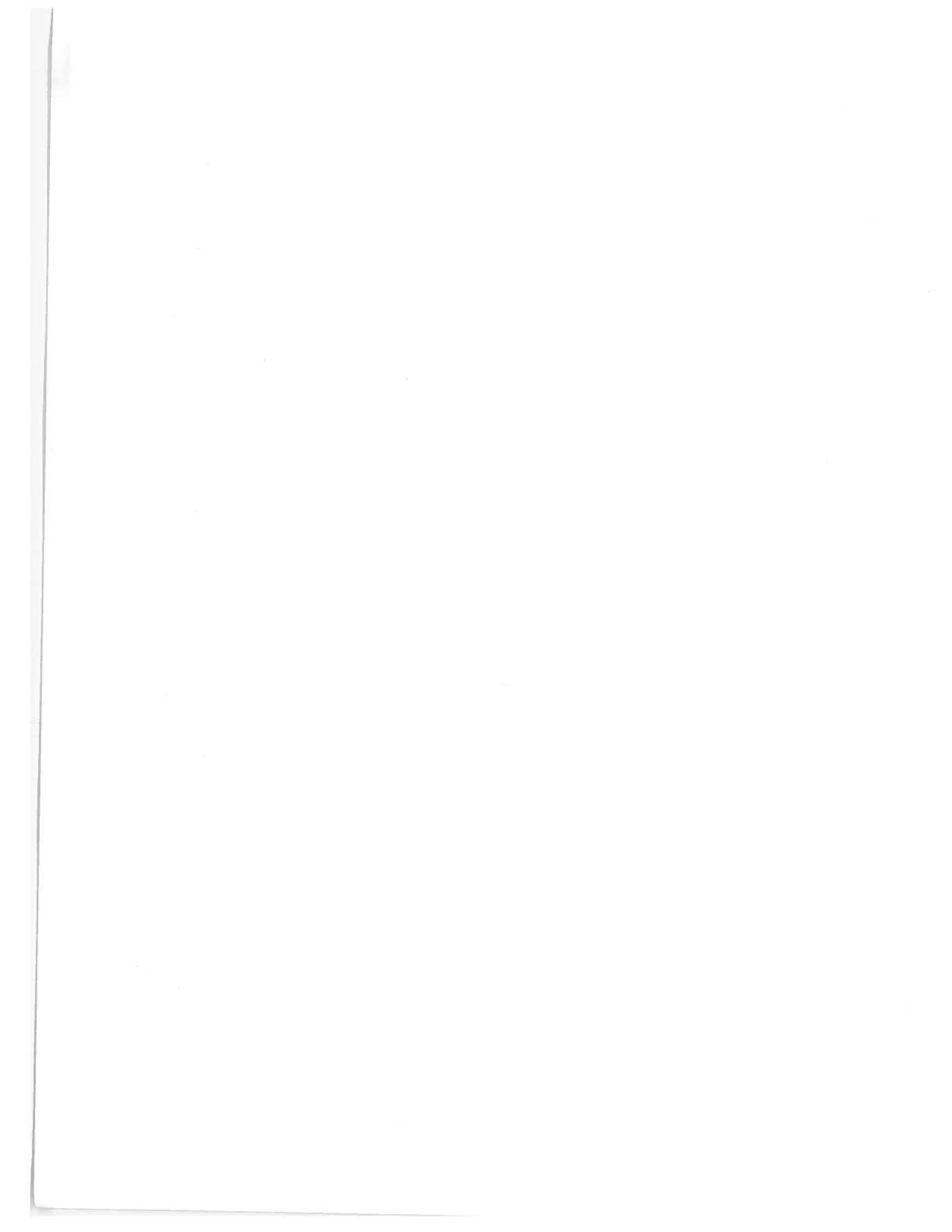


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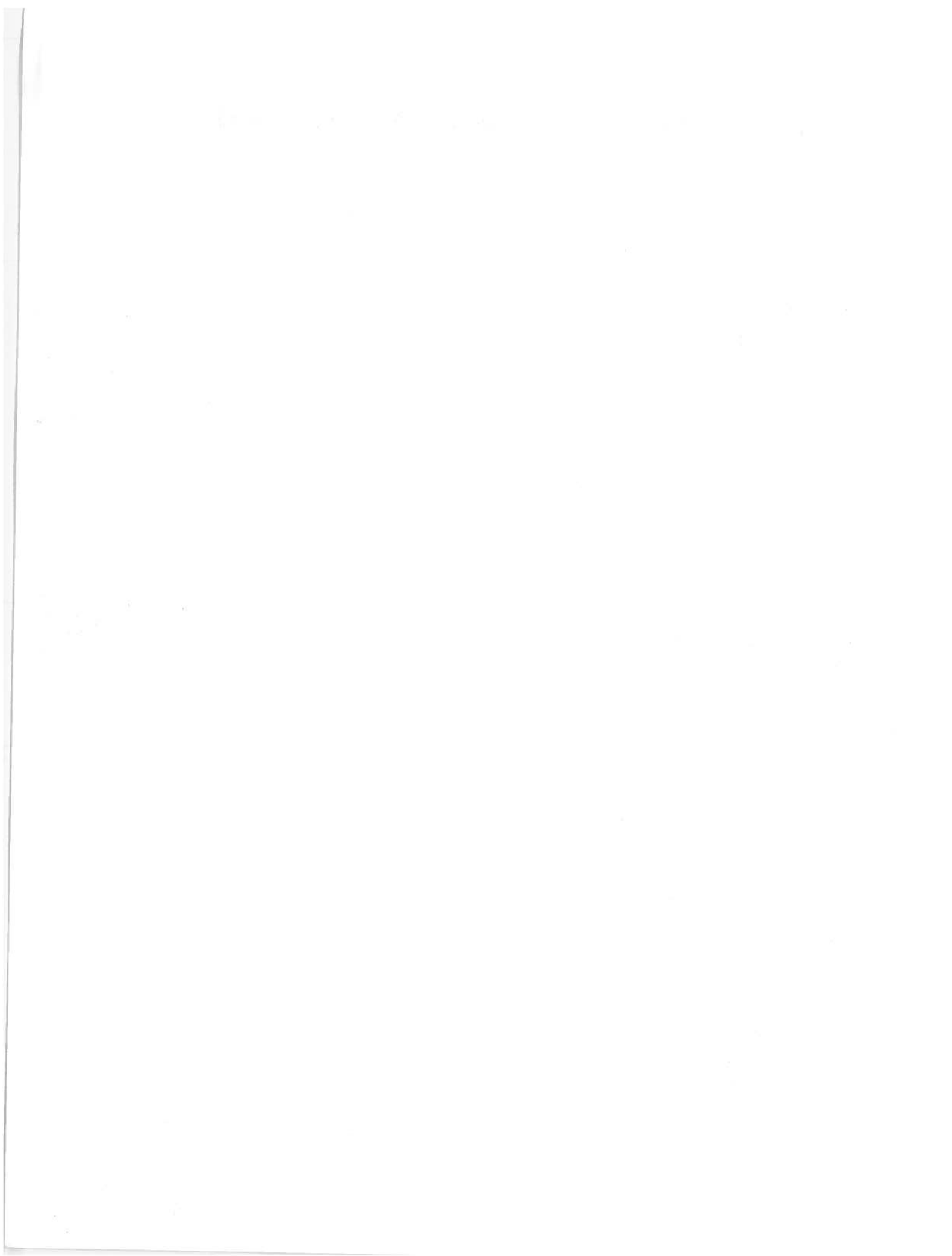
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# TRANSIS REPRESENTATIVES AND MANAGEMENT

