
Collision with Other Train	1	0
Collision with Obstacle	0	1
Collision with Person	6	0
Derailment	4	0
Fire	1	1
Rail-Highway Crossing	0	0
<b>Total</b>	<b>12</b>	<b>2</b>

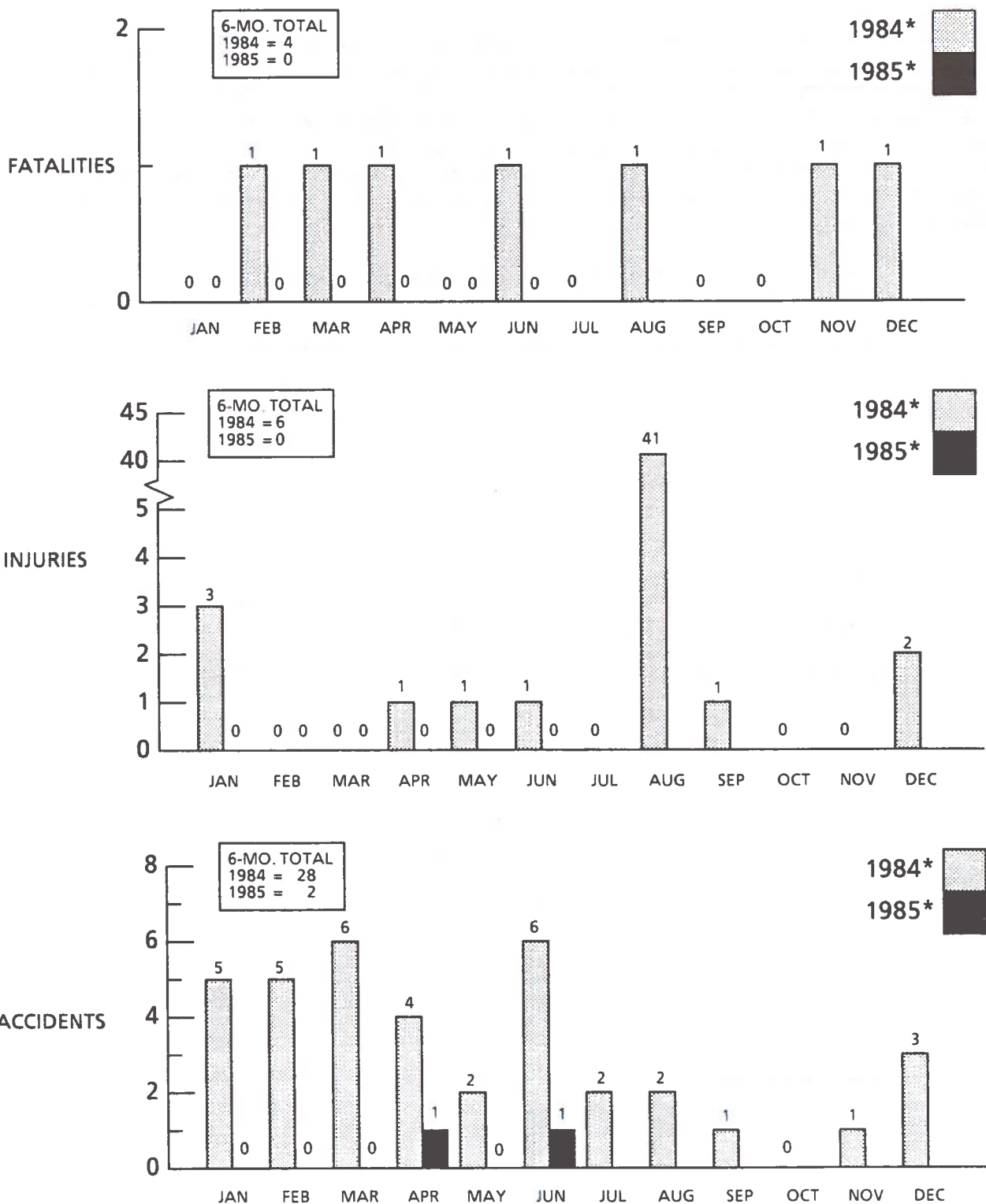
- The predominant cause of RRT train and nontrain personal casualties (injuries and fatalities) in the second quarter of 1985 was from persons slipping and falling. Of the 202 casualties reported in this quarter, 110 were the result of slips and falls (54 percent); while in the second quarter of 1984, 365 of the 561 casualties (injuries and fatalities) reported were also the result of slips and falls (65 percent).
- In the first six months of 1985, there were significant decreases in RRT train and nontrain fatalities, injuries and accidents/incidents when compared to the first six months of 1984.

\* Preliminary data prior to verification.

Source: TSC, Transit Safety and Security Division, DTS-65, SIRAS.

# CHART 8.

## RRT TRAIN FATALITIES, ACCIDENTS AND INJURIES, 1984-1985

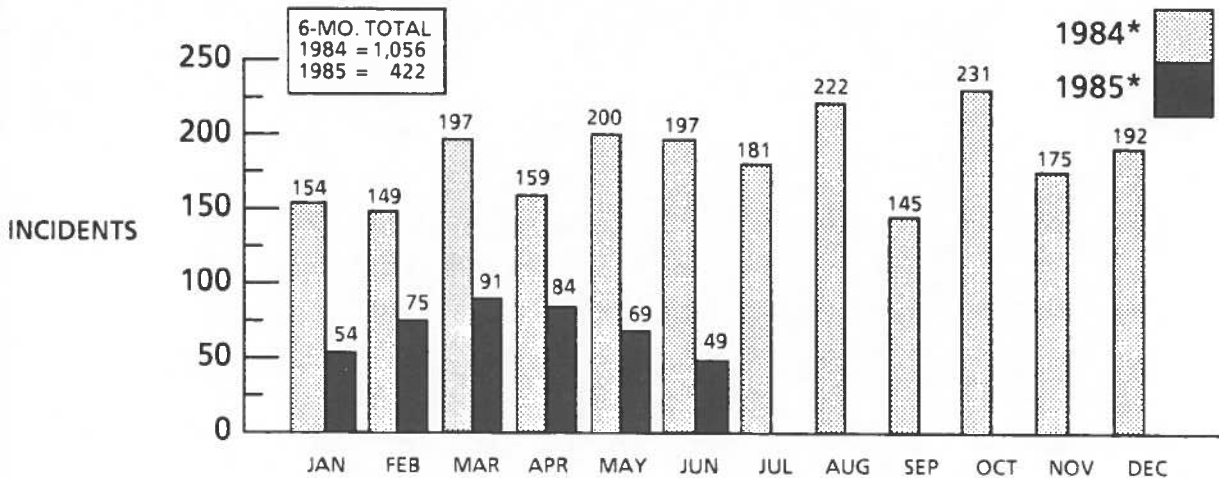
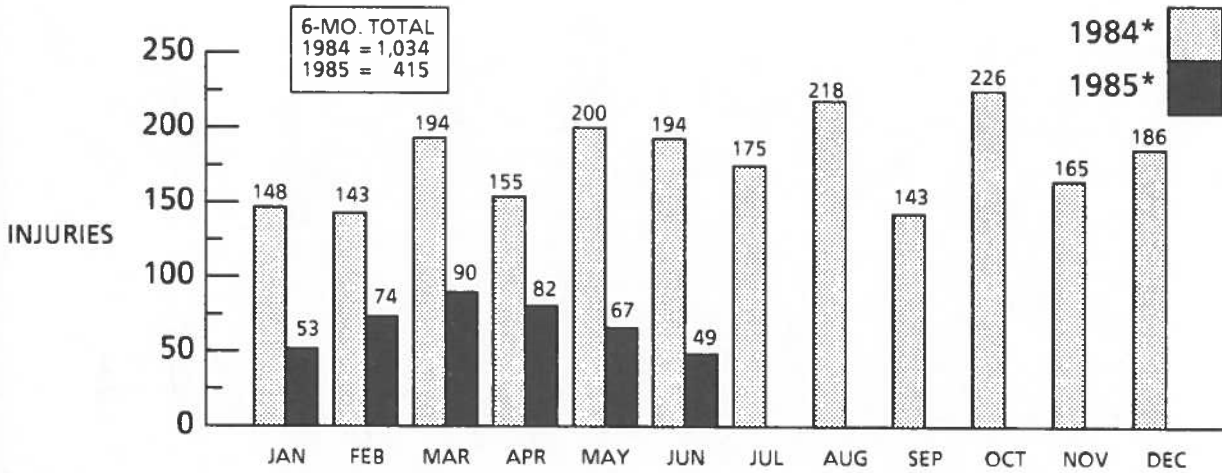
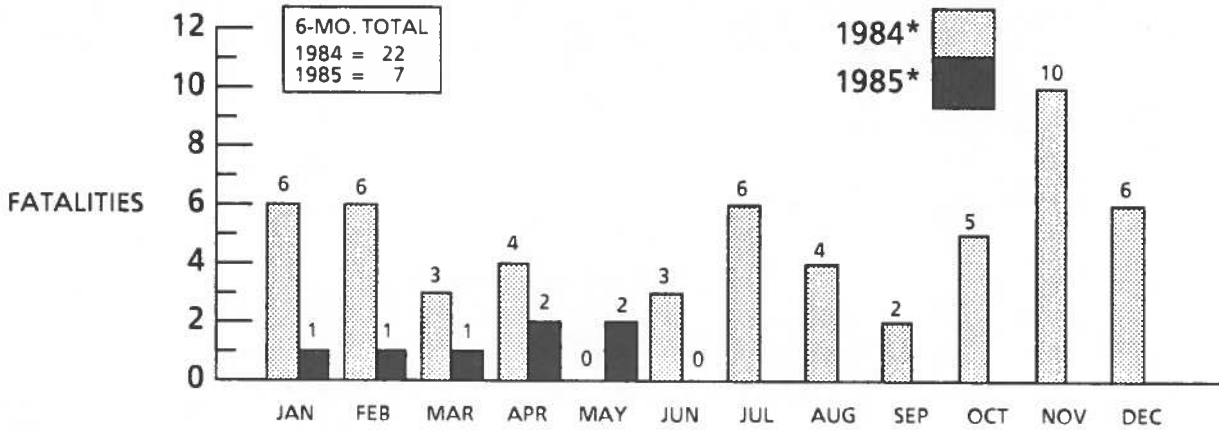


\* Preliminary data prior to verification.

SOURCE: TSC, Transit Safety and Security Division, DTS-65, SIRAS.

# CHART 9.

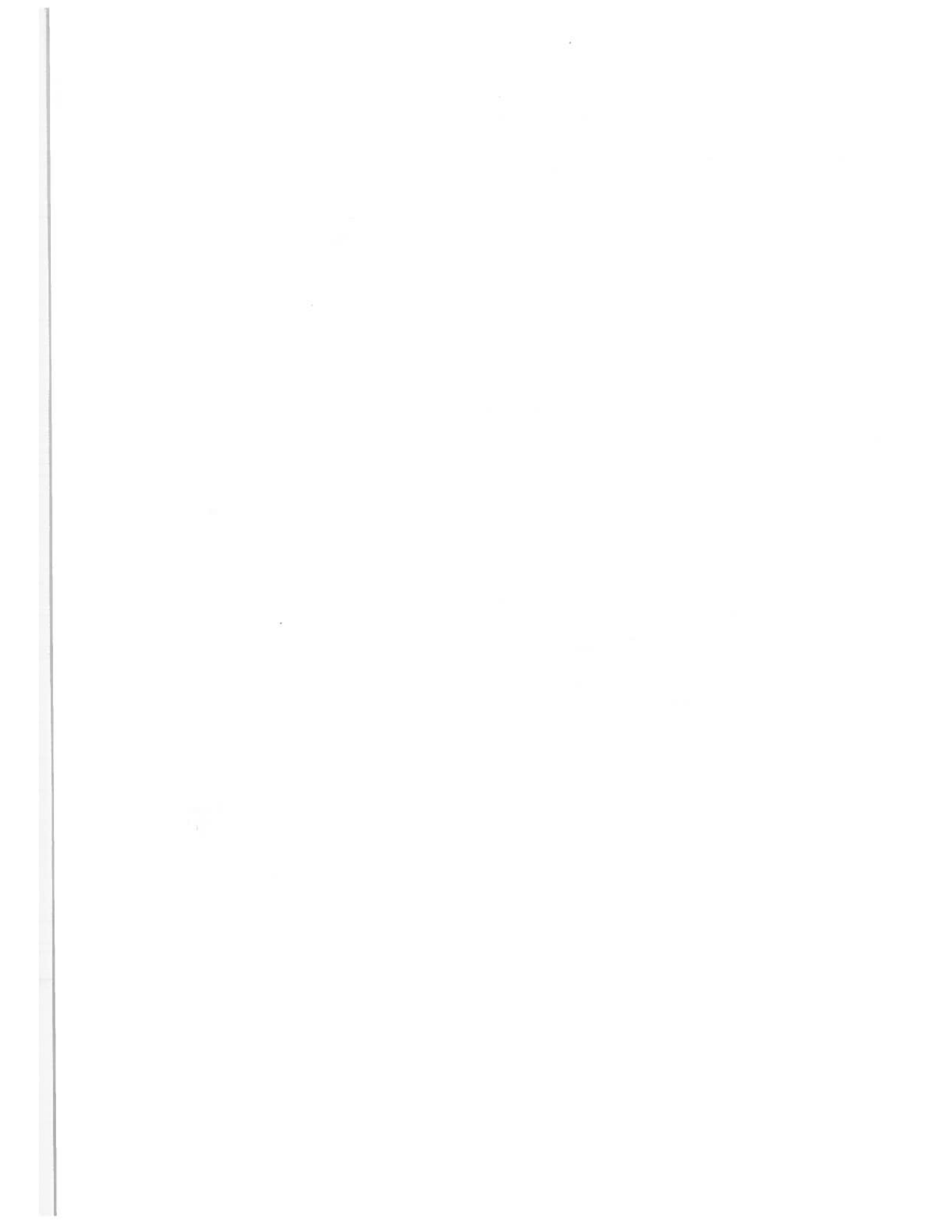
## RRT NONTRAIN FATALITIES, INJURIES AND INCIDENTS, 1984 - 1985



\* Preliminary data prior to verification.

SOURCE: TSC, Transit Safety and Security Division, DTS-65, SIRAS.





# AVIATION

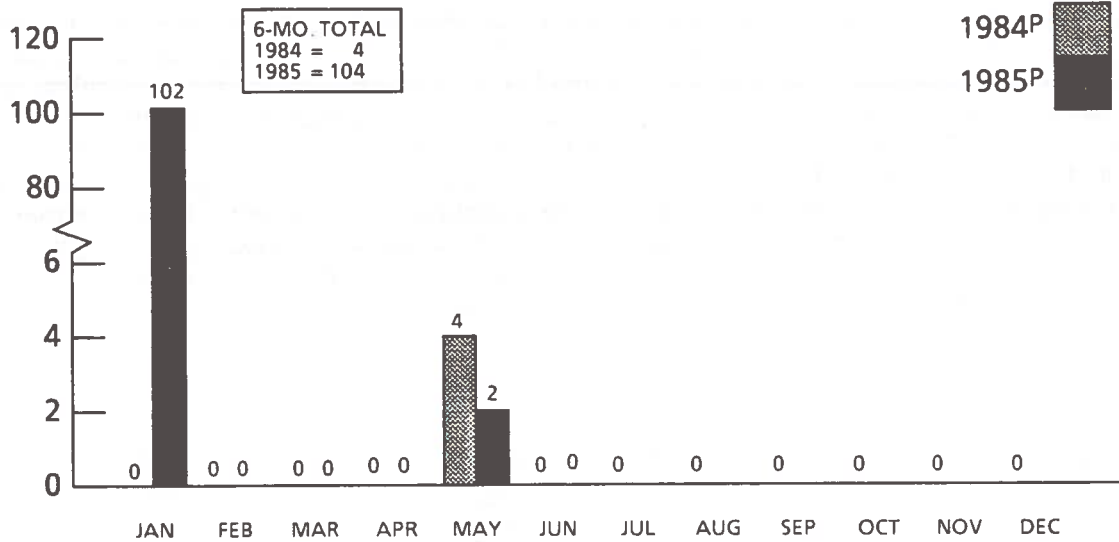
The National Transportation Safety Board reports aviation accident data according to the Federal Aviation Regulations under which the aircraft was operated at the time of an accident. Revenue operations of Air Carriers, Commercial Operators and deregulated All Cargo Carriers, using large aircraft, are 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. It is anticipated that classifying aviation accidents according to the operating rules will 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 CAB on December 31, 1984, FAA definitions of such terms as air carriers and general aviation are now being used.

## AIR CARRIER

- U.S. air carrier accidents increased from six during the second quarter of 1984 to ten in the second quarter of 1985. However, fatal accidents remained constant, with one being reported during each quarter. The number of air carrier fatalities in the second quarter declined from four in 1984 to two in 1985. During this period, serious injuries increased from one to nine.
- Commuter carriers showed a decrease in fatalities, fatal accidents, and total accidents, while serious injuries increased when the second quarter of 1985 is compared with the second quarter of 1984. During the same period, on-demand air taxis showed an increase in all areas.
- In the first six months on 1985, U.S. air carrier accidents, fatal accidents, fatalities, and serious injuries all experienced an increase when compared with the same period a year ago. Air carrier accidents increased from ten to 16 and fatal accidents rose from one to four. The number of fatalities increased significantly during this period -- from four to 104. Ninety-nine of the 104 fatalities in the first half of 1985 are attributed to accidents in La Paz, Bolivia, and Reno, Nevada.
- A comparison of fatality, injury, and accident data for commuter carriers and on-demand air taxis showed an increase in almost all areas for the first six months of 1985 versus the same period of 1984. Commuter carrier accidents (fatal and total) were the only areas that experienced a decline in this period.

## CHART 10.

### U.S. AIR CARRIER\* FATALITIES, 1984 - 1985



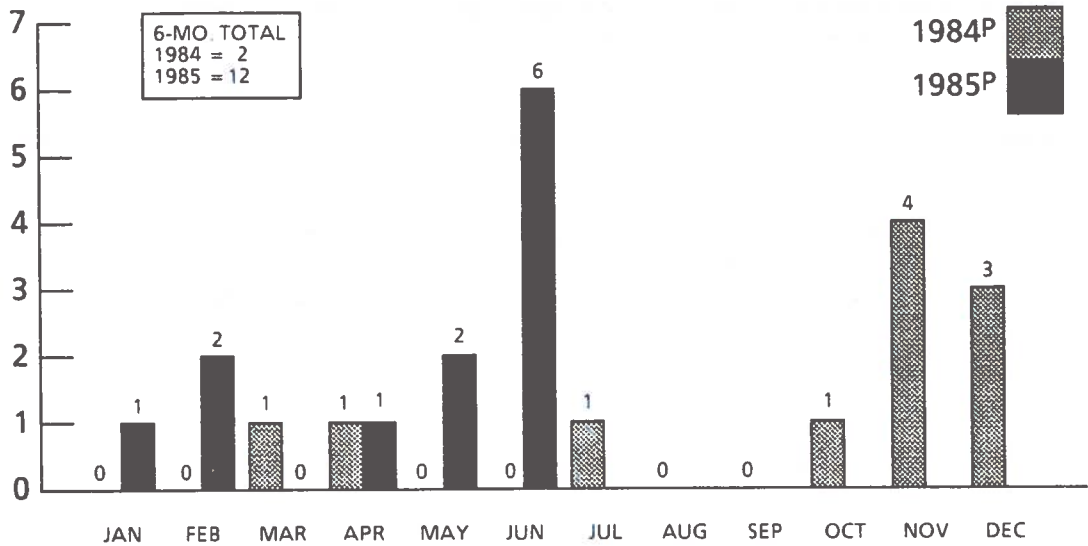
P = Preliminary.

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

SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

## CHART 11.

### U.S. AIR CARRIER\* SERIOUS INJURIES, 1984 - 1985



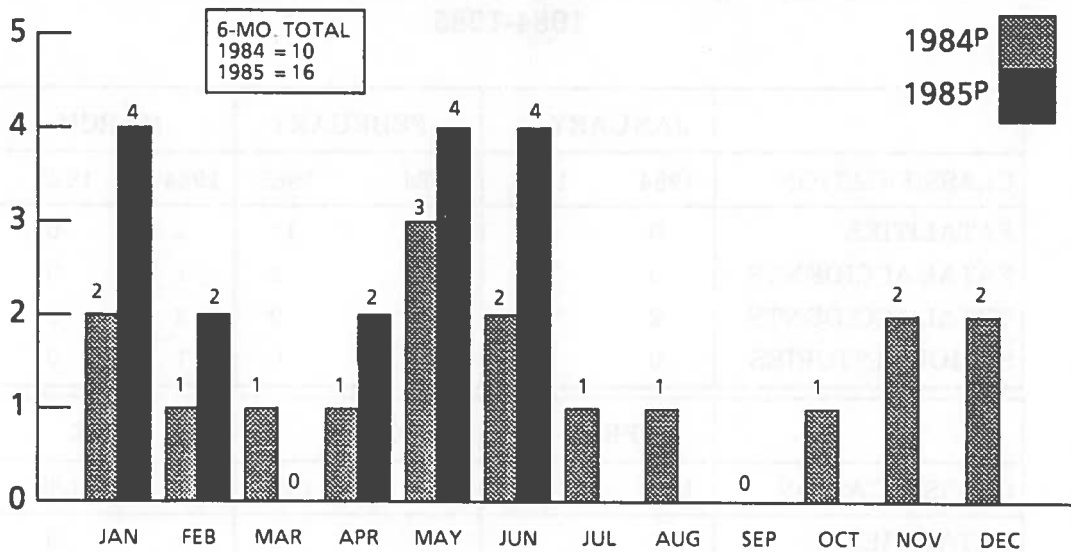
P = Preliminary.

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

SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

## CHART 12.

### U.S. AIR CARRIER ACCIDENTS\*, 1984 - 1985



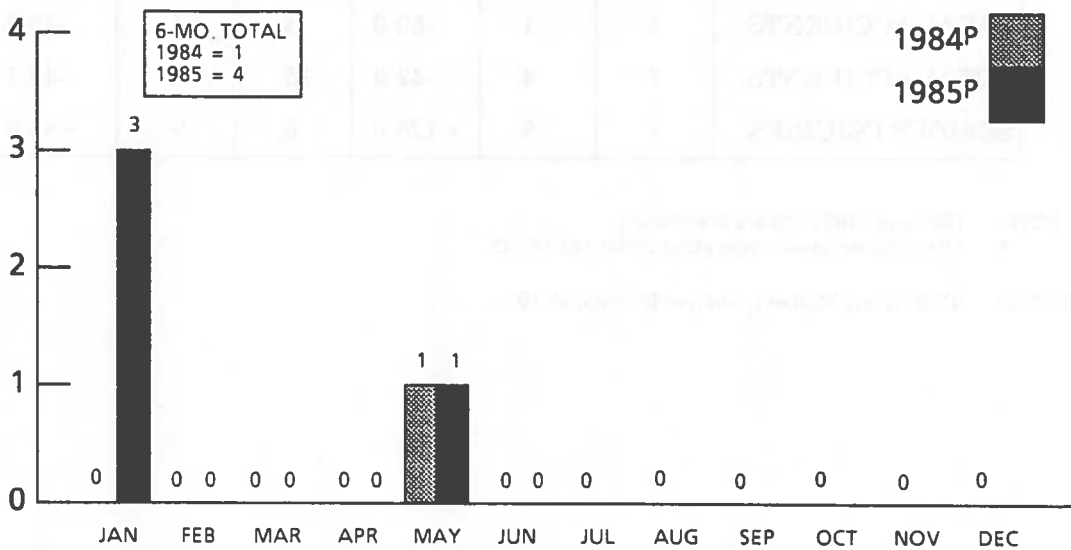
P = Preliminary.

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

SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

## CHART 13.

### U.S. AIR CARRIER\* FATAL ACCIDENTS, 1984 - 1985



P = Preliminary.

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

SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

**TABLE 4.****COMMUTER CARRIERS\* ACCIDENTS, FATALITIES AND INJURIES  
1984-1985**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
FATALITIES	0	0	1	11	3	0
FATAL ACCIDENTS	0	0	1	2	1	0
TOTAL ACCIDENTS	2	0	3	2	3	2
SERIOUS INJURIES	0	0	0	0	1	0

	APRIL		MAY		JUNE	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
FATALITIES	1	1	0	0	1	0
FATAL ACCIDENTS	1	1	0	0	1	0
TOTAL ACCIDENTS	2	2	3	2	2	0
SERIOUS INJURIES	0	3	4	6	0	0

	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1984	1985	% Chg	1984	1985	% Chg
FATALITIES	2	1	-50.0	6	12	+100.0
FATAL ACCIDENTS	2	1	-50.0	4	3	-25.0
TOTAL ACCIDENTS	7	4	-42.9	15	8	-46.7
SERIOUS INJURIES	4	9	+125.0	5	9	+80.0

NOTE: 1984 and 1985 Data are preliminary.  
 \* All scheduled service operating under 14 CFR 135.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

**TABLE 5.**

**ON-DEMAND AIR TAXIS\* ACCIDENTS, FATALITIES AND INJURIES  
1984-1985**

CLASSIFICATION	JANUARY		FEBRUARY		MARCH	
	1984	1985	1984	1985	1984	1985
FATALITIES	6	4	1	9	5	5
FATAL ACCIDENTS	3	2	1	3	2	2
TOTAL ACCIDENTS	11	26	10	8	8	12
SERIOUS INJURIES	2	5	1	2	4	6

CLASSIFICATION	APRIL		MAY		JUNE	
	1984	1985	1984	1985	1984	1985
FATALITIES	4	10	2	8	6	6
FATAL ACCIDENTS	1	2	1	3	2	3
TOTAL ACCIDENTS	5	12	8	13	16	14
SERIOUS INJURIES	1	2	3	6	2	1

CLASSIFICATION	SECOND QUARTER			FIRST 6 MONTHS		
	1984	1985	% Chg	1984	1985	% Chg
FATALITIES	12	24	+100.0	24	42	+75.0
FATAL ACCIDENTS	4	8	+100.0	10	15	+50.0
TOTAL ACCIDENTS	29	39	+34.5	58	85	+46.6
SERIOUS INJURIES	6	9	+50.0	13	22	+69.2

NOTE: 1984 and 1985 Data are preliminary.  
\* Non-scheduled service operating under 14 CFR 135.

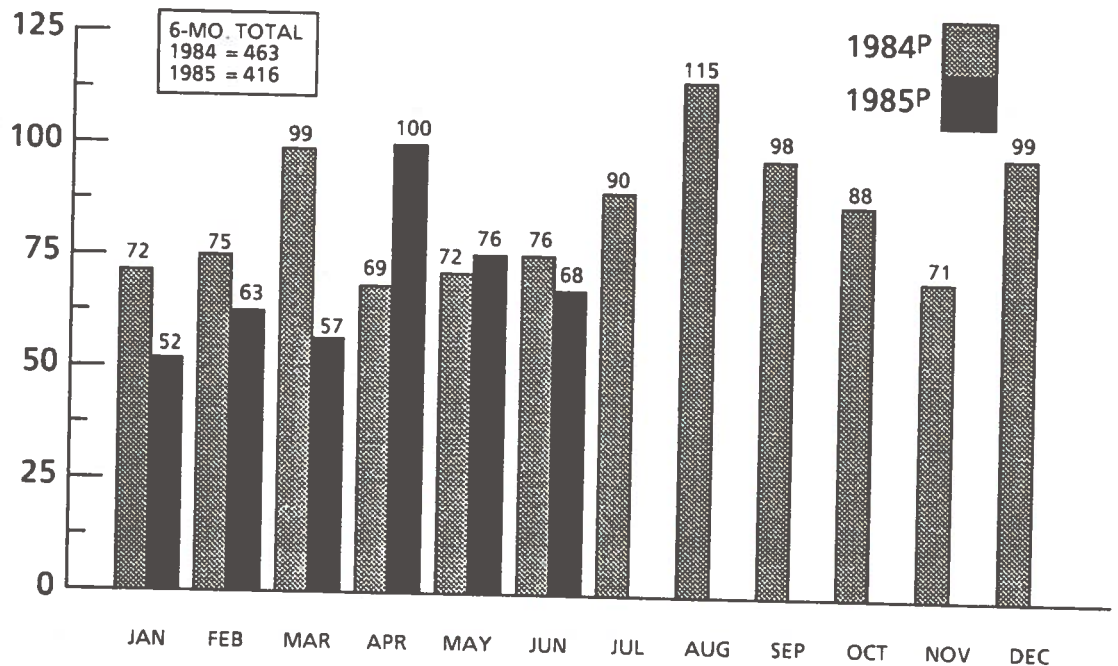
SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

## GENERAL AVIATION

- In the second quarter of 1985, General Aviation fatal accidents and fatalities increased when compared to the second quarter of 1984. Fatal accidents rose from 130 to 136 and fatalities increased from 217 to 244.
- The total number of General Aviation accidents decreased in the second quarter from 875 in 1984 to 779 in 1985.
- Serious injuries remained constant during the second quarter of 1984 and 1985 -- 156 serious injuries were reported in each quarter.
- However, when the first six months of 1985 are compared to the first six months of 1984, General Aviation fatalities, accidents, fatal accidents and serious injuries all experienced declines. Fatalities dropped from 463 in 1984 to 416 in 1985, accidents fell from 1,460 in 1984 to 1,287 in 1985, fatal accidents decreased from 248 in 1984 to 230 in 1985, and serious injuries declined from 268 in 1984 to 232 in 1985.