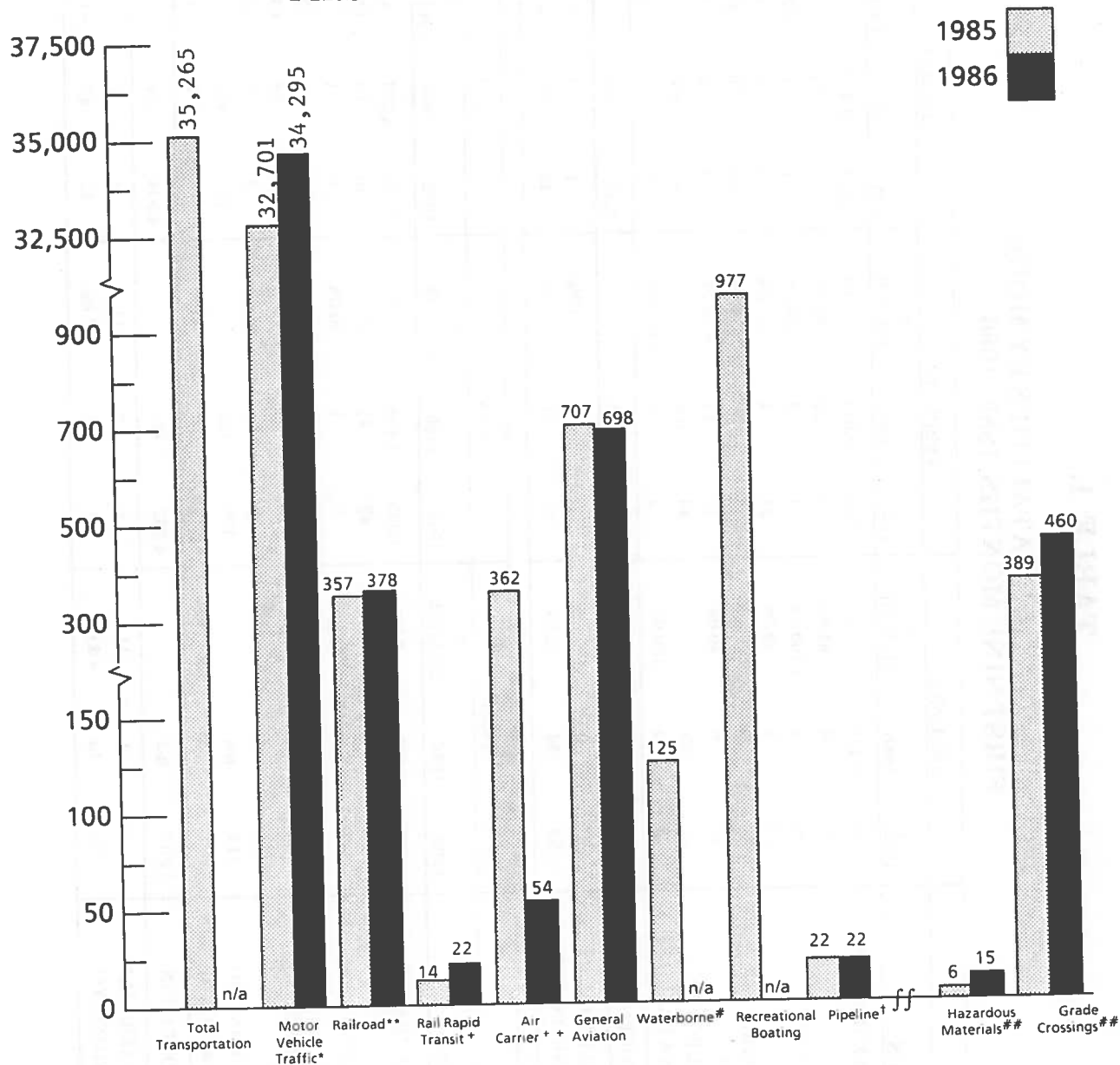
AGENCY	ROUTING SYMBOL	TELEPHONE	ROOM
<b>UNITED STATES COAST GUARD</b>			
Paul Ponce	G-MMI-3	267-1430	2406(TRPT)
Albert J. Marmo	G-BP-42	267-1070	4220(TRPT)
<b>FEDERAL AVIATION ADMINISTRATION</b>			
Charles J. Hoch	ASF-200	267-8256	330B(10A)
<b>FEDERAL HIGHWAY ADMINISTRATION</b>			
Phyllis Young	HHS-22	366-2159	3409
<b>FEDERAL RAILROAD ADMINISTRATION</b>			
Bruce Fine	RRS-20	366-0521	8314
<b>NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION</b>			
Grace B. Hazzard	NRD-33	366-5372	6125H
<b>URBAN MASS TRANSPORTATION ADMINISTRATION</b>			
Steven Barsony	URT-6	366-0209	6428
<b>RESEARCH &amp; SPECIAL PROGRAMS ADMINISTRATION</b>			
Richard C. Stevens	DMA-20	366-4348	8405
<b>NATIONAL TRANSPORTATION SAFETY BOARD</b>			
J. Stanley Smith	SP-30	382-6672	834(10A)
<b>TRANSIS MANAGEMENT</b>			
<b>SPONSOR-RSPA/MANAGEMENT INFORMATION SYSTEMS</b>			
Richard C. Stevens	DMA-20	366-4348	8405
<b>TASK MANAGER/PROGRAM ANALYST</b>			
James L. Duda	DTS-32	494-2758	1161(TSC)
Christine Bell	DTS-32	(FTS 837-2758)	1165(TSC)



# SUMMARY STATISTICS OF TRANSPORTATION SAFETY

## CHART 1.

### TRANSPORTATION FATALITIES BY MODE FIRST NINE MONTHS, 1985 - 1986



- Note: 1986 data are preliminary.
- \* Traffic fatalities are NHTSA's estimates based on a 30-day definition (see Glossary).
  - \*\* Fatalities resulting from train accidents, train incidents, and nontrain incidents. Train-related grade crossing fatalities are not included.
  - + Fatalities resulting from train and nontrain incidents.
  - ++ Air Carrier includes Commuter Carriers and Air Taxis.
  - # Waterborne data are for vessel casualties only.
  - ## These fatalities are included in other modes and Total Transportation.
  - † Includes Liquid and Gas Pipeline.

TABLE 1.

TRANSPORTATION FATALITIES BY MODE  
FIRST NINE MONTHS, 1985 - 1986

CLASSIFICATION	JANUARY			FEBRUARY			MARCH		
	1985	1986	% CHANGE	1985	1986	% CHANGE	1985	1986	% CHANGE
MOTOR VEHICLE TRAFFIC*	2,911	3,126	+7.4%	2,590	2,677	+3.4%	3,211	3,413	+6.3%
RAILROAD**	21	34	+61.9%	15	25	+66.7%	34	34	0.0%
RAIL RAPID TRANSIT+	1	2	+100.0%	1	4	+300.0%	1	8	+700.0%
AIR CARRIER++	107	8	-92.5%	21	4	-81.0%	5	4	-20.0%
GENERAL AVIATION	56	72	+28.6%	72	47	-34.7%	60	76	+26.7%
WATERBORNE#	10	6	-40.0%	12	14	+16.7%	14	3	-78.6%
RECREATIONAL BOATING	32	n/a	-	44	n/a	-	65	n/a	-
PIPELINES, GAS & LIQUID	2	0	-100.0%	3	9	+200.0%	0	1	[1]
TOTAL TRANSPORTATION	3,140	n/a	-	2,758	n/a	-	3,390	n/a	-
HAZARDOUS MATERIALS##	2	0	-100.0%	0	0	0.0%	1	1	0.0%
GRADE CROSSING ONLY##	59	54	-8.5%	36	53	+47.2%	44	60	+36.4%
	APRIL			MAY			JUNE		
CLASSIFICATION	1985	1986	% CHANGE	1985	1986	% CHANGE	1985	1986	% CHANGE
MOTOR VEHICLE TRAFFIC*	3,525	3,507	-0.5%	3,925	4,159	+6.0%	4,220	4,287	+1.6%
RAILROAD**	38	30	-21.1%	42	45	+7.1%	46	58	+26.1%
RAIL RAPID TRANSIT+	2	6	+200.0%	2	1	-50.0%	0	1	[1]
AIR CARRIER++	11	1	-90.9%	7	6	-14.3%	6	4	-33.3%
GENERAL AVIATION	105	67	-36.2%	78	98	+25.6%	71	98	+38.0%
WATERBORNE#	5	3	-40.0%	52	8	-84.6%	8	1	-87.5%
RECREATIONAL BOATING	114	n/a	-	126	n/a	-	183	n/a	-
PIPELINES, GAS & LIQUID	7	1	-85.7%	0	4	[1]	0	2	[1]
TOTAL TRANSPORTATION	3,807	n/a	-	4,232	n/a	-	4,534	n/a	-
HAZARDOUS MATERIALS##	0	1	[1]	0	2	[1]	0	3	[1]
GRADE CROSSING ONLY##	39	40	+2.6%	51	42	-17.6%	42	47	+11.9%

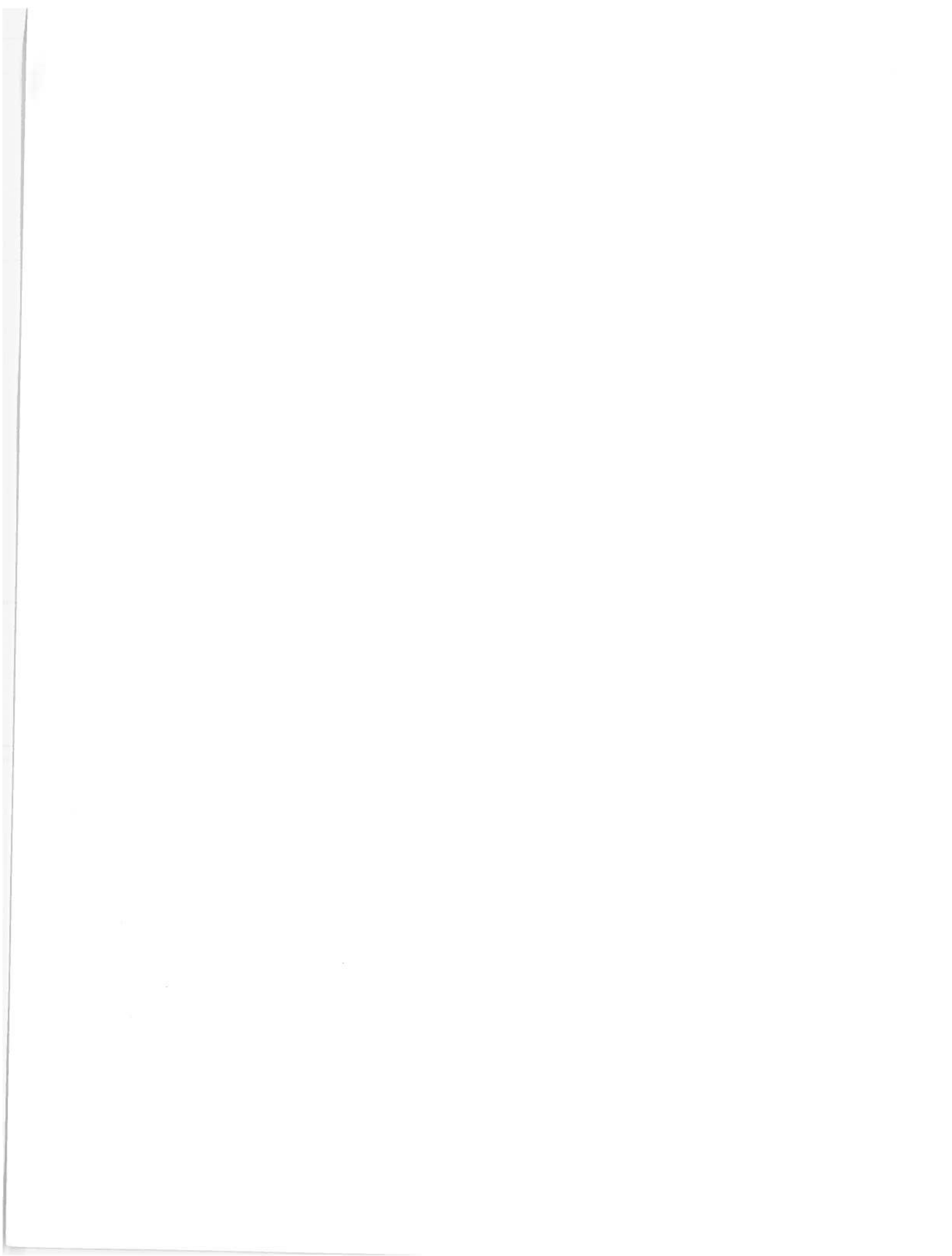


TABLE 1. (Continued)