### CHART 14.

**U.S. GENERAL AVIATION\* FATALITIES, 1984 - 1985**



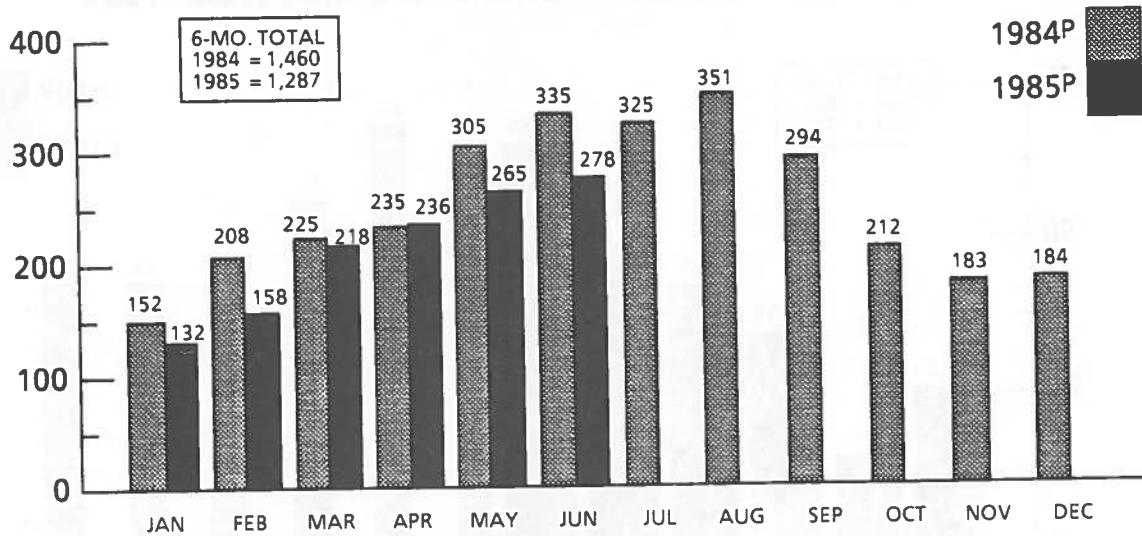
P = Preliminary.

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

SOURCE: NTSB, Safety Study & Analysis Division, SP-10.

## CHART 15.

### U.S. GENERAL AVIATION\* ACCIDENTS, 1984 - 1985



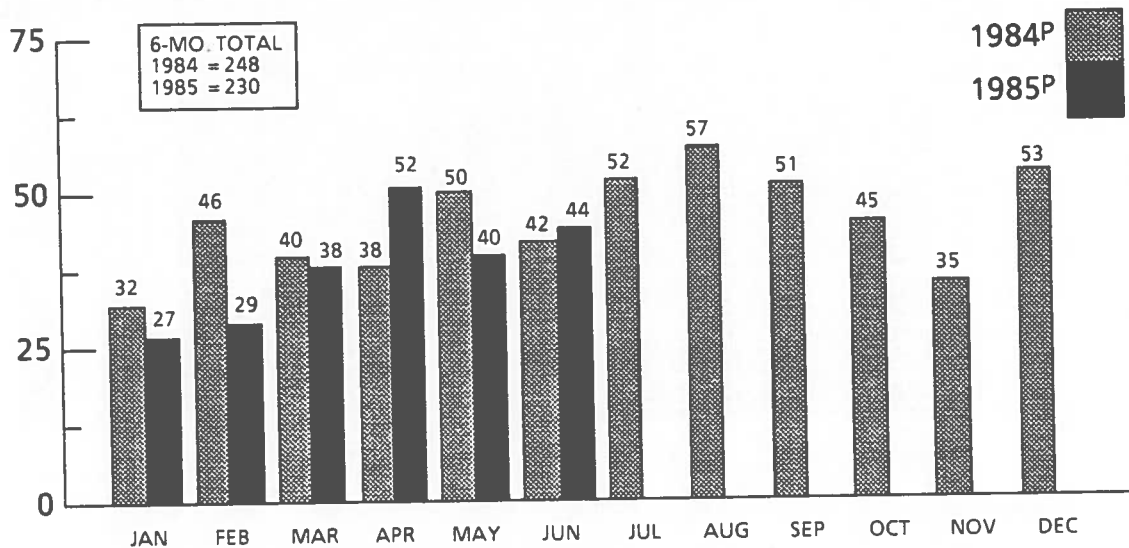
P = Preliminary.

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

SOURCE: NTSB, Safety Study & Analysis Division, SP-10.

## CHART 16.

### U.S. GENERAL AVIATION\* FATAL ACCIDENTS, 1984 - 1985



P = Preliminary.

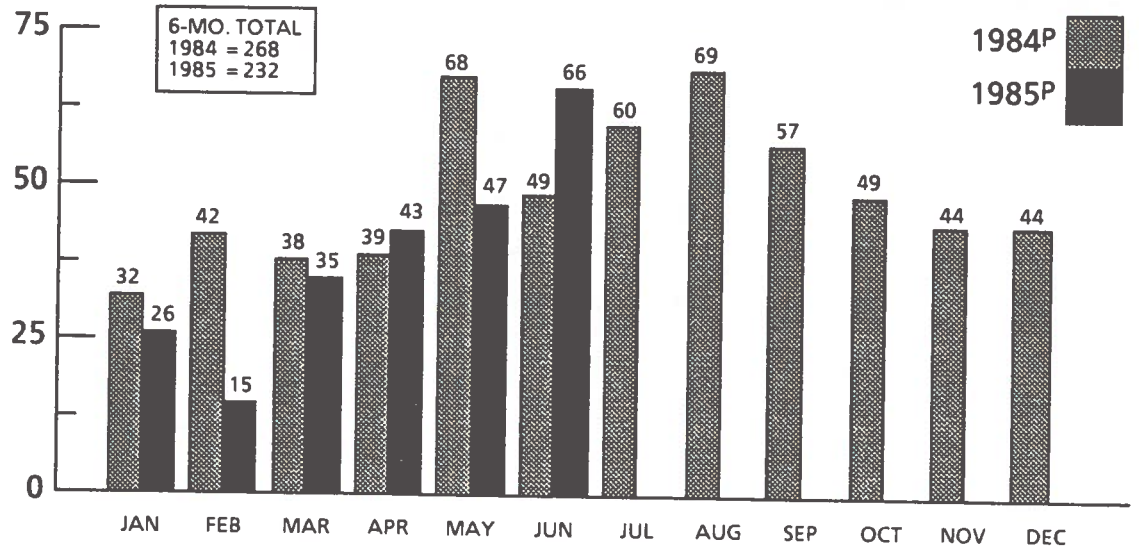
\* All operations other than those operations under 14 CFR 121, 125, 127, and 135.

SOURCE: NTSB, Safety Study & Analysis Division, SP-10.



# CHART 17.

## U.S. GENERAL AVIATION\* SERIOUS INJURIES, 1984 - 1985



P = Preliminary.

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

SOURCE: NTSB, Safety Study & Analysis Division, SP-10.

**TABLE 6.**

**GENERAL AVIATION FATALITIES BY TYPE OF FLYING, 1984 - 1985**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
PERSONAL	45	37	51	34	75	36
BUSINESS	18	6	11	10	17	16
CORPORATE/EXECUTIVE	0	5	1	5	0	1
AERIAL APPLICATION	0	0	2	0	0	0
INSTRUCTIONAL	1	2	4	7	1	1
OTHER	8	2	6	7	6	3
TOTAL GENERAL AVIATION	72	52	75	63	99	57

	APRIL		MAY		JUNE	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
PERSONAL	48	78	43	51	50	43
BUSINESS	18	9	8	11	7	10
CORPORATE/EXECUTIVE	0	0	0	0	0	0
AERIAL APPLICATION	0	3	3	1	8	1
INSTRUCTIONAL	1	4	5	0	4	1
OTHER	2	6	13	13	7	13
TOTAL GENERAL AVIATION	69	100	72	76	76	68

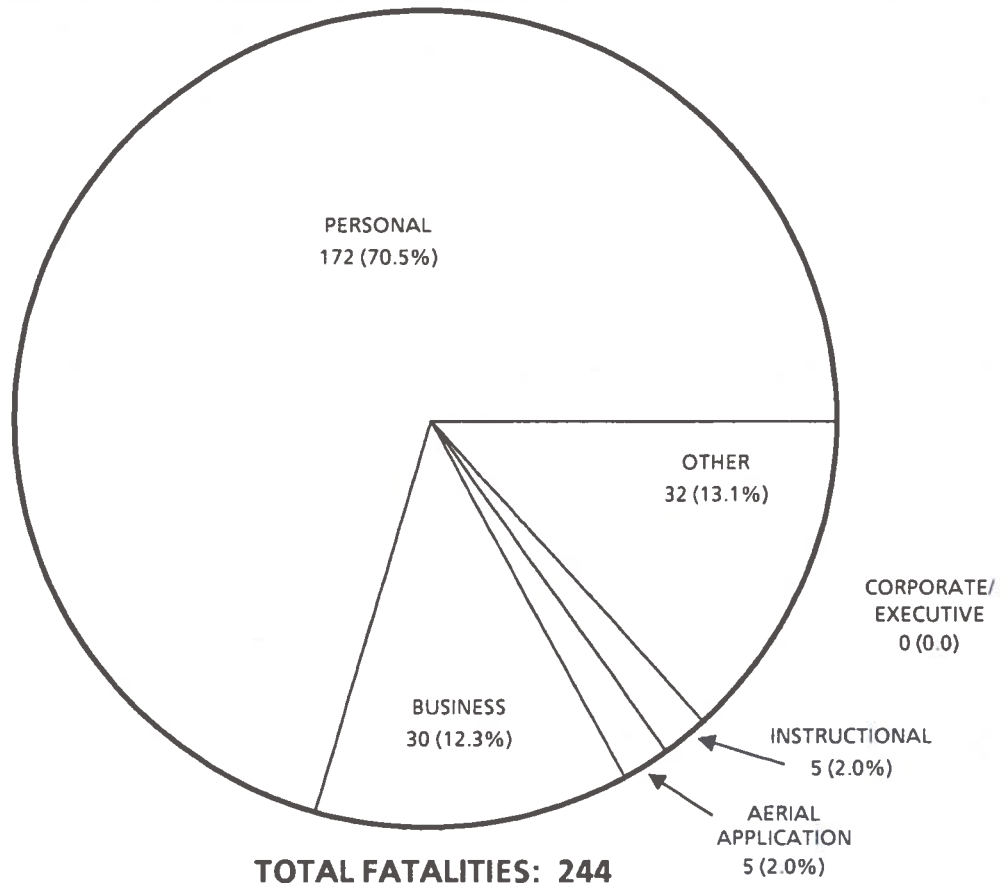
	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1984	1985	% Chg	1984	1985	% Chg
PERSONAL	141	172	+22.0	312	279	-10.6
BUSINESS	33	30	-9.1	79	62	-21.5
CORPORATE/EXECUTIVE	0	0	0.0	1	11	+1000.0
AERIAL APPLICATION	11	5	-54.5	13	5	-61.5
INSTRUCTIONAL	10	5	-50.0	16	15	-6.3
OTHER	22	32	+45.5	42	44	+4.8
TOTAL GENERAL AVIATION	217	244	+12.4	463	416	-10.2

NOTE: 1984 and 1985 Data are preliminary.

SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

# CHART 18.

## GENERAL AVIATION FATALITIES BY AIRCRAFT CLASSIFICATION, SECOND QUARTER, 1985



Note: 1985 Data are preliminary

SOURCE: NTSB, Safety Study & Analysis Division, SP-10.

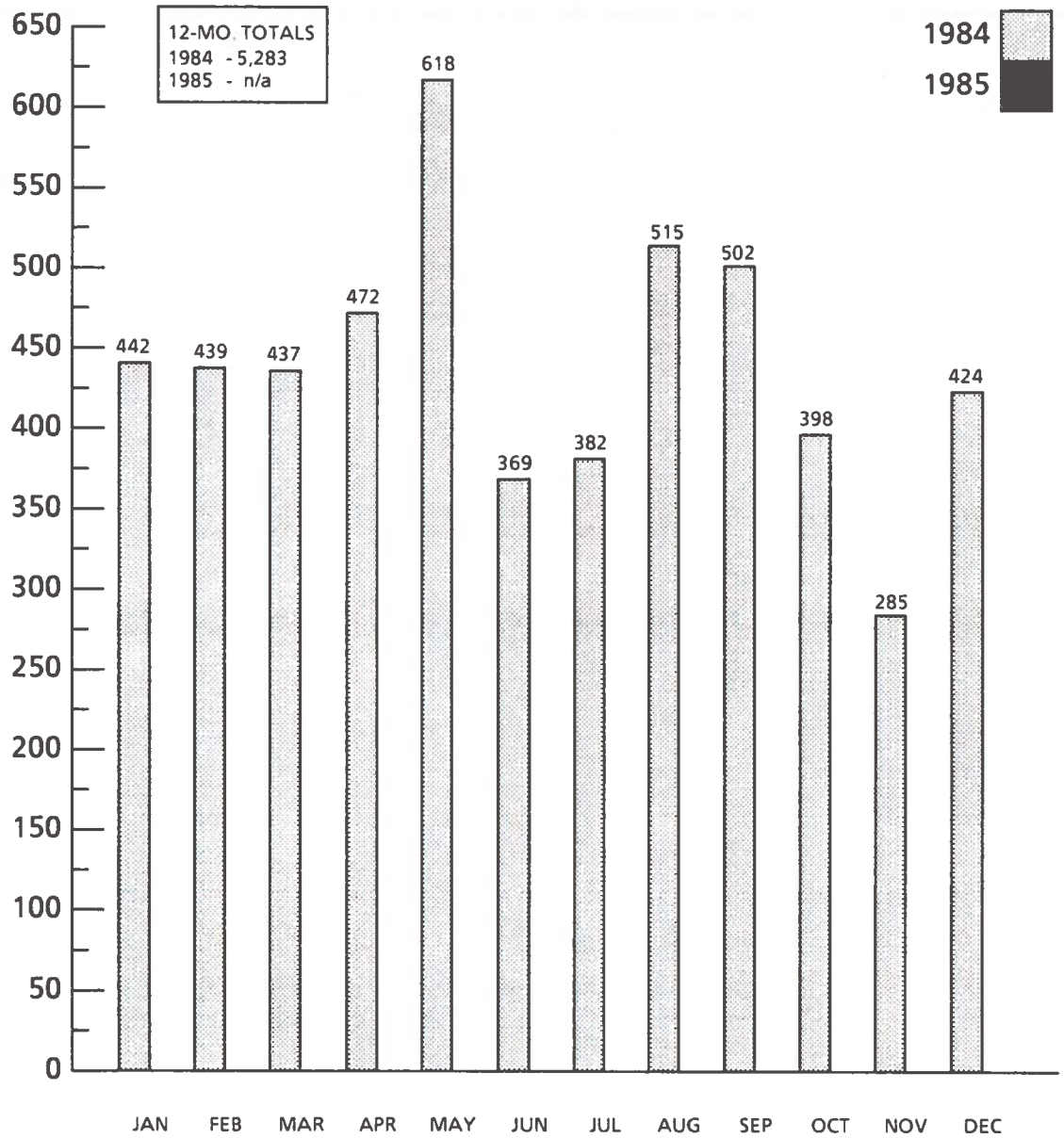
# MARINE

## WATERBORNE

The Commercial Marine Division of the Coast Guard does not have 1985 information available at this time since many of the marine casualties are still being investigated or are in various stages of completion. However, there have been substantial increases in the 1984 statistics published in the 1984 Annual Summary of this report. These changes are recorded in the following charts for Waterborne accidents, fatalities and injuries.

# CHART 19.

## VESSELS\* INVOLVED IN WATERBORNE ACCIDENTS, 1984-1985\*\*

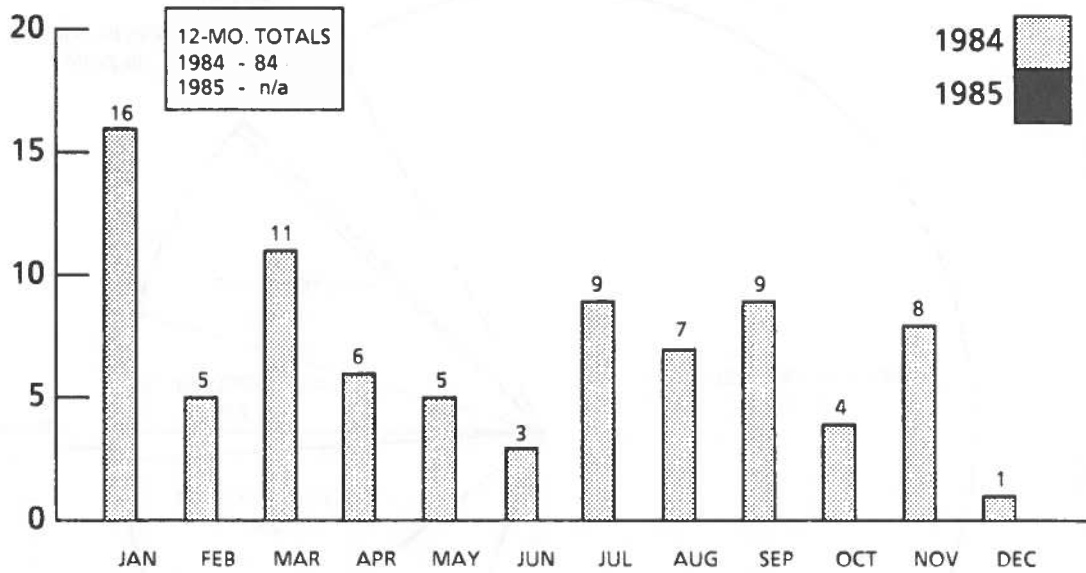


\* Includes foreign vessels having casualties in U.S. navigable waters.  
\*\* Data for 1985 are not yet available.

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

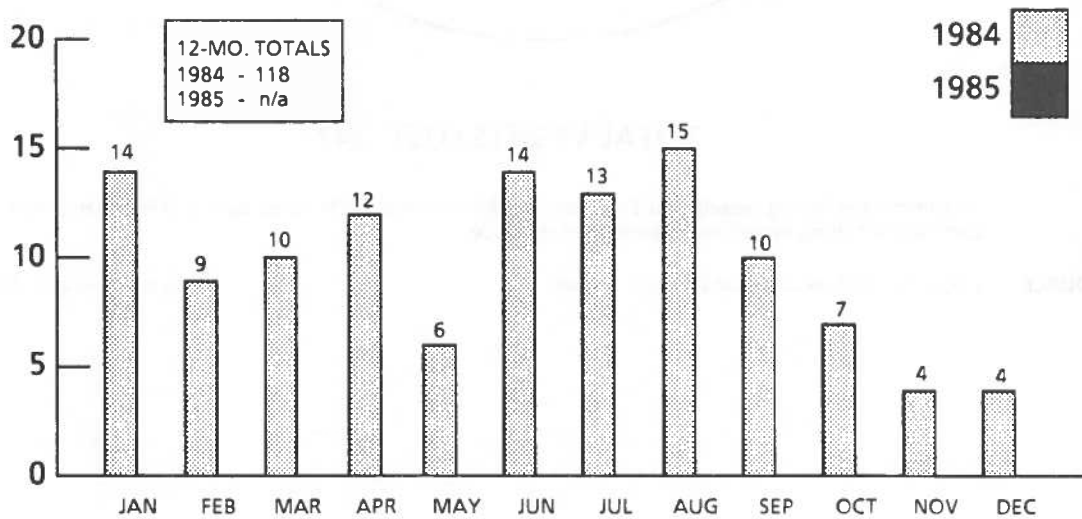
## CHART 20.

### WATERBORNE FATALITIES RESULTING FROM VESSEL CASUALTIES\*, 1984 - 1985\*\*



## CHART 21.

### WATERBORNE INJURIES RESULTING FROM VESSEL CASUALTIES\*, 1984 - 1985\*\*



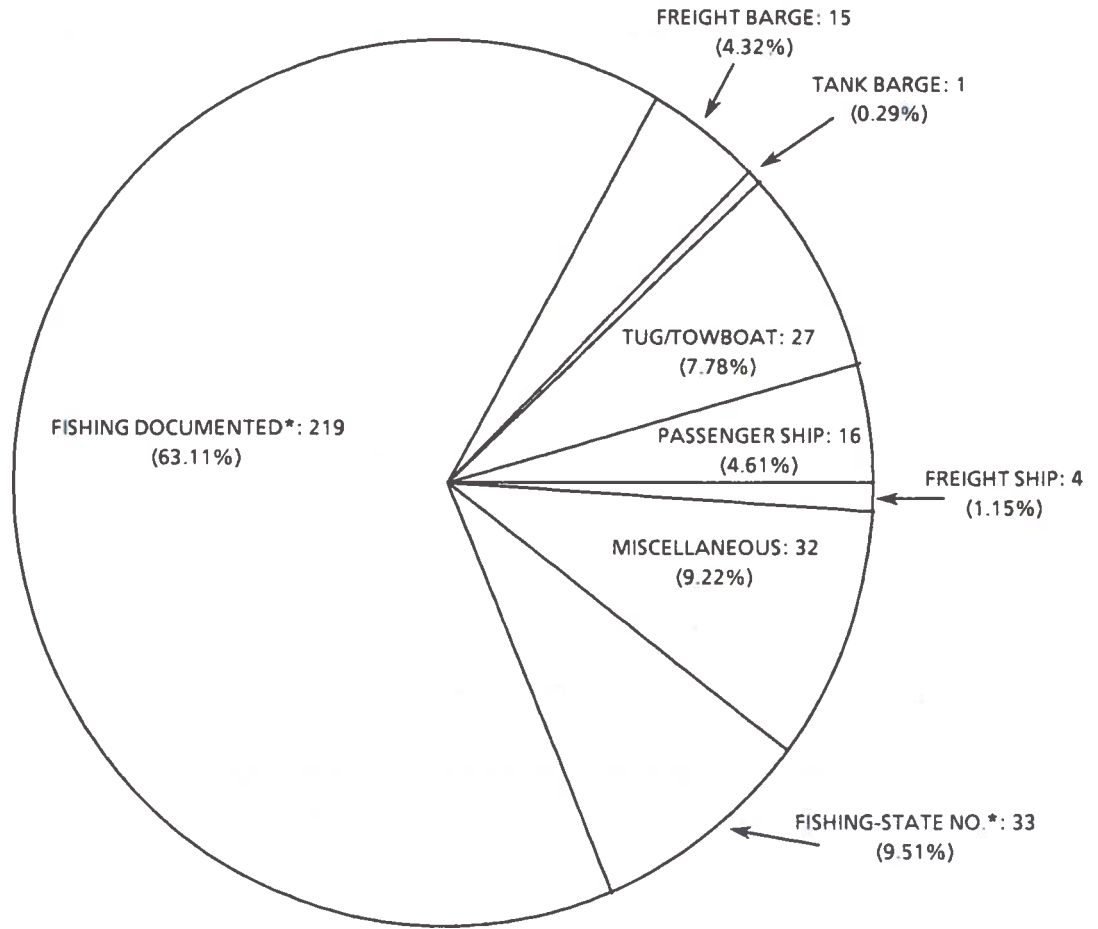
\* Includes foreign vessels having casualties in U.S. navigable waters.

\*\* Data for 1985 are not yet available.

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

# CHART 22.

## U.S. VESSELS TOTALLY LOST IN 1984



TOTAL VESSELS LOST: 347

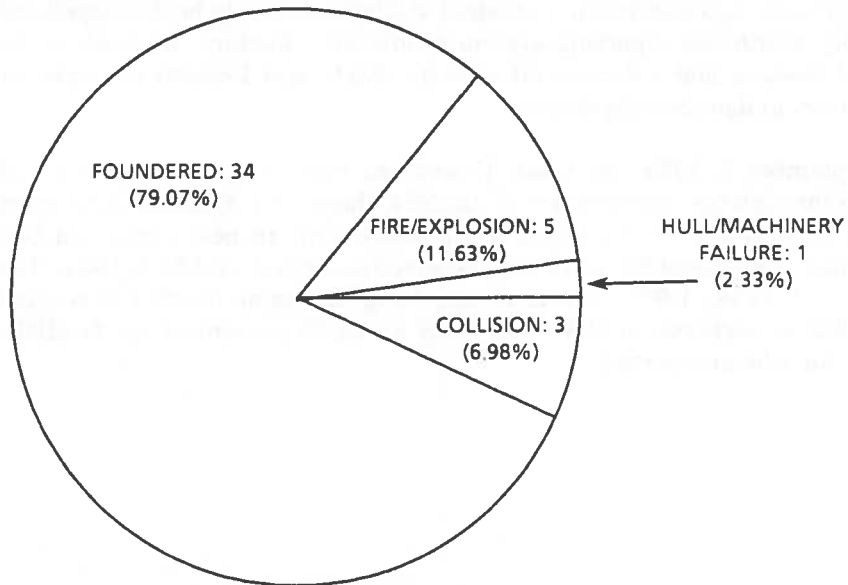
\* All commercial fishing vessels over 5 net tons are documented by the Coast Guard; if less than 5 net tons, commercial fishing vessels are registered in the state.

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

Data supplied as of 09/11/85

# CHART 23.

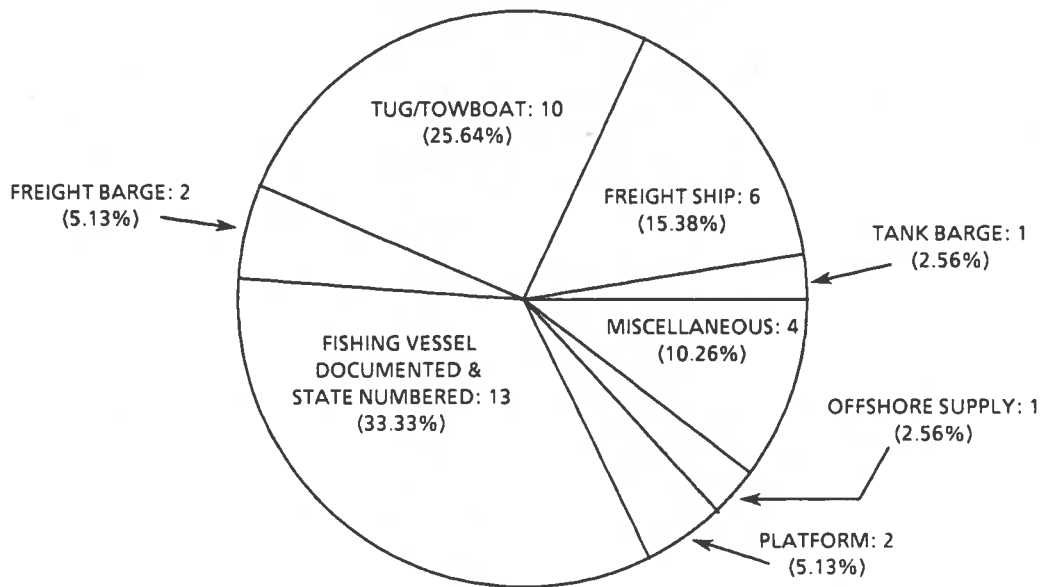
## FATALITIES RESULTING FROM TOTAL LOSS OF U.S. VESSELS, 1984



TOTAL FATALITIES: 43

# CHART 24.

## ACCIDENTAL DEATHS RESULTING FROM FALLS OVERBOARD (NO VESSEL CASUALTY), 1984



TOTAL FATALITIES: 39

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

Data supplied as of 09/11/85



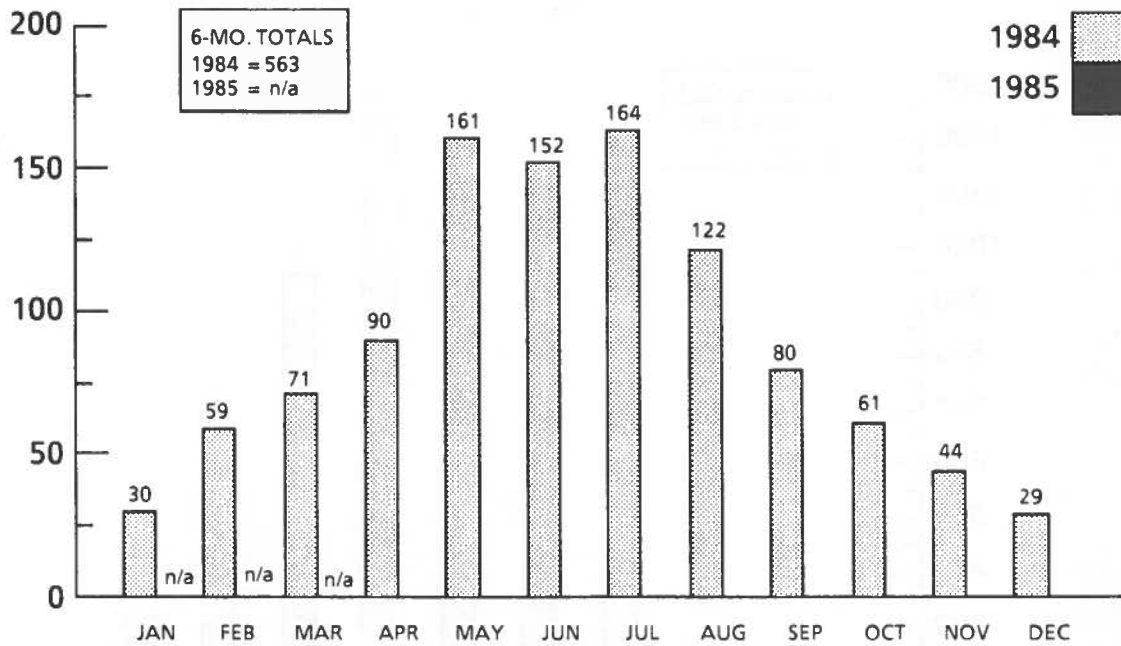
## RECREATIONAL BOATING

The second quarter of 1985 Recreational Boating accident statistics are not complete at this time. Since they are not an accurate portrayal of this quarter's accident experience, they are 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 September 5, 1985, the Coast Guard had received reports of only 2,016 vessels involved in accidents through the second quarter. In 1984, there were 3,065 vessels reported to be in accidents in the first six months. Fatalities are especially slow in being reported because they are usually investigated. Reports of 357 have been received so far, versus 563 in 1984. The comparison of injuries is: 1985 - 587; 1984 - 1,088. If it is assumed that the same number of accidents occurred in the first half of 1985 as occurred in 1984, then only about 63 percent of the fatalities and 70 percent of all accidents have been reported.