CLASSIFICATION	JULY			AUGUST			SEPTEMBER		
	1985	1986	% CHANGE	1985	1986	% CHANGE	1985	1986	% CHANGE
MOTOR VEHICLE TRAFFIC*	4,107	4,456	+8.5%	4,372	4,708	+7.7%	3,840	3,962	+3.2%
RAILROAD**	59	67	+13.6%	63	49	-22.2%	39	36	-7.7%
RAIL RAPID TRANSIT+	0	0	0.0%	4	0	-100.0%	3	0	-100.0%
AIR CARRIER++	3	3	0.0%	151	20	-86.8%	51	4	-92.2%
GENERAL AVIATION	85	93	+9.4%	100	88	-12.0%	80	59	-26.3%
WATERBORNE#	1	1	0.0%	12	n/a	-	11	n/a	-
RECREATIONAL BOATING	164	n/a	-	140	n/a	-	109	n/a	-
PIPELINES, GAS & LIQUID	5	2	-60.0%	5	0	-100.0%	0	3	[1]
TOTAL TRANSPORTATION	4,362	n/a	-	4,773	n/a	-	4,075	n/a	-
HAZARDOUS MATERIALS##	3	4	+33.3%	0	3	[1]	0	1	[1]
GRADE CROSSING ONLY##	37	58	+56.8%	37	52	+40.5%	44	54	+22.7%

CLASSIFICATION	THIRD QUARTER TOTAL			FIRST NINE MONTHS		
	1985	1986	% CHANGE	1985	1986	% CHANGE
MOTOR VEHICLE TRAFFIC*	12,319	13,126	+6.6%	32,701	34,295	+4.9%
RAILROAD**	161	152	-5.6%	357	378	+5.9%
RAIL RAPID TRANSIT+	7	0	-100.0%	14	22	+57.1%
AIR CARRIER++	205	27	-86.8%	362	54	-85.1%
GENERAL AVIATION	265	240	-9.4%	707	698	-1.3%
WATERBORNE#	24	n/a	-	125	n/a	-
RECREATIONAL BOATING	413	n/a	-	977	n/a	-
PIPELINES, GAS & LIQUID	10	5	-50.0%	22	22	0.0%
TOTAL TRANSPORTATION	12,945	n/a	-	35,265	n/a	-
HAZARDOUS MATERIALS##	3	8	+166.7%	6	15	+150.0%
GRADE CROSSING ONLY##	118	164	+39.0	389	460	+18.3%

NOTE: 1986 data are preliminary.  
 \* Traffic fatalities are NHTSA's estimates based on a 30-day definition.  
 \*\* Fatalities resulting from train accidents, train incidents, and nontrain incidents. Train-related grade crossing fatalities are not included.  
 + Fatalities resulting from train and nontrain incidents. Exercise caution when comparing 1985 and 1986 data because two large transit companies did not submit reports in 1985.  
 ++ Air Carrier includes Commuter Carriers and Air Taxis (see Glossary).  
 # Waterborne data are for vessel casualties only.  
 ## These fatalities are included in other modes and Total Transportation.  
 [1] Not calculable.



# HIGHWAY

- The number of estimated motor vehicle fatalities increased slightly when the third quarter of 1986 is compared with the third quarter of 1985 -- from 12,319 to 13,126.
- During the first nine months of 1986, there were 34,295 fatalities reported versus 32,701 during the same period of 1985, which represents an increase of nearly five percent. However, the number of fatalities was lower than the corresponding period in 1977.
- Preliminary estimates of motor vehicle travel showed an increase of 4.1 percent in the third quarter of 1986 and 4.3 percent in the first nine months of 1986 over the comparable periods of 1985.

**TABLE 2.**

**HIGHWAY FATALITIES FOR 1986 COMPARED WITH 1985 AND 1977**

JANUARY			FEBRUARY			MARCH		
1977	1985	1986	1977	1985	1986	1977	1985	1986
2,738	2,911	3,126	2,877	2,590	2,677	3,497	3,211	3,413
% CHANGE			% CHANGE			% CHANGE		
1977-86		1985-86	1977-86		1985-86	1977-86		1985-86
+ 14.2		+ 7.4	-7.0		+ 3.4	-2.4		+ 6.3
APRIL			MAY			JUNE		
1977	1985	1986	1977	1985	1986	1977	1985	1986
3,730	3,525	3,507	4,060	3,925	4,159	4,320	4,220	4,287
% CHANGE			% CHANGE			% CHANGE		
1977-86		1985-86	1977-86		1985-86	1977-86		1985-86
-6.0		-0.5	+ 2.4		+ 6.0	-0.8		+ 1.6
JULY			AUGUST			SEPTEMBER		
1977	1985	1986	1977	1985	1986	1977	1985	1986
4,960	4,107	4,456	4,586	4,372	4,708	4,250	3,840	3,962
% CHANGE			% CHANGE			% CHANGE		
1977-86		1985-86	1977-86		1985-86	1977-86		1985-86
-10.2		+ 8.5	+ 2.7		+ 7.7	-6.8		+ 3.2

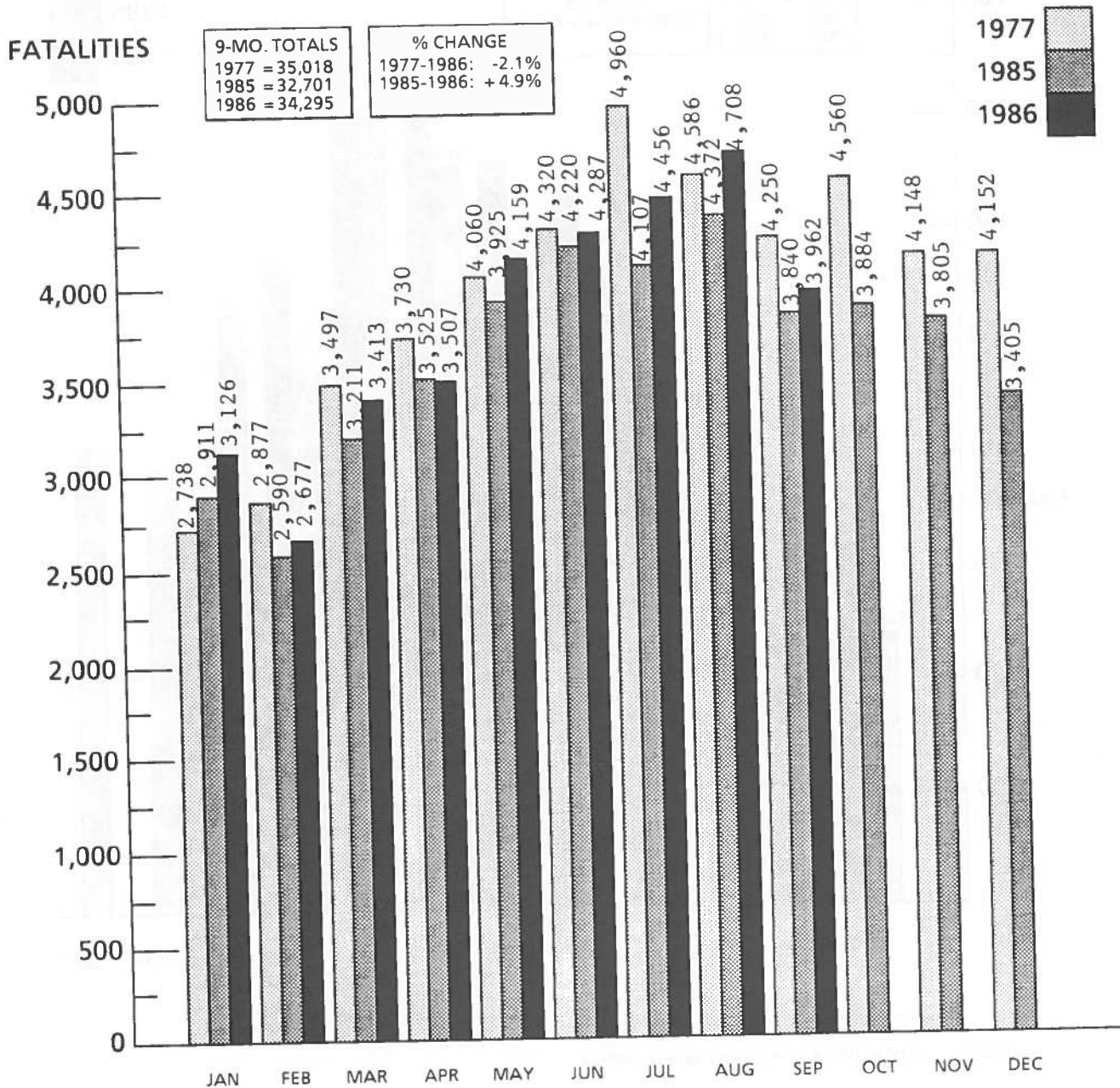
THIRD QUARTER			FIRST 9 MONTHS		
1977	1985	1986	1977	1985	1986
13,796	12,319	13,126	35,018	32,701	34,295
% CHANGE			% CHANGE		
1977-86		1985-86	1977-86		1985-86
-4.9		+ 6.6	-2.1		+ 4.9

NOTE: Figures are based on 30-day fatality definition (see Glossary).  
1986 data are preliminary.