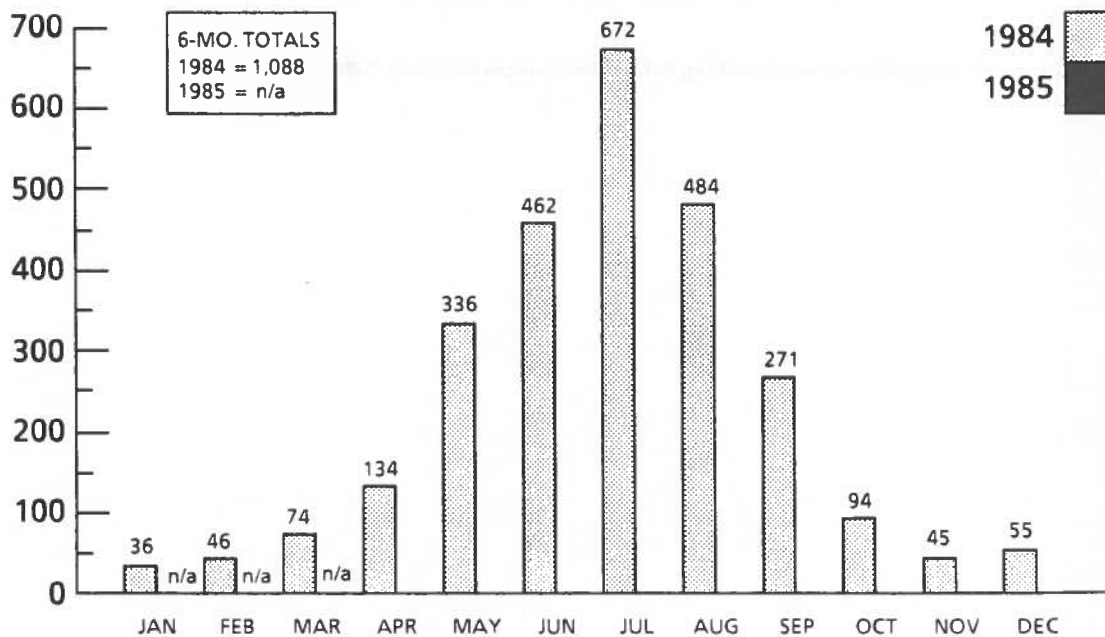
## CHART 25.

### RECREATIONAL BOATING FATALITIES, 1984-1985



## CHART 26.

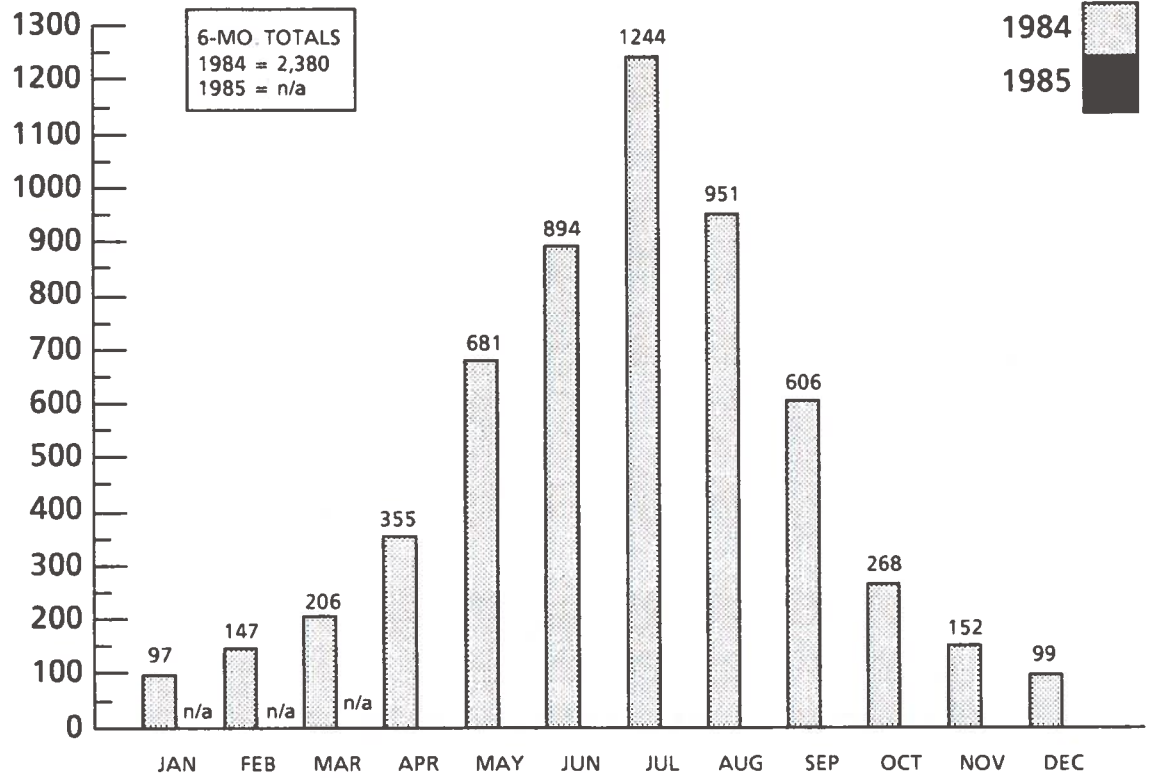
### RECREATIONAL BOATING INJURIES, 1984-1985



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

# CHART 27.

## RECREATIONAL BOATING, REPORTED ACCIDENTS 1984-1985



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

# **MATERIALS TRANSPORT**

## **PIPELINES**

- Fatalities resulting from incidents involving pipelines transporting gas and liquid materials increased significantly in the second quarter of 1985 when compared with fatalities occurring during the same period a year ago, as shown in Table 7.
- The number of gas and liquid pipeline injuries and leaks/failures decreased during this reporting period. Injuries declined from 54 in the second quarter of 1984 to 32 in the same quarter of 1985. Leaks/failures totaled 372 in the second quarter of 1984 compared with 133 in the second quarter of 1985.
- There was no change in the number of gas and liquid pipeline fatalities in the first six months of 1984 and 1985 -- 13 fatalities were reported each year. However, injuries and leaks/failures experienced a significant decrease during this period.

## **HAZARDOUS MATERIALS**

- Hazardous materials fatalities fell from three in the second quarter of 1984 to zero in the second quarter of 1985. The number of fatalities also decreased when the first half of 1984 is compared with the same 1985 period -- from five to three.
- Incidents involving the transportation of hazardous materials declined in the second quarter of 1985 and also the first six months of the same year. There were 1,284 reported incidents in the second quarter of 1985 compared with 1,633 in the corresponding period of 1984. The six-month totals for 1985 and 1984 were 2,693 and 2,982, respectively.
- In the second quarter of 1984 and 1985, major injuries remained constant, with two reported in each quarter, while minor injuries declined from 60 to 56. Six-month major injury totals fell from five in 1984 to two in 1985, and minor injury totals rose from 98 to 121 for the same periods.

## TABLE 7.

### PIPELINE FATALITIES FOR 1985 COMPARED WITH 1984

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
GAS PIPELINE	6	3	4	3	1	0
LIQUID PIPELINE	0	0	0	0	0	0
<b>TOTAL</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>0</b>

	APRIL		MAY		JUNE	
CLASSIFICATION	1984	1985	1984	1985	1984	1985
GAS PIPELINE	2	6	0	0	0	0
LIQUID PIPELINE	0	1	0	0	0	0
<b>TOTAL</b>	<b>2</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1984	1985	% Chg	1984	1985	% Chg
GAS PIPELINE	2	6	+200.0	13	12	-7.7
LIQUID PIPELINE	0	1	[1]	0	1	[1]
<b>TOTAL</b>	<b>2</b>	<b>7</b>	<b>+250.0</b>	<b>13</b>	<b>13</b>	<b>0.0</b>

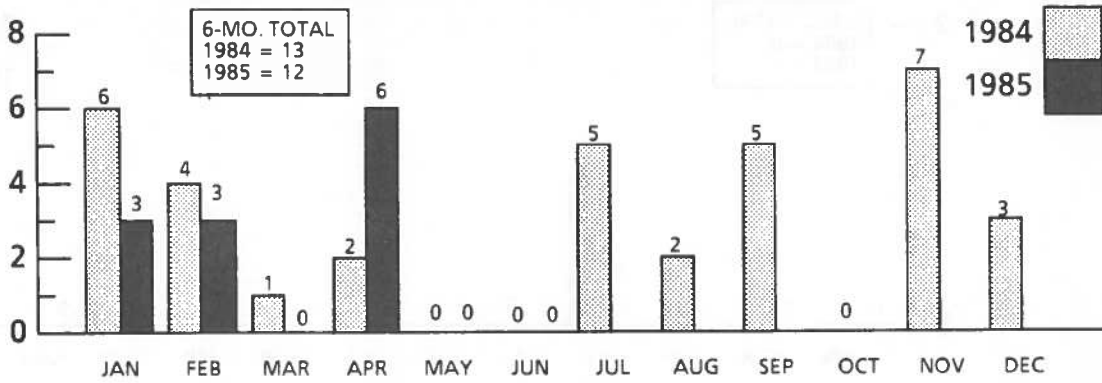
NOTE: 1985 Data are preliminary.  
 Pipeline incidents are credited to the year in which they occurred, not the year in which the report was received.

Data supplied as of 9/23/85

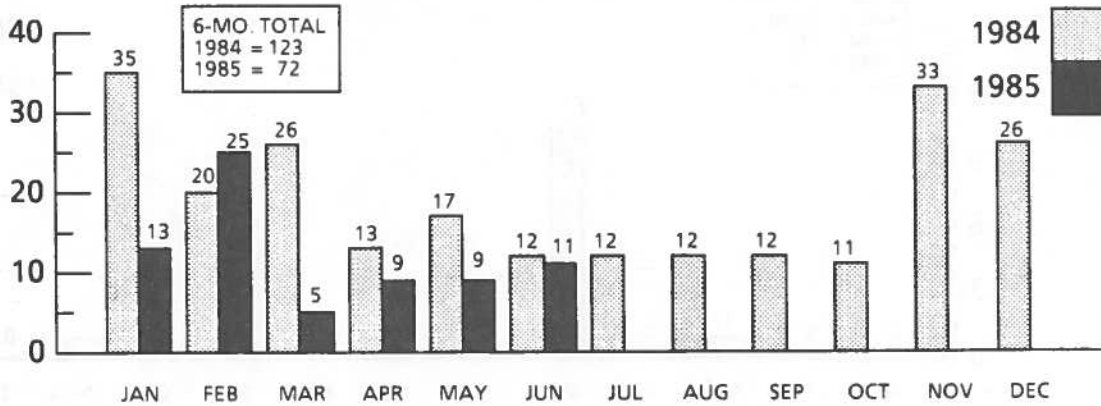
[1] Not calculable.

SOURCE: Gas Pipeline: DOT F7100.1 and F7100.2  
 RSPA, Hazardous Materials Information Systems, DMT-62.

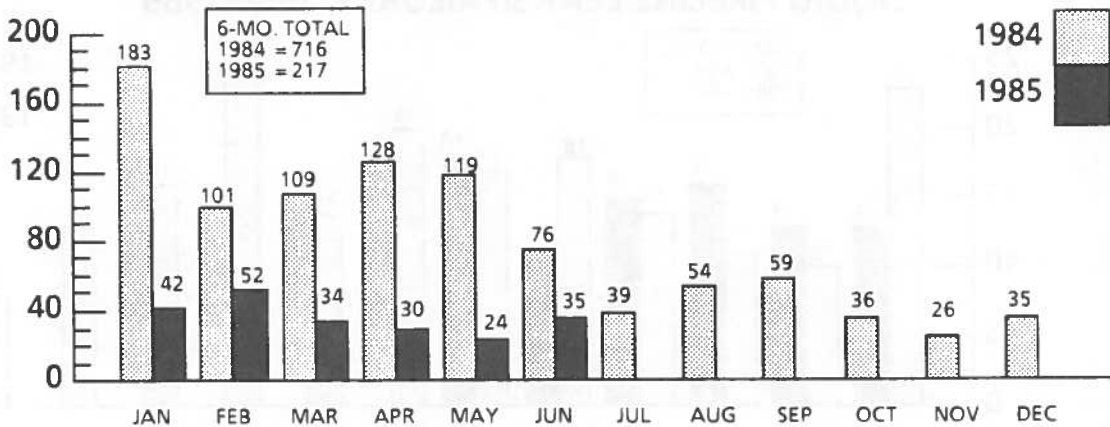
**CHART 28.**  
**GAS PIPELINE FATALITIES, 1984-1985**



**CHART 29.**  
**GAS PIPELINE INJURIES, 1984-1985**



**CHART 30.**  
**GAS PIPELINE LEAKS/FAILURES, 1984-1985**



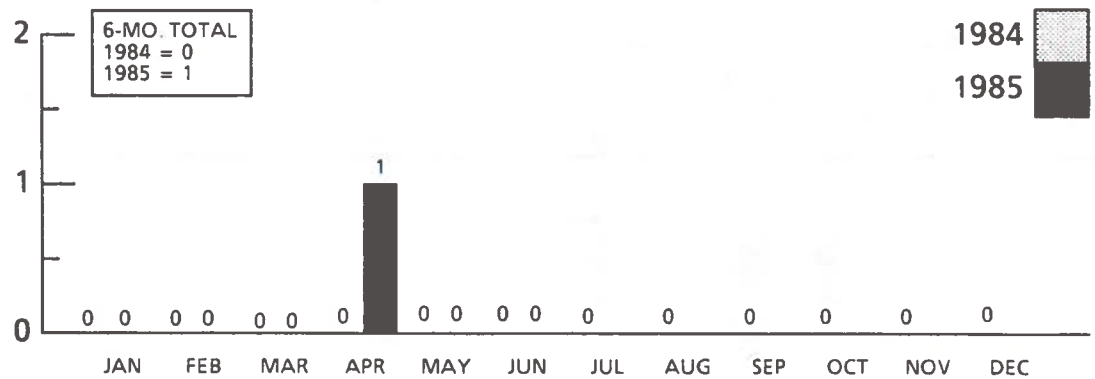
NOTE: 1985 Data are preliminary.  
Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

Data supplied as of 9/23/85

SOURCE: Gas Pipeline: DOT F 7100.1 and F7100.2.  
RSPA, Hazardous Materials Information Systems, DMT-62.

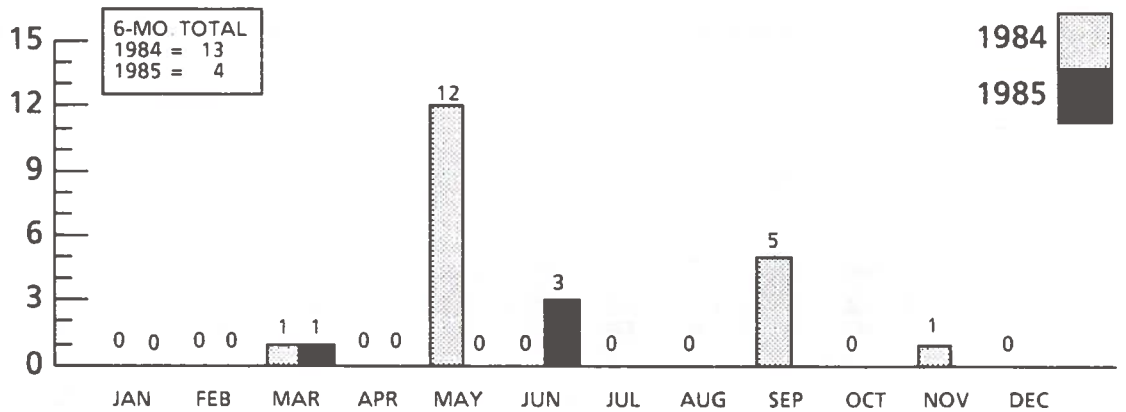
### CHART 31.

#### LIQUID PIPELINE FATALITIES, 1984-1985



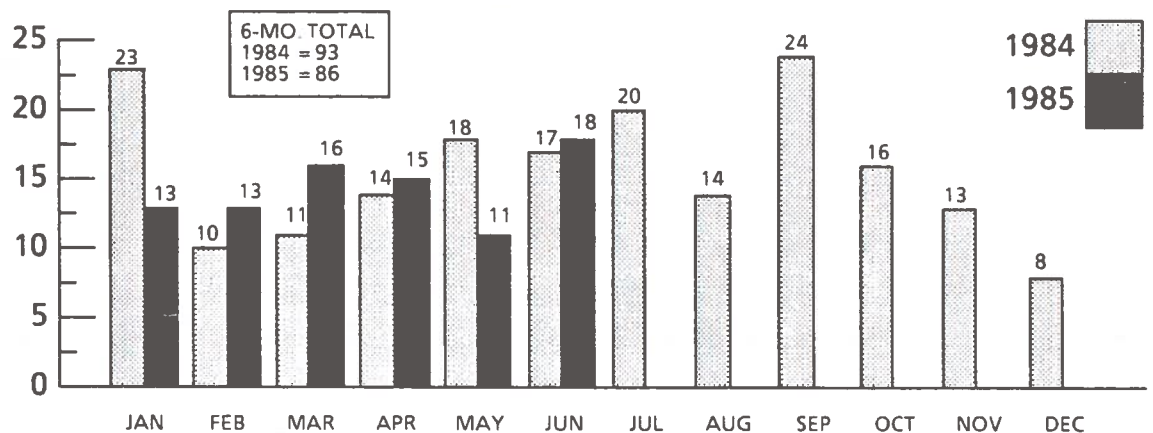
### CHART 32.

#### LIQUID PIPELINE INJURIES, 1984-1985



### CHART 33.

#### LIQUID PIPELINE LEAKS/FAILURES, 1984-1985



NOTE: 1985 Data are preliminary.  
Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

Data supplied as of 9/23/85

SOURCE: Liquid Pipeline: DOT F 7000 0.  
RSPA, Hazardous Materials Information Systems, DMT-62

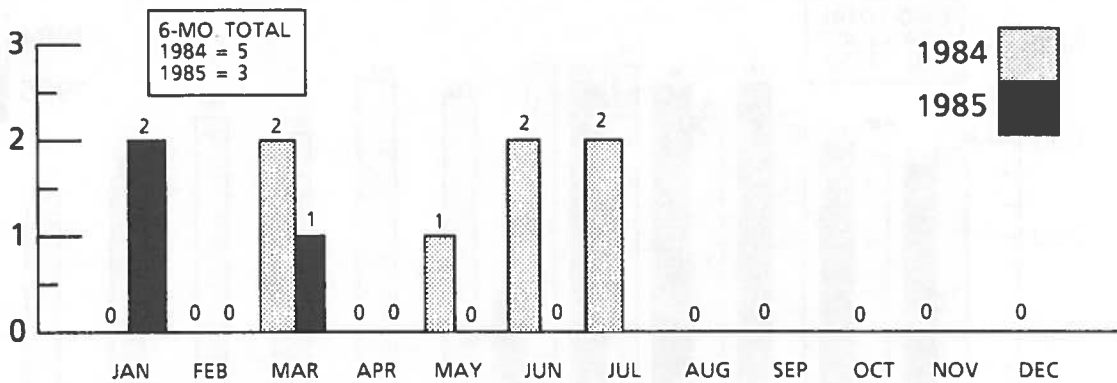
**TABLE 8.**

**HAZARDOUS MATERIALS FATALITIES FOR 1985 COMPARED WITH 1984**

JANUARY		FEBRUARY		MARCH	
1984	1985	1984	1985	1984	1985
0	2	0	0	2	1
APRIL		MAY		JUNE	
1984	1985	1984	1985	1984	1985
0	0	1	0	2	0
SECOND QUARTER			FIRST 6 MONTHS		
1984	1985	% Chg	1984	1985	% Chg
3	0	-100.0	5	3	-40.0

**CHART 34.**

**HAZARDOUS MATERIALS FATALITIES, BY MONTH, 1984-1985**



NOTE: 1985 Data are preliminary.

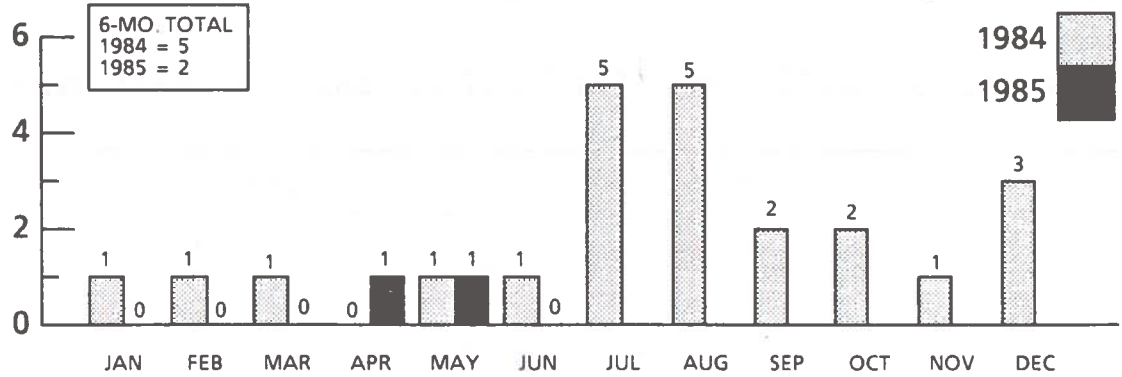
Data supplied as of 10/1/85

SOURCE: RSPA, Hazardous Materials Information Systems, DMT-62.



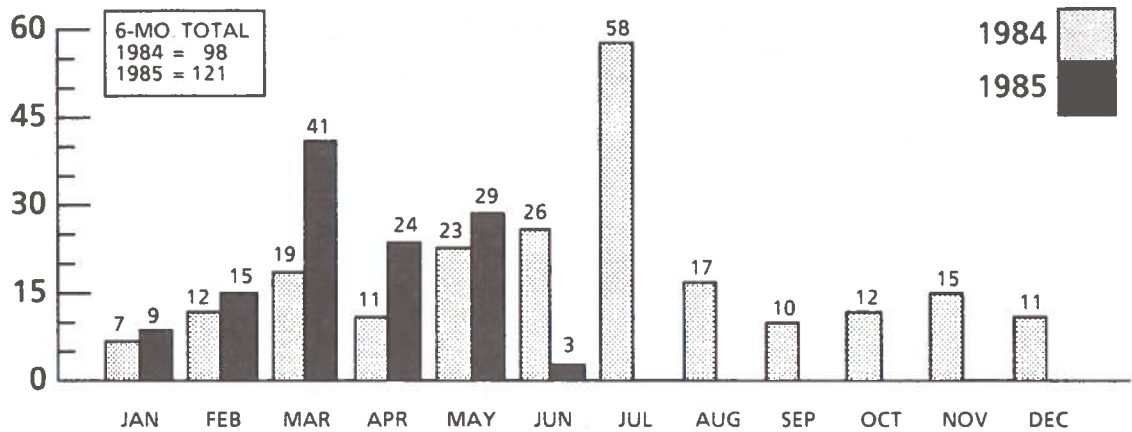
### CHART 35A.

#### HAZARDOUS MATERIALS MAJOR INJURIES\*, 1984-1985



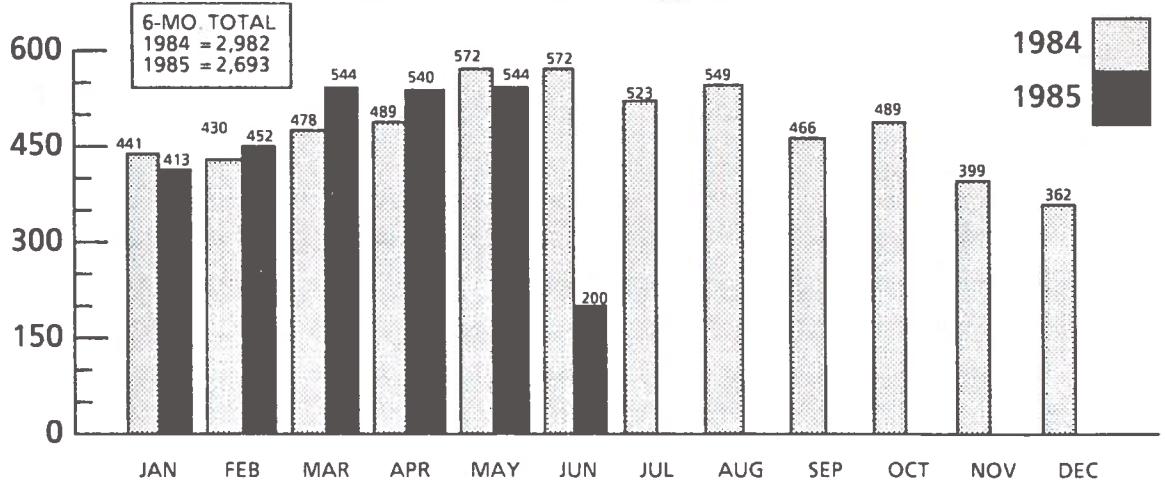
### CHART 35B.

#### HAZARDOUS MATERIALS MINOR INJURIES\*, 1984-1985



### CHART 36.

#### HAZARDOUS MATERIALS INCIDENTS\*\*, 1984-1985



\* See Glossary for definition.

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

NOTE: 1985 Data are preliminary.

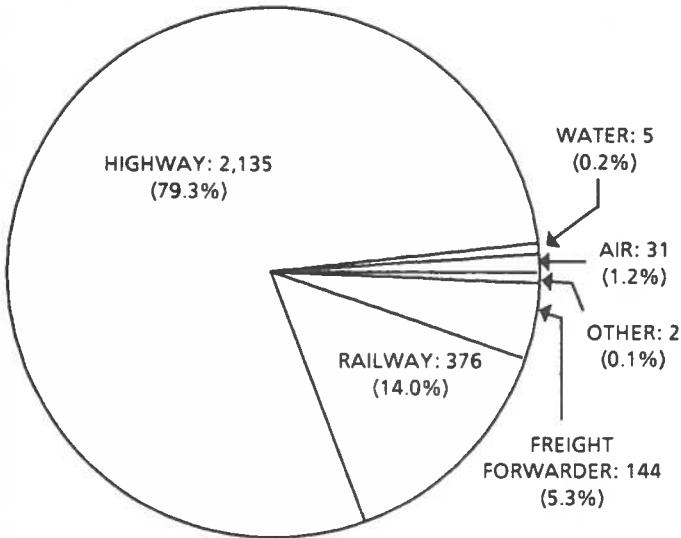
Data supplied as of 10/1/85

SOURCE: RSPA, Hazardous Materials Information Systems, DMT-62.

# CHART 37.

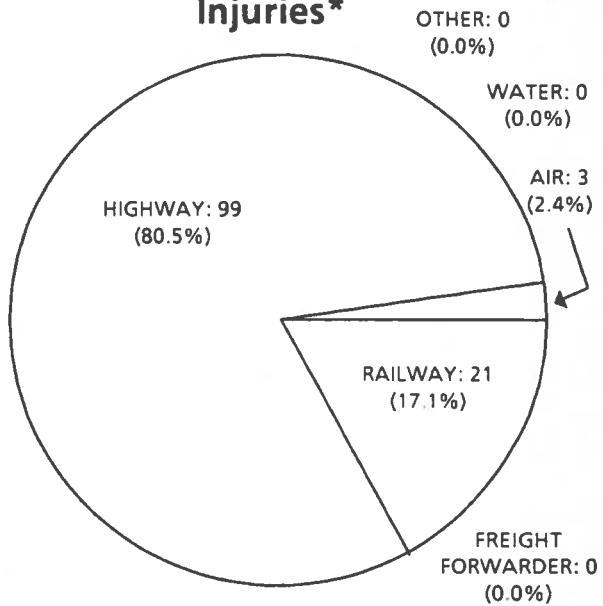
## HAZARDOUS MATERIALS INCIDENTS, INJURIES, DEATHS AND DAMAGES BY MODE, FIRST SIX MONTHS 1985<sup>P</sup>

### Incidents



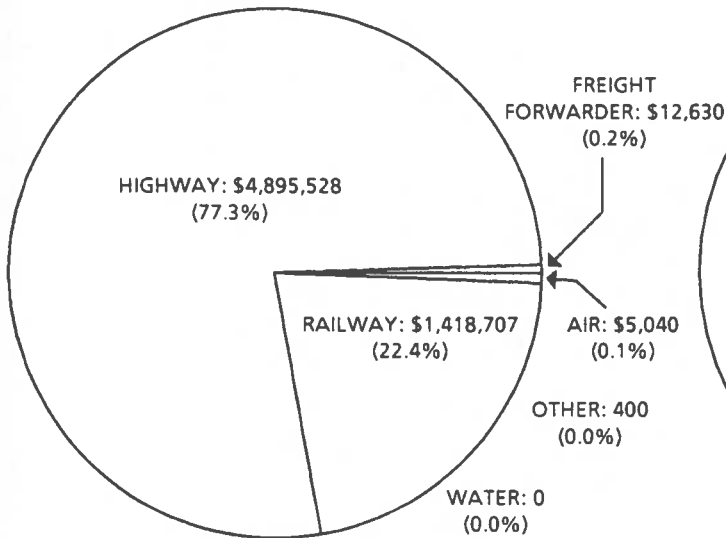
**TOTAL INCIDENTS: 2,693**

### Injuries\*



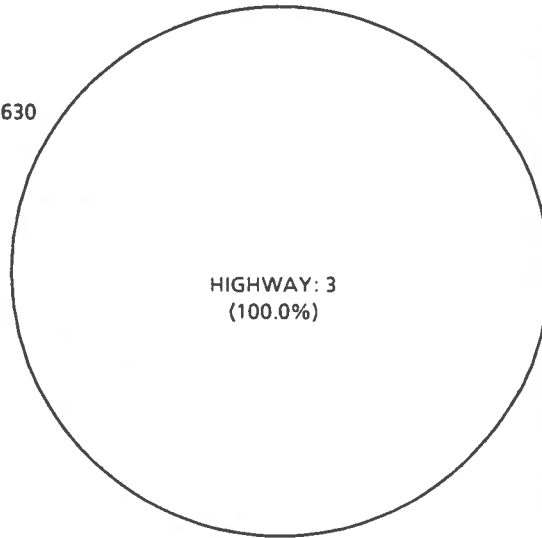
**TOTAL INJURIES: 123**

### Damages



**TOTAL DAMAGES: \$6,332,305**

### Deaths



**TOTAL DEATHS: 3**

<sup>P</sup> = Preliminary.

\* Includes Major and Minor Injuries.

Data supplied as of 10/1/85.

SOURCE: RSPA, Hazardous Materials Information Systems, DMT-62.