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

## CHART 2.

### MOTOR VEHICLE TRAFFIC FATALITIES BY MONTH 1977, 1985 AND 1986

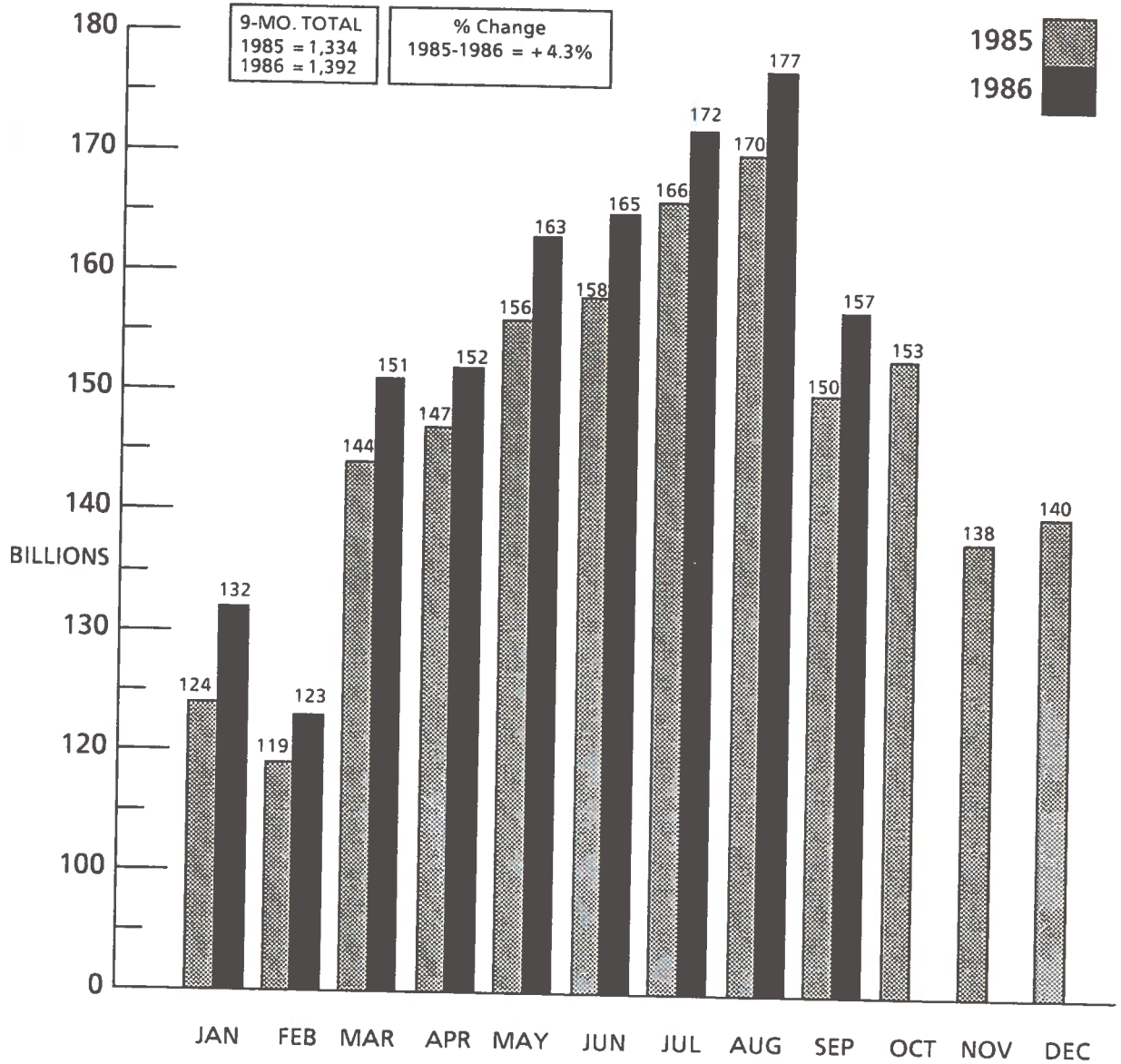


NOTE: Figures are based on 30-day fatality definition (see Glossary).  
 1986 data are preliminary.

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

### CHART 3.

#### MOTOR VEHICLE MILES OF TRAVEL, 1985 - 1986<sup>P</sup>



<sup>P</sup> = Preliminary.

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

## **RAILROAD**

- The number of fatalities reported for railroads\* and rail-highway grade crossings increased in the third quarter and the first nine months of 1986 when compared with the corresponding periods of 1985, as shown in Table 3.
- Train accidents, train incidents, and nontrain incidents experienced a decline in the third quarter and the first nine months of 1986, when compared with the same 1985 periods.
- During the third quarter of 1986, the number of fatalities resulting from train accidents and nontrain incidents increased slightly over the same quarter of 1985; only fatalities resulting from train incidents experienced a decrease in the same periods. However, train accident, train incident, and nontrain incident fatalities all rose in the first nine months of 1986 when compared with the corresponding period of 1985.
- During the third quarter and the first nine months of 1986, injuries resulting from train and nontrain incidents were lower than the corresponding periods of 1985, while train accident related injuries increased.
- Rail-highway grade crossing incidents and injuries fell in the third quarter and the first nine months of 1986 when compared with the same 1985 periods. Grade crossing fatalities increased in the third quarter of 1986 as well as in the first nine months of 1986 compared to the same periods of 1985.

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

**TABLE 3.**

**RAILROAD\* FATALITIES FOR 1986 COMPARED WITH 1985**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
RAILROAD*	21	34	15	25	34	34
GRADE CROSSING	59	54	36	53	44	60
TOTAL RR AND GC	80	88	51	78	78	94

	APRIL		MAY		JUNE	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
RAILROAD*	38	30	42	45	46	58
GRADE CROSSING	39	40	51	42	42	47
TOTAL RR AND GC	77	70	93	87	88	105

	JULY		AUGUST		SEPTEMBER	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
RAILROAD*	59	67	63	49	39	36
GRADE CROSSING	37	58	37	52	44	54
TOTAL RR AND GC	96	125	100	101	83	90

	THIRD QUARTER			FIRST 9 MONTHS		
CLASSIFICATION	1985	1986	% Chg	1985	1986	% Chg
RAILROAD*	161	152	-5.6	357	378	+5.9
GRADE CROSSING	118	164	+39.0	389	460	+18.3
TOTAL RR AND GC	279	316	+13.3	746	838	+12.3

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

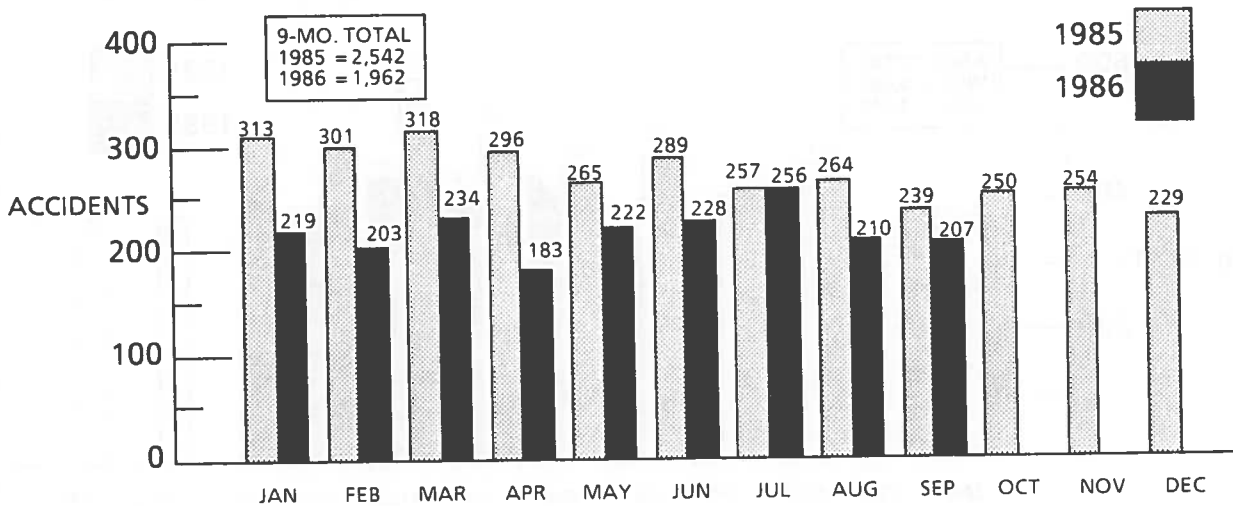
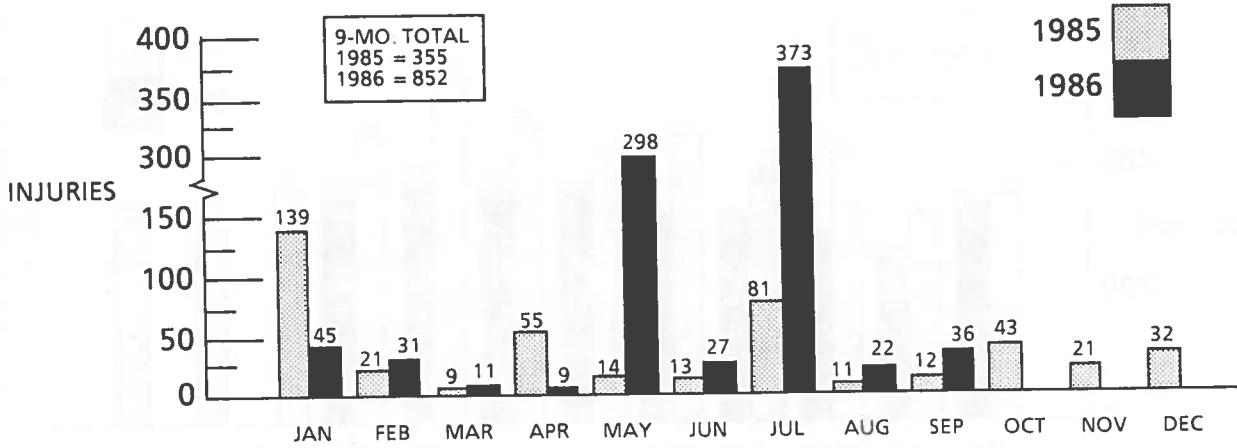
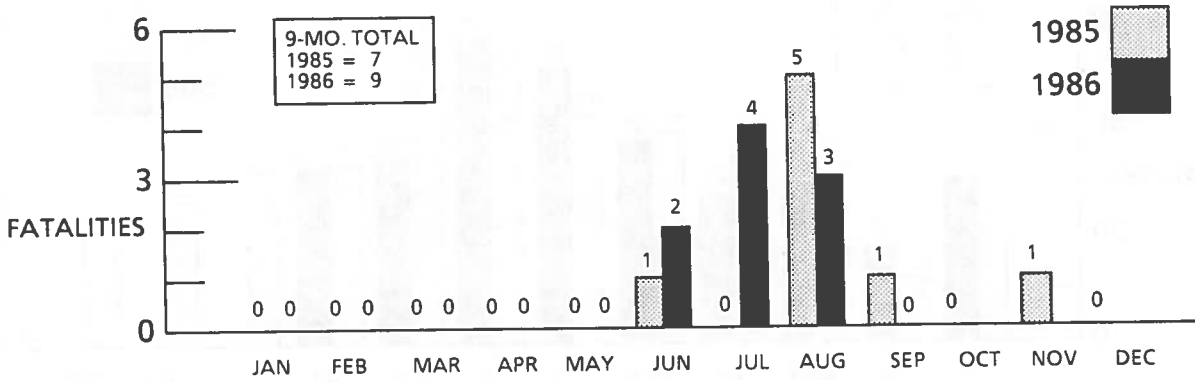
NOTE: 1986 data are preliminary.