# **MAJOR DOT SAFETY REGULATIONS**

**APRIL 1, 1985 - JUNE 30, 1985**

The actions below are 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**

### **33 CFR Parts 146 and 150 -- Casualty Reporting Requirements**

This rule eliminates the costs of salvage, cleaning, gas freeing and drydocking from the marine casualty reporting requirements contained in Title 33, Code of Federal Regulations (CFR). Since the costs of salvage, cleaning, gas freeing and drydocking can vary widely depending on the nature of the casualty, they tend to distort the basis for using a monetary criteria to establish a reporting threshold. This Final Rule will have a negligible effect on the number of reports submitted by the marine industry by reducing the cost of marine casualties for reporting purposes. Effective date: May 13, 1985. (50 FR 14215, April 11, 1985.)

### **33 CFR Part 62 -- Deletion of Loran Description; Change In Blink Procedure**

This rule deletes Subpart 62.40-Loran from Title 33, Code of Federal Regulations (CFR). The informational provisions of this subpart are obsolete and contain no regulatory directives. Of particular note is a recent modification in Signal Warning procedures which diverges from the procedures outlined in § 62.40-15. This change and all future modifications will be more effectively publicized via updates to Coast Guard publications which provide current Loran information to system users. Effective date: May 13, 1985. (50 FR 14213, April 11, 1985.)

### **33 CFR Parts 181 and 183 -- Certification , Safe Loading and Flotation Standards; Correction and Clarification**

The purpose of this document is to clarify the final rule on miscellaneous amendments to the certification, safe loading and flotation standards that appeared on page 39327 in the Federal Register of Friday, October 5, 1984 [49 FR 39327]. Since the effective date of the final rule, the Coast Guard has received questions regarding interpretation of §§ 183.39 and 183.41 of the Safe Loading Standard. This document corrects these sections to clarify the Coast Guard's intent and eliminate possible confusion. (50 FR 18636, May 2, 1985.)

### **46 CFR Parts 30, 151, and 153 -- Safety Rules for Self-Propelled Vessels Carrying Hazardous Liquids**

This amendment revises the rules for self-propelled vessels carrying hazardous liquids. It adds to and revises the lists of cargoes regulated under parts 30, 151, and 153, and includes carriage requirements for these new cargoes. In part 153 it corrects editorial errors, clarifies provisions that are confusing, deletes provisions that are impractical, reduces certain requirements, and adds several new requirements. In general, the changes agree with standards adopted by the International Maritime Organization (IMO), formerly the Intergovernmental Maritime Consultative Organization or IMCO, in the IMO Code for the Construction and Equipment of Ships Carrying Dangerous

Chemicals in Bulk (IMO Chemical Code), Resolution A.212. Effective date: July 22, 1985. (50 FR 21166, May 22, 1985.)

### **33 CFR Part 1 -- Individual Participation in Marine Safety Reporting Program (MSRP); Enforcement Policy**

The rule amends 33 CFR Part 1 (Subpart 1.07) to set forth Coast Guard enforcement policy when an individual participates in the voluntary Marine Safety Reporting Program (MSRP). The Coast Guard will not assess a penalty for a violation involving the navigation and control of a vessel if the individual has reported the incident to MSRP and if certain conditions are met. This policy will provide mariners with added incentive to voluntarily report safety-related incidents to MSRP. Effective date: June 1, 1985. (50 FR 23688, June 5, 1985.)

### **46 CFR Part 5 -- Individual Participation in Marine Safety Reporting Program (MSRP); Enforcement Policy on Suspension and Revocation Proceedings**

This rule amends 46 CFR Part 5 to set forth Coast Guard enforcement policy relating to suspension and revocation proceedings when an individual participates in the voluntary Marine Safety Reporting Program (MSRP). The Coast Guard will not impose any order under this Part which adversely affects a mariner's license, certificate or document if the individual has reported the incident to MSRP and if certain conditions are met. This policy will provide mariners with added incentive to voluntarily report safety-related incidents to MSRP. Effective date: June 1, 1985. (50 FR 23693, June 5, 1985.)

### **46 CFR Part 7 -- Boundary Lines**

The Seagoing Barge Act was revised in 1980 to define a seagoing barge as one that proceeds outside a defined boundary. The purpose of this rulemaking is to establish demarcation lines for the Seagoing Barge Act and more clearly define the existing Boundary Lines which govern the application of various maritime safety statutes. Additionally, the rule consolidates the Boundary Lines where possible. Effective date: July 18, 1985. (50 FR 25229, June 18, 1985.)

### **46 CFR Parts 10 and 157 -- Licensing of Pilots; Manning of Vessels-Pilots**

The Coast Guard is amending the regulations concerning the licensing of pilots and the manning of vessels-pilots. This rule: (1) Establishes the minimum age requirement at 21 years, (2) requires pilots to have an annual physical examination, (3) changes the experience requirement for a tonnage endorsement of "any gross tons", (4) requires pilots to maintain knowledge of the routes on their license, and (5) maintains the authority of the Coast Guard to establish limitations on licenses. This action implements the Port and Tanker Safety Act's amendment to the statute authorizing the Coast Guard to license pilots and conforms the pilot licensing regulations with the statute. This rule also amends the regulations by authorizing masters, mates, or operators to serve as pilots on those non-self-propelled vessels of not more than 10,000 gross tons (not 20,000 gross tons as proposed) carrying cargoes subject to the provisions of 46 U.S.C. 3702 (tank barges). In a separate action, the Coast Guard is proposing several other amendments to the regulations dealing with the licensing of pilots and the manning of vessels (CGD 84-060). They are closely related to matters contained in this rule; however, they are not within the scope of this rule and therefore they require a separate notice of proposed rulemaking. Those proposed amendments concern: (1) The piloting of vessels of more than 50,000 gross tons, (2) the authorization of licensed individuals to serve as pilot on self-propelled vessels up to 1,600 gross tons, (3) a definition of "coastwise seagoing vessel" for pilotage purposes, (4) a definition of "pilotage waters," (5) the requirement for pilots on Great Lakes vessels, and (6) allowing a written test alternative to the chart sketch for a first class pilot's license restricted to tug and barge only. Effective date: July 24, 1985. (50 FR 26106, June 24, 1985.)

## FEDERAL AVIATION ADMINISTRATION

### **14 CFR Part 39 -- Airworthiness Directives; Bell Helicopter Textron, Inc., Model 412 Helicopters**

This amendment adopts a new airworthiness directive (AD) which requires a repetitive inspection or replacement of certain main rotor pitch horns on certain Bell Helicopter Textron, Inc., Model 412 helicopters certified in all categories. This AD is needed to prevent possible corrosion fatigue failure of the pitch horn assembly which would result in the loss of blade pitch control and possible loss of the aircraft. Effective date: April 10, 1985. (50 FR 12775, April 1, 1985.)

### **14 CFR Part 39 -- Airworthiness Directives; Lockheed-California Company Model L-1011 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires the modification of the bleed air duct overheat sensor system and structure in the Mid-Electrical Service Center (MESC) area of Lockheed Model L-1011 series airplanes. This action is prompted by reports of clamp and duct failures in the vicinity of the MESC area during flight. This condition could result in total loss of electrical power and, as a consequence, would result in the loss of communications, flight instruments, control systems, and environmental systems. Effective date: May 9, 1985. (50 FR 13014, April 2, 1985.)

### **14 CFR Part 39 -- Airworthiness Directives; McDonnell Douglas Model DC-9 Series Airplanes**

This document amends an existing airworthiness directive (AD) which requires inspections of the fuselage lower skin in the immediate area surrounding the VHF antenna, on certain McDonnell Douglas DC-9 series airplanes. This amendment reduces the threshold to 2,000 landings. This amendment is prompted by a report of a 15-inch crack in the skin adjacent to the mounting holes for the VHF antenna on an airplane with 5,450 landings. If allowed to go undetected, this type of crack could result in rapid depressurization of the airplane. Effective date: April 15, 1985. (50 FR 13015, April 2, 1985.)

### **14 CFR Part 39 -- Airworthiness Directives; Douglas Aircraft Company A-26/B-26 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 Douglas Aircraft Company A-26/B-26 series airplanes by individual letters. The AD requires the inspection of the lower forward and aft wing spar cap, inboard and outboard of the engine nacelle. The AD is prompted by a report of loss of structural integrity of the wing spar cap, which subsequently led to wing failure and loss of the airplane. Effective date: April 16, 1985. (50 FR 13549, April 5, 1985.)

### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 757 Series Airplanes**

This amendment adds a new airworthiness directive that requires replacement of the existing forward and aft cargo compartment blowout panels with new panels incorporating an improved retention system. The cargo compartment blowout panels are designed to blow out in case of a decompression in order to minimize the differential pressure on floor panels. Operators have reported blowout panels becoming dislodged. Missing blowout panels reduce fire containment and fire suppression capability of the cargo compartment. Effective date: May 13, 1985. (50 FR 13552, April 5, 1985.)

#### **14 CFR Parts 61, 63, 65, and 91 -- Use of Alcohol or Drugs**

These amendments establish rules governing the use of alcohol or drugs by any crewmember assigned to perform duty during the operation of an aircraft. In addition to maintaining current provisions regarding the use of alcohol or drugs before serving as a crewmember, it delineates the maximum allowable blood alcohol content level. Crewmembers also will be required to furnish the Administrator with the results of any test that is performed that may indicate the percentage of alcohol in the blood or the presence of drugs in the body when such tests have been taken within 4 hours after acting or attempting to act as a crewmember. Failure to furnish or authorize the release of the results of these tests will result in certificate action or other sanctions. These rules are based, in part, on a National Transportation Safety Board determination that alcohol is a cause or factor in about 40 aircraft accidents annually, almost all of which are fatal. These amendments are intended to facilitate enforcement of the present drug and alcohol regulations and to reduce aircraft accidents and incidents attributable to consumption of alcoholic beverages and the use of drugs. For this same purpose, the FAA is proposing elsewhere in this issue of the Federal Register to require crewmembers to submit to tests for alcohol given by law enforcement officers under certain circumstances. Effective date: June 17, 1985. (50 FR 15376, April 17, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Teledyne Continental Motors IO-470 and 0-470 Series Engines**

This amendment adopts a new airworthiness directive (AD) which requires an inspection for cylinder assemblies with P/Ns 646680A4 and 646680A5 and replacement of exhaust valve P/N 626540 with P/N 637781 in these assemblies. These cylinder assemblies were installed on certain Teledyne Continental Motors (TCM) new and rebuilt IO-470 and 0-470 series engines and sold over the counter in the aftermarket. The AD is needed to prevent possible wear and seizure of the exhaust valve stem caused by incompatible materials and insufficient clearance between the valve stem and its valve guide which, if left uncorrected, could result in total loss of engine power. Effective date: April 15, 1985. (50 FR 15098, April 17, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 707 and 720 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires inspection of the wing front spar upper chord of Boeing Model 707 and 720 airplanes. This action is promoted by a recent report of a 46-inch crack. The chords are subject to cracks, which if undetected will propagate to the point where fail-safe load cannot be supported. Effective date: May 8, 1985. (50 FR 16465, April 26, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Lockheed-California Company Model L-1011 Series Airplanes Equipped with Rolls Royce RB211-22B Engines**

This amendment adopts a new airworthiness directive (AD) which requires an interim revision to the FAA approved Airplane Flight Manual (AFM) on Lockheed L-1011 series airplanes equipped with RB211-22B engines. This action is prompted by a recent incident of an undetected fire which originated within the gearbox. The accessory gearbox is located at the front bottom outer surface of the engine fan case inside the engine fan case fire zone. Until appropriate corrective actions/modifications are provided by the manufacturer, the AFM revision is required to minimize and contain the potential fire hazard caused by heat damage to the flex fuel feed line from an undetected gearbox fire. Effective date: May 20, 1985. (50 FR 18853, May 3, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 767-200 Series Airplanes**

This amendment adds a new airworthiness directive (AD) applicable to Boeing Model 767-200 airplanes. The AD requires replacement of the horizontal stabilizer inner pivot pins with improved inner pivot pins, and inspection of the horizontal stabilizer outer pivot pins for cracks. This action is prompted by the discovery that a number of these parts were improperly manufactured. The failure of one pin on the major fatigue test article for the Model 767 was attributed to improper manufacture. The failure of an inner and outer pin at the same joint would compromise the structural integrity of the horizontal stabilizer support structure and could ultimately result in loss of airplane control. Effective date: May 20, 1985. (50 FR 18854, May 3, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 747 Series Airplanes**

This amendment amends an existing airworthiness directive (AD) which requires inspection and replacement, as required, of the engine pylon and spar attach bolts (fuse pins) on certain Boeing Model 747 airplanes. This amendment eliminates the reporting requirements specified in the existing AD because they are no longer necessary and, in addition, corrects an error in the Service Bulletin reference. Effective date: June 4, 1985. (50 FR 18855, May 3, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Allison Gas Turbine Division, General Motors Corp., Allison Model 250-C30 and -C30S Engines**

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 by individual telegrams to all known U.S. owners and operators of certain Allison Model 250-C30 and C30S engines installed in Sikorsky Model S-76A helicopters. The AD requires replacement of the two P/N 23001915 magnetic plugs installed in the power and accessory gearboxes with two P/N 6871534 magnetic plugs within the next 50 hours time in service, but not later than May 15, 1985. The AD is needed to prevent undetected bearing wear progressing to a point where an engine inflight shutdown or turbine rotor damage could occur. Effective date: May 10, 1985. (50 FR 19667, May 10, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; McDonnell Douglas Model DC-10 and KC-10A Series Airplanes, Fuselage Numbers 1 Through 370**

This amendment adds a new airworthiness directive (AD) which requires replacement of the aluminum rivet in the speedbrake module gate assembly with a corrosion-resistant steel rivet. This action is prompted by report of failures of the aluminum rivet in the speedbrake module assembly. This amendment is necessary to prevent failure of the aluminum rivet, which could allow the spoiler handle to latch in the full speedbrake position during an aborted landing or "touch and go" landing situation. With the spoilers in this position and the flaps at 22° or greater, the airplane cannot attain a pitch angle which will permit flight. Effective date: June 24, 1985. (50 FR 20198, May 15, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Cessna Models 206, P206, U206, 207 and 210 Airplanes**

This amendment adopts a new Airworthiness Directive (AD), applicable to certain Cessna Models 206, P206, U206, 207 and 210 Airplanes, which require inspection, repair and/or modification of the engine induction airbox installation. Loss of engine power has resulted from pieces of the lower forward induction airbox separating from the bottom of the duct and being ingested by the engine. This action will preclude engine power loss caused by induction airbox failures. Effective date: June 20, 1985. (50 FR 20403, May 16, 1985.)



**14 CFR Part 39 -- Airworthiness Directives; Boeing Model 757 Series Airplanes Equipped With Certain Air Cruisers Slides**

This amendment adds a new airworthiness directive (AD) which requires inspection and replacement, as necessary, of certain Air Cruisers evacuation slides installed on Boeing Model 757 airplanes. This AD is prompted by reports of excessive slide fabric porosity, which results in leakage. Excessive leakage of the evacuation slide could result in an unusable slide and jeopardize successful emergency evacuation of an airplane. Effective date: June 28, 1985. (50 FR 20895, May 21, 1985.)

**14 CFR Part 39 -- Airworthiness Directives; Beech Models 58P and 58PA Airplanes**

This amendment adopts a new Airworthiness Directive (AD), applicable to certain Beech Models 58P and 58PA airplanes, which temporarily prohibits the use of seat numbers five and six during takeoff and landing and requires modification of the floorboard attachments of these seats. The manufacturer has reported that a key part of these attachments was not installed during manufacture of the affected airplanes. The actions required by this AD will preclude the possibility of seat failure during a minor crash landing. Effective date: July 1, 1985. (50 FR 21584, May 28, 1985.)

**14 CFR Part 39 -- Airworthiness Directive; British Aerospace Model BAC 1-11 200 and 400 Series Airplanes**

This amendment adds a new airworthiness directive (AD) applicable to British Aerospace Model BAC 1-11 200 and 400 series airplanes which requires repetitive inspections and repairs, if necessary, of the tailplane center section top skin assembly for cracks in the reinforcing plate. Cracks have been reported in the reinforcing plate on high flight time airplanes. Uncontrolled propagation of these cracks could lead to structural failure of the horizontal stabilizer. Effective date: July 5, 1985. (50 FR 21585, May 28, 1985.)

**14 CFR Part 39 -- Airworthiness Directives; DeHavilland Model DHC-3 airplanes**

This amendment adds a new Airworthiness Directive (AD), applicable to DeHavilland Model DHC-3 airplanes. It requires initial and repetitive inspections or modifications to ensure security of the seat to the rail. Inspection findings indicate that the seat legs may be dislodged from the mounting rails during normal usage. The inspections and modifications will eliminate hazards to seat occupants resulting from an inadequately restrained seat during a crash. Effective date: June 3, 1985. (50 FR 21587, May 28, 1985.)

**14 CFR Part 39 -- Airworthiness Directives; Garrett Turbine Engine Co. Model ATF3-6-2C Turbofan Engines**

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 to all known U.S. owners and operators of certain Garrett Turbine Engine Company (GTEC) ATF3-6-2C turbofan engines by individual telegrams. The AD requires an initial and interim inspection as well as eventual modification of certain exhaust deflector liner and seal assemblies to assure that they are not loose and have not make contact with the turbine rotor. The AD is needed to prevent the detachment of the exhaust splitter labyrinth seal which could result in an uncontained engine failure. Effective date: June 24, 1985. (50 FR 23108, May 31, 1985.)

**14 CFR Part 39 -- Airworthiness Directives; Rolls-Royce Limited RB 211-22B and -524 Series Turbofan Engines**

This amendment adopts a new airworthiness directive (AD) which requires modification of the low pressure rotor location bearing area on Rolls-Royce RB211-22B and RB211-524 series turbofan

engines in accordance with Rolls-Royce Mandatory Service Bulletin (SB) RB211-72-6847. The AD is needed to prevent possible internal oil fires caused by low pressure rotor location bearing failures which could result in an uncontained engine failure. Effective date July 23, 1985. (50 FR 23109, May 31, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; British Aerospace Model BAe-146 Series Airplanes**

On March 15, 1985, the FAA issued telegraphic Airworthiness Directive T85-05-51, effective upon receipt, to all known U.S. operators of British Aerospace Model BAe-146 airplanes. The airworthiness directive (AD) required an inspection for fuel leakage into the passenger cabin from the center fuel tank and limits the amount of fuel allowed in that tank. On March 22, 1985, AD T85-05-51 was revised, as a result of further investigation, to require the center fuel tank to be drained and the airplane not dispatched with center tank fuel until a specified modification is incorporated. This action was prompted by reports of center tank fuel leaking into the passenger cabin. This action publishes telegraphic AD T85-05-51 R1. Effective date: June 24, 1985. (50 FR 23396, June 4, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; British Aerospace (BAe) Viscount Model 700 Series and 800 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires inspection, replacement, and modification, as necessary, of certain components on British Aerospace, Aircraft Group, Viscount airplanes, to detect and prevent certain unsafe conditions. These conditions relate to components of the main undercarriage, and wing trailing edge member spar and liner assemblies. This action is taken to preclude failure of these components. Effective date: July 15, 1985. (50 FR 23939, June 7, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 757-200 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires inspection of the lavatory drain ducts of the Boeing 757 series airplanes. This action is prompted by a reported wire bundle fire caused by leaking waste liquids contaminating damaged electrical wiring. Failure to correct these problems could result in additional wire bundle fires. Effective date: June 28, 1985. (50 FR 24187, June 10, 1985.)

#### **14 CFR Parts 108 and 129 -- Use of X-Ray Systems**

This amendment revises the language of signs required to be posted in a conspicuous place that notify passengers that an X-ray system is being used to inspect carry-on baggage in accordance with required security programs. It also adopts a new standard for testing the effectiveness of these X-ray systems. A more realistic standard will result with the adoption of the revisions, one that will enhance overall security by requiring the X-ray systems to comply with a more realistic imaging standard and at the same time protect film and photographic materials. Effective date: July 22, 1985. (50 FR 25654, June 20, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 747 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires inspection for cracks in the area of the inboard elevator control rods, inboard elevator Power Control Package (PCP) input rods, and elevator aft quadrant tube on all Model 747 series airplanes. This action is prompted by the recent finding of 12 cracked rods. An undetected crack could result in loss of redundancy in the elevator control. Effective date: July 28, 1985. (50 FR 25545, June 20, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 767 Series Airplanes**

This amendment adds a new airworthiness directive that requires the modification of wiring for the aft equipment/lavatory/galley ventilation fans and the air conditioning pack flow control on certain Boeing Model 767 airplanes. This action is necessary because, in the event of a fire in the aft cargo compartment, the airplane systems as presently configured allow the fire extinguishing agent concentration to drop to a level which may not prevent a smoldering fire from rekindling. Effective date: July 28, 1985. (50 FR 25546, June 20, 1985.)

#### **14 CFR Part 39 -- Airworthiness Directives; Boeing Model 707/720 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires structural inspections and repairs or replacement, as necessary, on certain high time Boeing Model 707/720 series airplanes to assure continued airworthiness. This AD is prompted by the increased incidence of fatigue cracks on these airplanes as they approach or exceed the manufacturer's original design life goal. A structural reevaluation has identified certain significant structural components in which cracks, if allowed to grow undetected, would result in loss of structural integrity. Effective date: July 5, 1985. (50 FR 26690, June 28, 1985.)

## **NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION**

#### **49 CFR Part 571 -- Child Restraint Systems for Use in Motor Vehicles and Aircraft**

This rule amends the inversion test added Standard No. 213, *Child Restraint Systems*, to allow those manufacturers which choose to do so to certify their restraints for use in both motor vehicles and aircraft. These amendments specify more objective criteria for the testing procedures and determining compliance with the inversion tests. This rule adopts what was proposed, except that the rate of acceleration and deceleration at the start and finish of the test is now specified. The rule also specifically allows manufacturers the option of using any of the specified aircraft seats and safety belts. In addition, several typographical errors have been corrected. Effective date: April 17, 1985. (50 FR 15154, April 17, 1985.)

#### **49 CFR Part 571 -- Federal Motor Vehicle Safety Standards; Lamps, Reflective Devices, and Associated Equipment**

This notice amends Safety Standard No. 108 to allow motor vehicles to be equipped with replaceable bulb headlamp systems consisting of either four lamps with single standardized replaceable light sources, or two lamps each with two such light sources. Currently Standard No. 108 permits replaceable bulb systems only if they are comprised of two lamps with single standardized light sources. The amendment relieves the current replaceable bulb headlamp design restriction that allows only two-lamp single-light source systems.

Notice of the proposed amendment was published on December 7, 1984, and an opportunity afforded for comment (49 FR 47880). The proposal implemented the agency's grant of a petition for rulemaking by General Motors Corporation. It also responded to a petition by Volkswagen of America previously denied. Effective date: May 22, 1985. (50 FR 21052, May 22, 1985.)

#### **49 CFR Part 571 -- Lamps, Reflective Devices and Associated Equipment; Correction and Clarification**

This notice corrects an error in the amendment published on November 26, 1984 (49 FR 46386) relating to lamps, reflective devices and associated equipment. The error appears in Figure 1b. It is therefore necessary to correct the error. The maximum allowable value for parking lamp candle power was omitted. Clarifications of Figure 1b are also provided. (50 FR 21619, May 28, 1985.)

#### **49 CFR Part 571 -- Federal Motor Vehicle Safety Standards Controls and Displays**

This notice responds to three petitions for reconsideration and two related petitions for rulemaking concerning an amendment to Standard No. 101, *Controls and Displays*, published in July 1984 (49 FR 30191). That notice amended several of the identification requirements of the standard for the purposes of improving safety by providing for the use of the easily recognizable international symbols and relieving unnecessary restrictions on manufacturers by providing additional flexibility in their ability to identify controls and displays. In response to one of the petitions, the agency has eliminated a requirement that the horn control symbol be perceptually upright. In response to another petition, the agency is permitting use of the words "FASTEN BELTS" or "FASTEN SEAT BELTS" as an alternative to the seat belt warning symbol in informational readout displays. A conforming amendment is being made to Standard No. 208, *Occupant Crash Protection*. The petitions are otherwise denied. However, in the near future, the agency plans to publish a separate notice of proposed rulemaking which will fully address the issue of the use of telltales in informational readout displays, one of the major issues raised by one of the petitions for reconsideration. Effective date: June 4, 1985. (50 FR 23427, June 4, 1985.)

#### **49 CFR Part 571 -- Lamps, Reflective Devices, and Associated Equipment; Clarifications**

This notice clarifies the final rule published on November 26, 1984 (49 FR 46386), relating to lamps, reflective devices, and associated equipment through non-substantive amendments to paragraph S4.1.1.11 and Figure 1a. Effective date: June 6, 1985. (50 FR 23813, June 6, 1985.)

#### **49 CFR Part 572 -- Anthropomorphic Test Dummies**

This document amends the regulation concerning the National Highway Traffic Safety Administration's specifications for anthropomorphic test dummies by revising sections that state where copies of the test dummy drawings may be obtained. It also amends the regulation to indicate the Director of the Federal Register has approved the incorporations by reference included in Part 572. Effective date: June 19, 1985. (50 FR 25423, June 19, 1985.)

### **Research and Special Programs Administration**

#### **49 CFR Part 192 -- Transportation of Natural and Other Gas by Pipeline; Ovality of Field Bends in Steel Pipe**

This amendment removes the ovality limitation requirement of 2½ percent of the nominal diameter for a field bend made in steel pipe during construction of transmission lines and mains. This limitation was operational in origin (i.e., to permit the passage of internal "pigging" devices) and has been found to be redundant because of other performance requirements that each bend have a smooth contour, be free of mechanical damage, and must not impair the serviceability of the pipe. Experience has also shown that the rule was unnecessary for safety. Effective date: May 3, 1985. (50 FR 13224, April 3, 1985.)

#### **49 CFR Part 195 -- Transportation of Hazardous Liquids by Pipeline; Regulation of Intrastate Pipelines**

The existing Federal safety standards for pipelines transporting hazardous liquids apply to pipelines operating in interstate or foreign commerce. This final rule extends the applicability of these standards to include pipelines transporting hazardous liquids that affect interstate or foreign commerce, sometimes called intrastate pipelines. The Hazardous Liquid Pipeline Safety Act of 1979 (HLPESA) requires this action to provide for consistent State regulation of risks associated with intrastate transportation of hazardous liquids. Effective date: October 21, 1985. (50 FR 15895, April 23, 1985.)

#### **49 CFR Part 107 -- Designation of Testing Agencies; United Nations Packagings; Correction**

This document corrects an error of omission found under §107.402(b)(4) of a final rule published under Docket HM-194 (50 FR 10060), which amended the Hazardous Materials Regulations (49 CFR Part 107) by establishing requirements that designate third-party packaging testing agencies, for the purpose of certifying the conformance of United States (U.S.) export packaging designs with the United Nations (U.N.) standards. The final rule under HM-194 has an effective date of July 1, 1985. Effective date: July 1, 1985. (50 FR 16089, April 24, 1985.)

#### **49 CFR Parts 173 and 175 -- Exceptions for Specified Quantities of Radioactive Materials**

The Materials Transportation Bureau (MTB) is renewing for two years the exceptions (statutory exemptions) for specified quantities of radioactive materials found in 49 CFR 173.4, 173.4, 173.421-1 and 173.421-2. These exceptions permit the continued transportation by passenger-carrying aircraft of certain quantities of radioactive material under the existing restrictions. These materials do not present a significant hazard to passengers or crew on an aircraft. This action is necessary on an emergency basis because the existing exceptions will expire on May 3, 1985. Under the provisions of section 553 of the Administrative Procedure Act agencies are permitted to issue a rule in final form when notice and public procedure are impracticable, unnecessary, or contrary to the public interest. This emergency final rule, entitled "Exceptions for Specified Quantities of Radioactive Materials", has been determined not to be a major rule. Its effect will permit the continued transportation by passenger-carrying aircraft of certain quantities of radioactive materials. Delay in the renewal of these provisions would be contrary to the public interest because the limits imposed on the transport of these materials via passenger-carrying aircraft would have an adverse effect on the nuclear industry, and would disrupt routine and ongoing shipments which have been made safely for 10 years under the previous exceptions. Continuation of the exceptions will have a negligible environmental impact and will not impose any additional costs on shippers, carriers or consumers. Effective date: May 2, 1985. (50 FR 18667, May 2, 1985.)

#### **49 CFR Part 173 -- Exceptions for Specified Quantities of Radioactive Materials; Correction**

This document corrects an emergency final rule published in the Federal Register on May 2, 1985, under the Docket No. HM-149D (50 FR 18667). The emergency final rule published under HM-149D renewed for two years the exceptions (statutory exemptions) for specified quantities of radioactive material found in 49 CFR 173.4, 173.421-1 and 173.421-2. The effective dates of the exceptions found in these sections were extended until May 2, 1987. The emergency final rule also revised the language contained in §§ 173.448(f) and 175.700(c). This action is necessary to correct an inadvertent editorial change that was made to § 173.448(f) of that document because the change as published would have prohibited the transportation by passenger-carrying aircraft of radioactive materials which the rule change was intended to authorize. (50 FR 21051, May 22, 1985.)

**49 CFR Part 173 -- Tritium and Carbon-14; Low Specific Activity Radioactive Materials Transported for Disposal or Recovery**

The Materials Transportation Bureau (MTB) is amending § 173.425 of the Hazardous Materials Regulations (HMR) to except certain low specific activity radioactive materials containing tritium (hydrogen-3) or carbon-14 from most requirements of the HMR when the materials are being transported for disposal or reclamation. This amendment allows the shipment of waste materials such as scintillation counting media, animal carcasses and tissue containing not more than 0.05 microcuries per gram (1.9 megabecquerels per kilogram) of tritium or carbon-14 without further consideration of their radioactive hazards. This action is consistent with the Nuclear Regulatory Commission (NRC) provisions specified in new section 20.306, Title 10, Code of Federal Regulations relating to the disposal by NRC licensees of tritium and carbon-14 low specific activity radioactive materials. Effective date: August 1, 1985. (50 FR 23811, June 6, 1985.)



# 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.

**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 a leak requiring immediate repair or other emergency action.

**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. Rail transit train derailments which result in \$5,000 or greater property damage.

### **C. Fires/Explosions**

1. Fires/explosions which involve the participation of the local fire department in the fire fighting, and/or which cause the evacuation of passengers onto the system right-of-way.

### **D. Exclusions**

1. Accidents (collisions, derailments or fires/explosions) occurring in yards and non-revenue service areas which do not involve revenue trains; accidents (collisions, derailments or fires/explosions) 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.

## **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.