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



### CHART 4.

## TRAIN ACCIDENT\* FATALITIES, INJURIES AND ACCIDENTS, 1985-1986



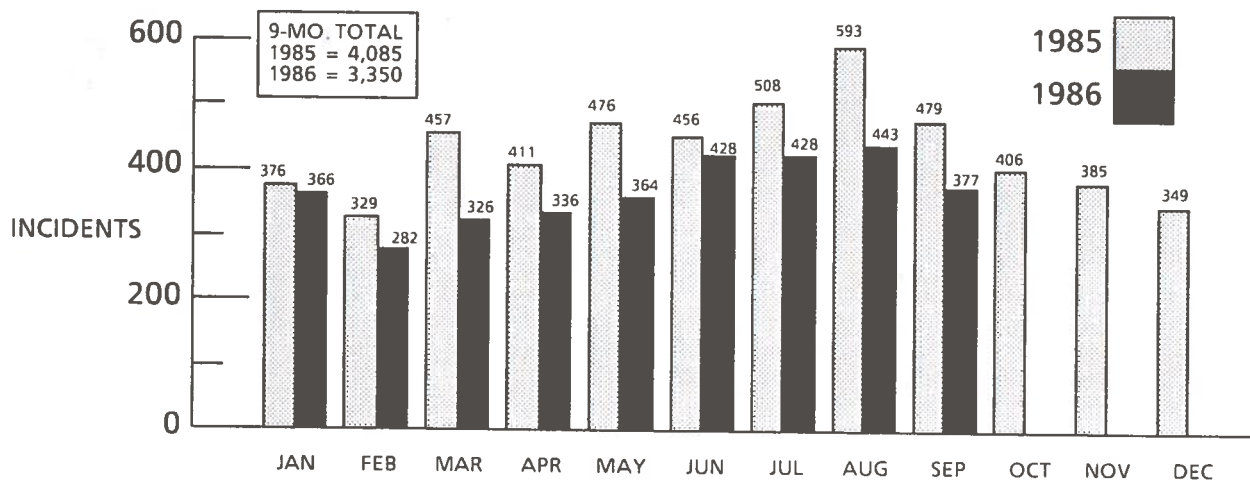
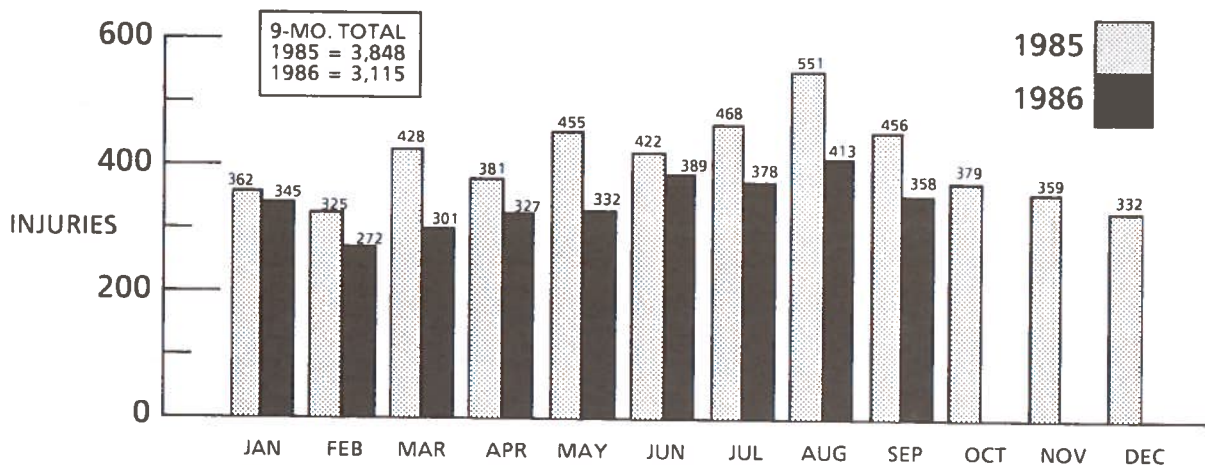
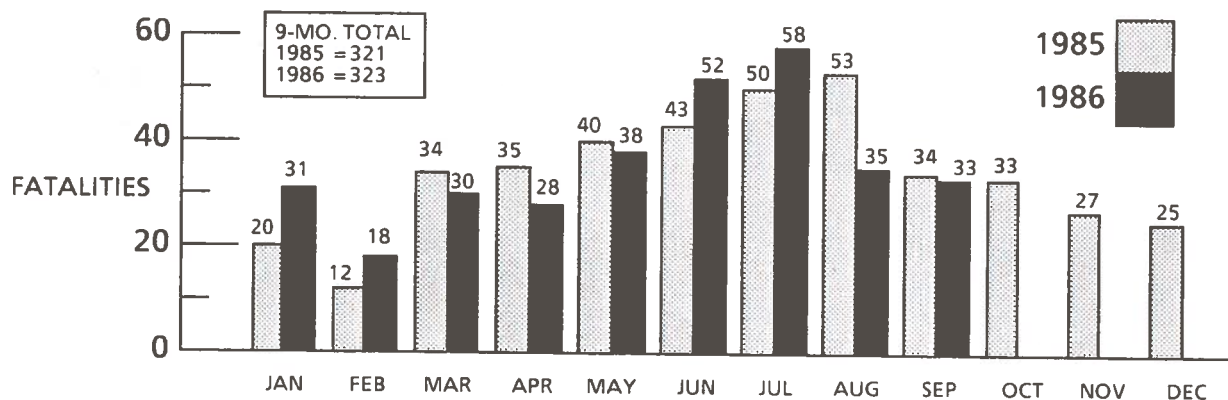
\* See Glossary for Train Accident definition. This chart does not include Grade Crossings.

NOTE: 1986 data are preliminary.

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

## CHART 5.

### TRAIN INCIDENT\* FATALITIES, INJURIES AND INCIDENTS, 1985-1986

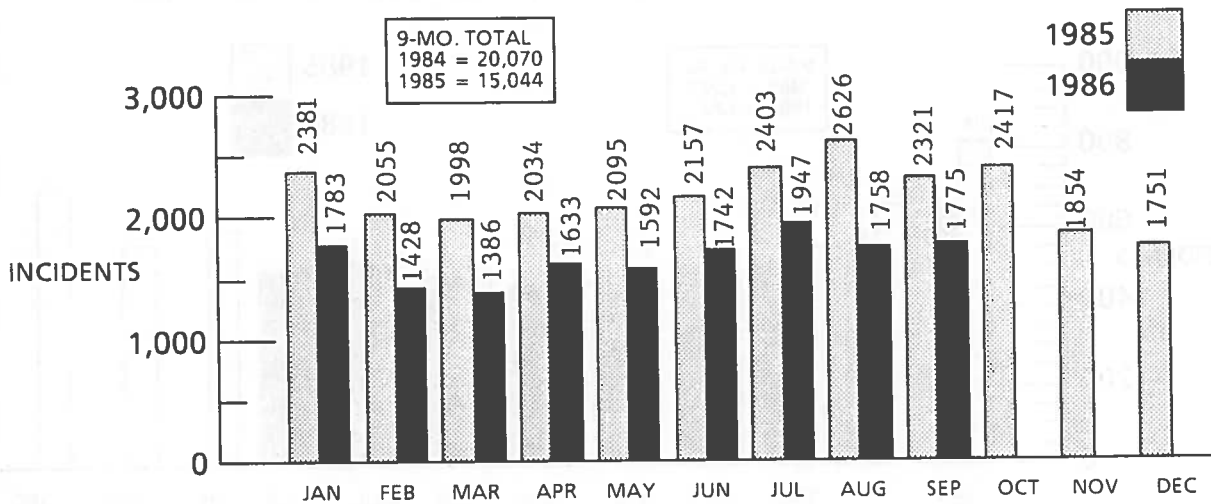
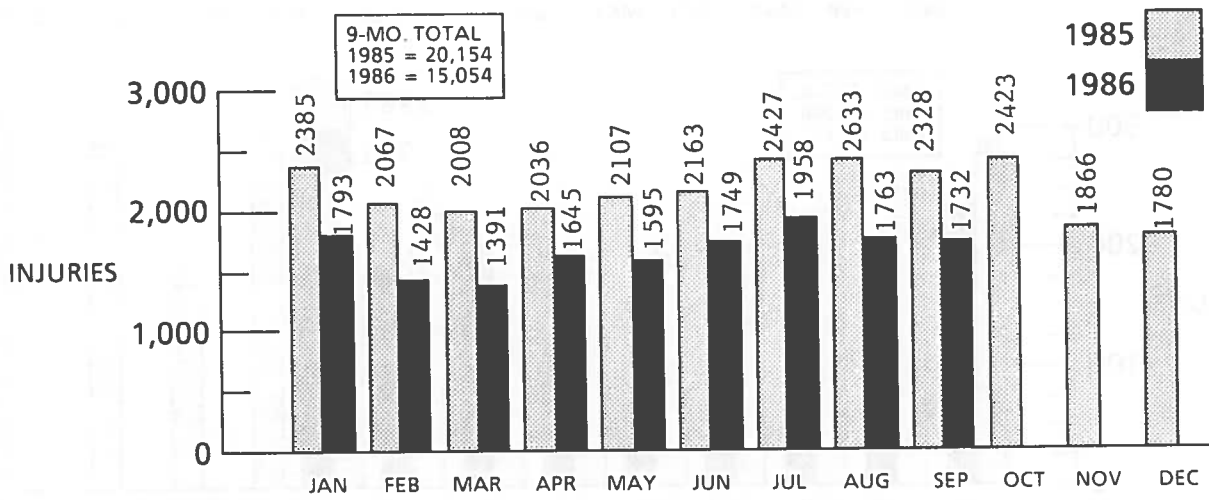
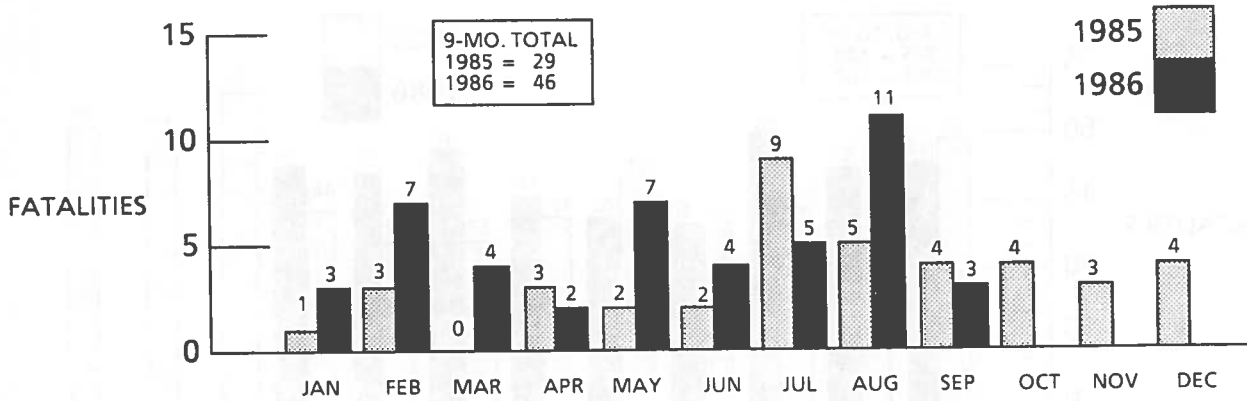


\* See Glossary for Train and Nontrain Incident definitions. This chart does not include Grade Crossings.  
NOTE: 1986 data are preliminary.

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

## CHART 6.

### NONTRAIN\* FATALITIES, INJURIES AND INCIDENTS, 1985-1986

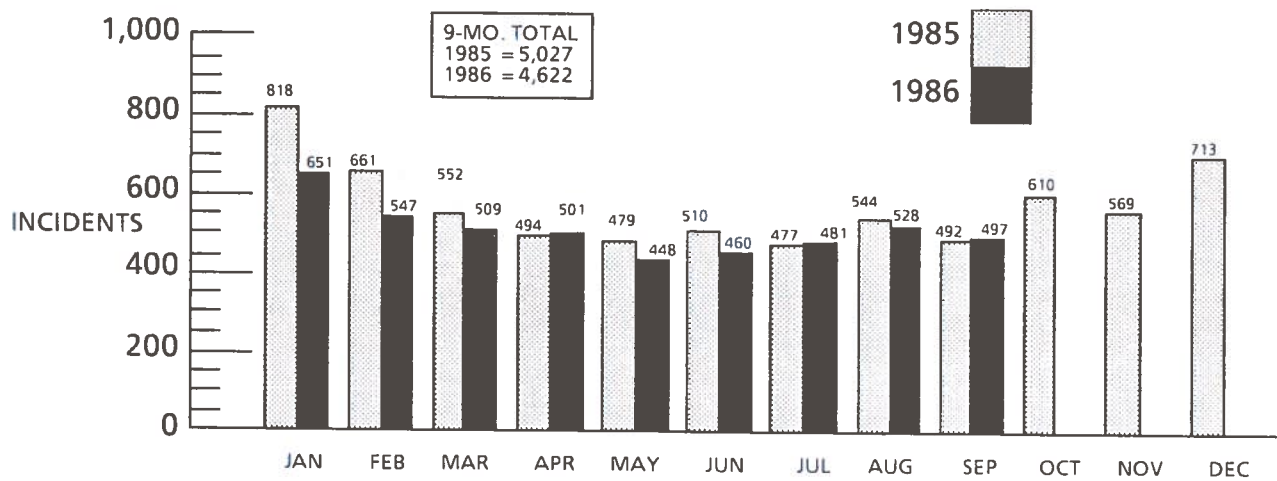
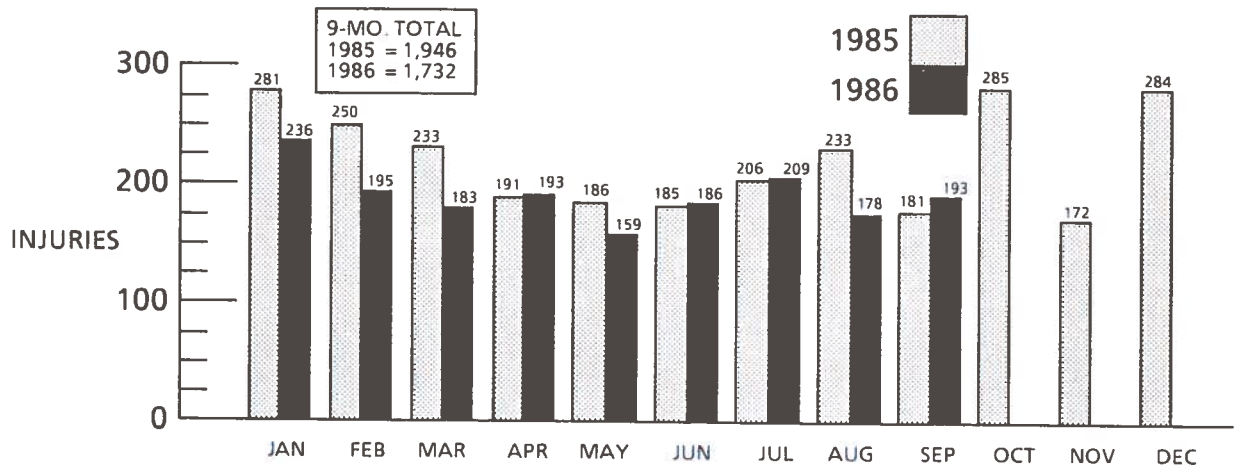
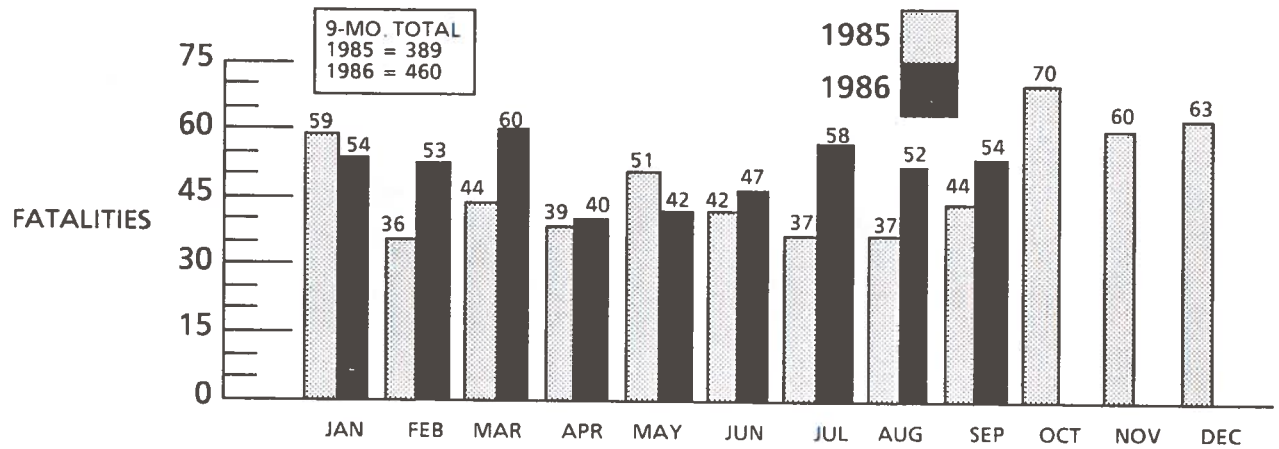


\* See Glossary for definition. This chart does not include Grade Crossings.  
NOTE: 1986 data are preliminary.

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

## CHART 7.

### GRADE CROSSING\* FATALITIES, INJURIES AND INCIDENTS, 1985-1986



\* See Glossary for definition.  
NOTE: 1986 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 1985 and 1986. In 1985, two of the largest transit authorities did not submit reports. All 13 transit authorities have submitted data for the first six months of 1986. As of January 1, 1986, nine transit authorities have submitted data for July, nine for August and eight for September. UMTA has, in conjunction with APTA, revised the reporting system categories and instituted new thresholds. Fires are now reported in a separate fire report and are not included in train accidents. This new reporting system was implemented for Rapid Rail Transit on January 1, 1986. Due to these changes, it is difficult to make comparisons between earlier data and current data.

The following comparisons are made using data which have been received as of January 1, 1987.

- There were three Rapid Rail Transit revenue train accidents reported in the third quarter of 1986, compared with four in the third quarter of 1985.

The following table summarizes train accidents by type for the third quarter of 1985 and 1986.

	1985 THIRD QUARTER	1986* THIRD QUARTER
Collision with Other Train	2	1*
Collision with Obstacle	0	1*
Collision with Person	1	1*
Derailment	0	0*
Fire	0	N/A
Rail-Highway Crossing	1	0*
<b>Total</b>	<b>4</b>	<b>3*</b>

- The predominant cause of RRT train and nontrain personal casualties (injuries and fatalities) in the third quarter of 1986 was from accidents occurring on station platforms. Of the 297 casualties reported in this quarter, 63 took place while boarding the train; while in the third quarter of 1985, 129 of the 292 casualties (injuries and fatalities) reported were the result of slips and falls.
- Comparisons of accident, injury and fatality data for the first nine months of 1985 and 1986 are difficult to make because of changes in reporting requirements. In 1985, fires were considered RRT equipment accidents, while in 1986, fires are reported in a separate report. In addition, two large transit authorities did not submit reports in 1985.

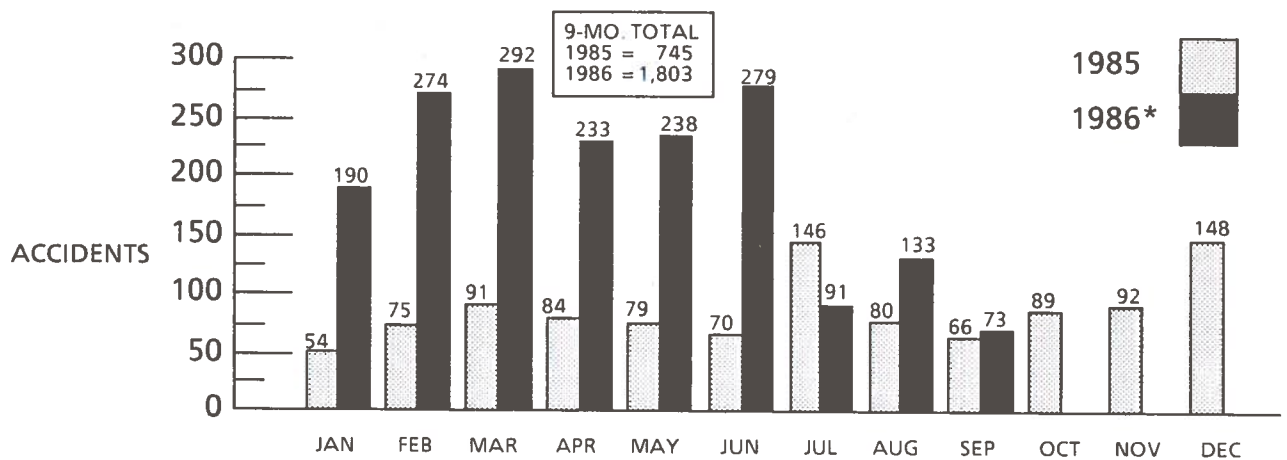
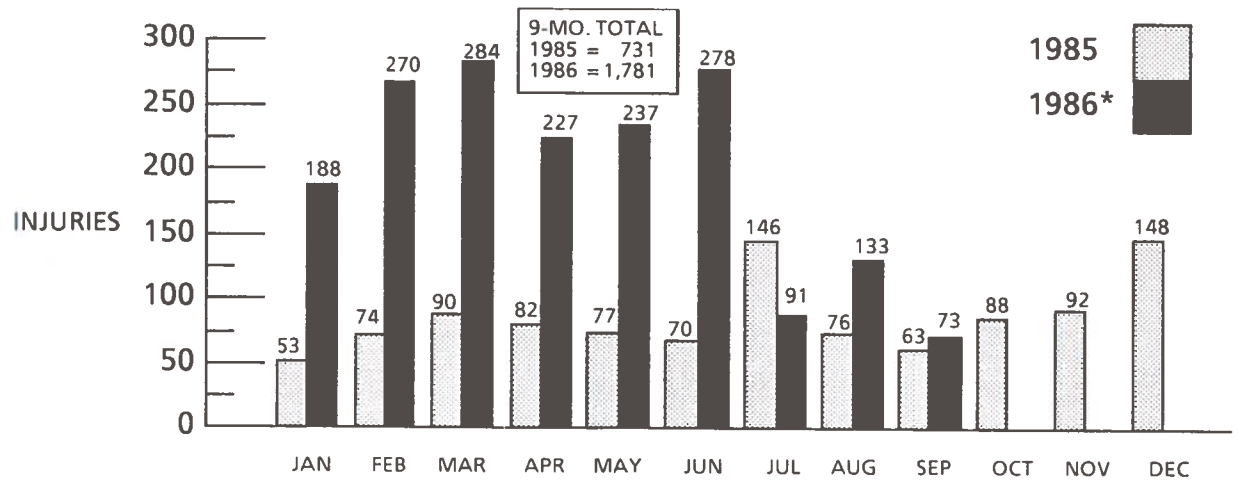
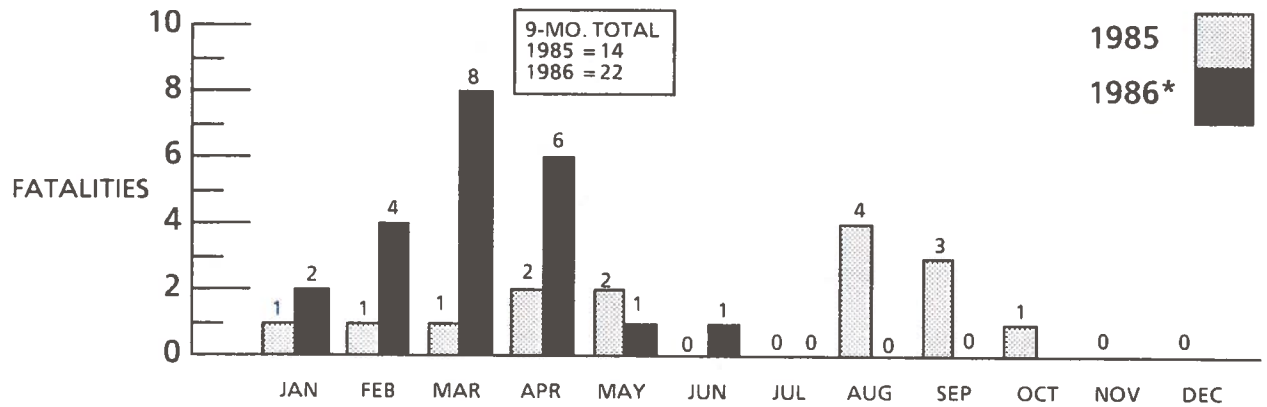
\* Preliminary data prior to verification.

N/A Not available.

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

## CHART 8.

### RRT TRAIN AND NON-TRAIN\*\* FATALITIES, INJURIES AND ACCIDENTS, 1985-1986

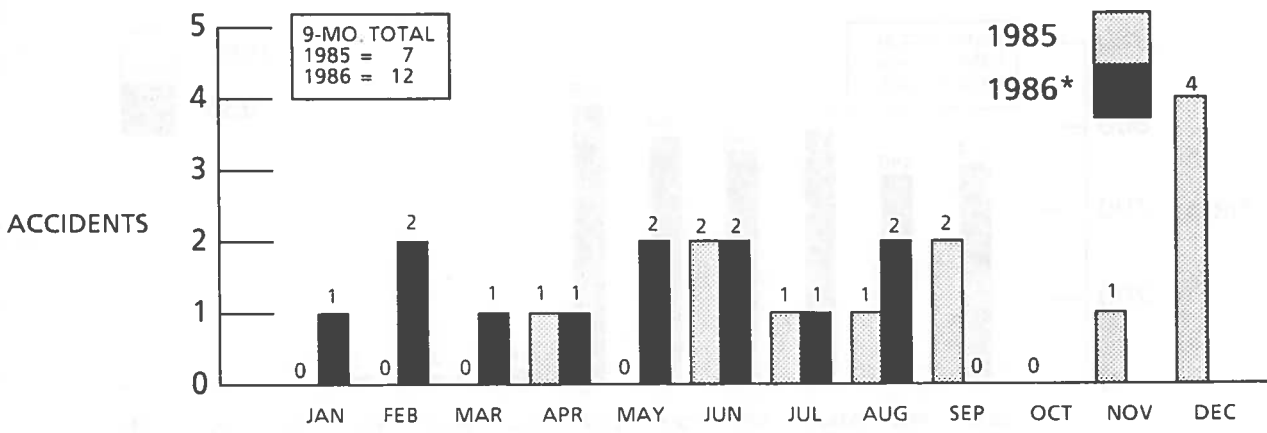
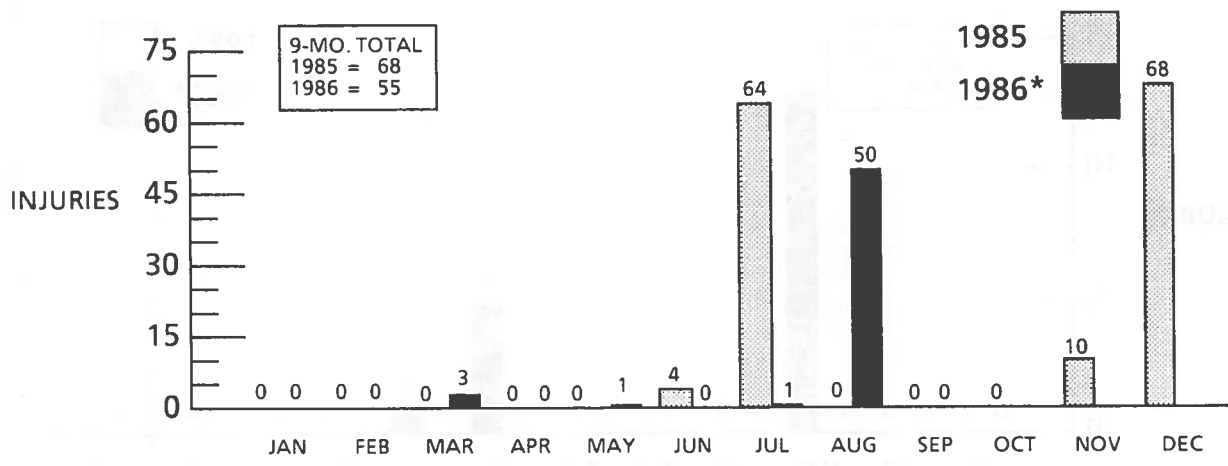
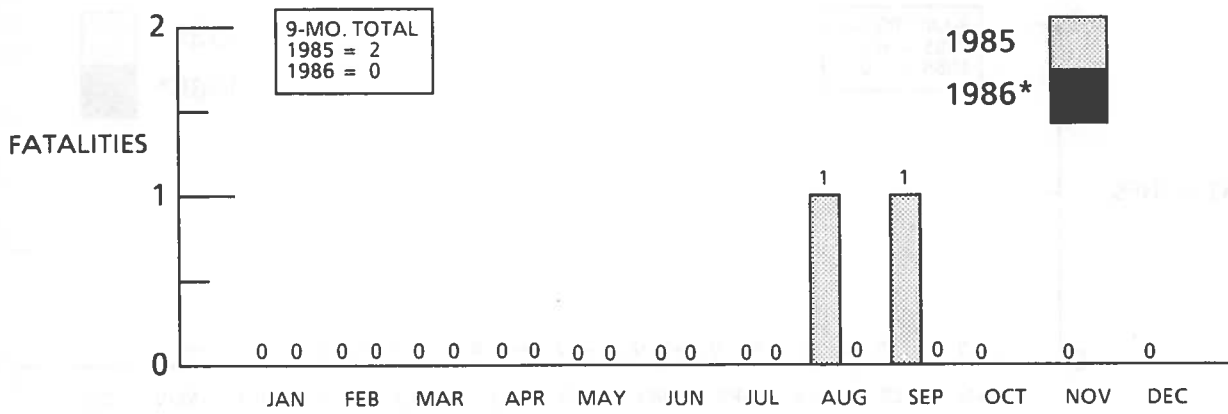


\* Preliminary data prior to verification.  
\*\* See glossary for definition.

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

### CHART 9.

#### RRT EQUIPMENT\*\* FATALITIES, INJURIES AND ACCIDENTS, 1985-1986

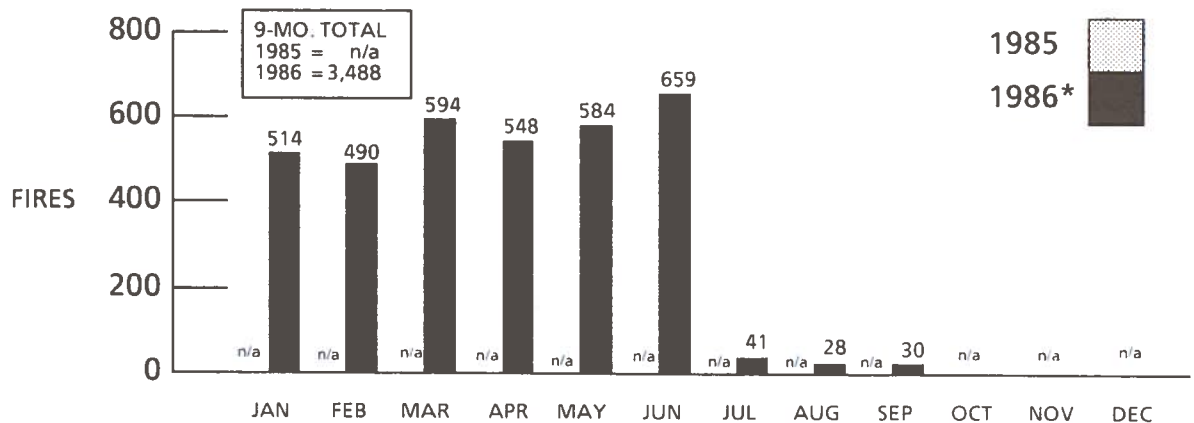
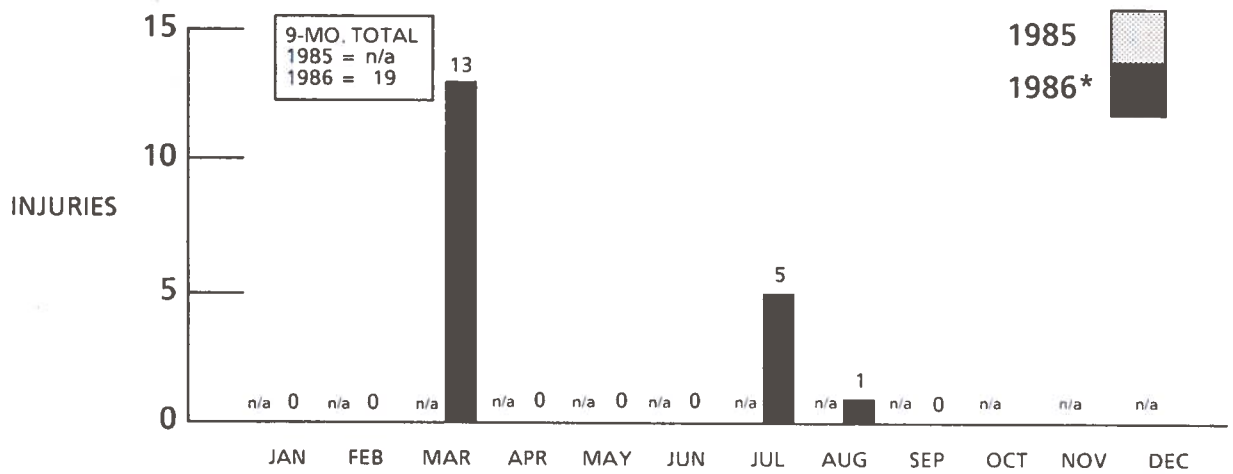
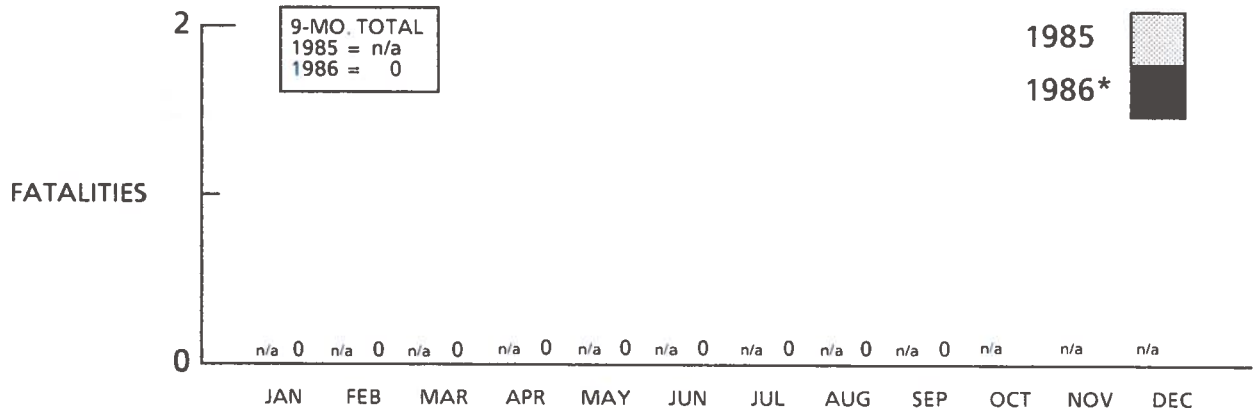


\* Preliminary data prior to verification.  
\*\* See glossary for definition.

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

## CHART 10.

### RRT FIRE REPORTS\*\* FATALITIES AND INJURIES, 1985-1986



n/a Not available.  
\* Preliminary data prior to verification.  
\*\* See glossary for definition.

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



## AVIATION

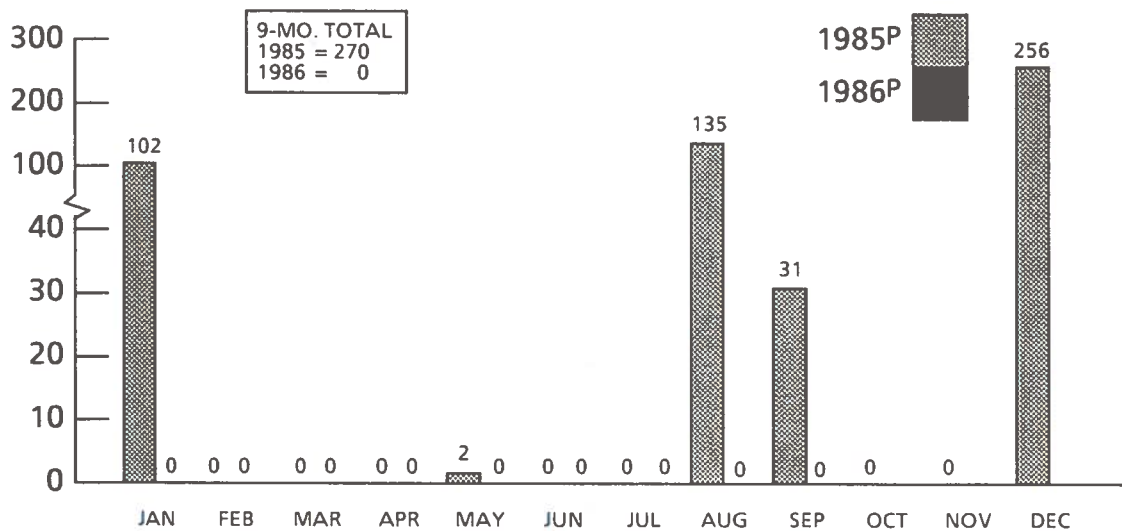
Beginning in January 1982, the National Transportation Safety Board began reporting aviation accident data according to the Federal Aviation Regulations under which the aircraft was operated at the time of an accident. Revenue operations of Air Carriers, Commercial Operators and deregulated All Cargo Carriers, using large aircraft, are conducted under 14 CFR 121, 125, and 127. Commuter Air Carriers' (scheduled) and On-Demand Air Taxi Operators' (unscheduled) revenue operations (using small aircraft) are conducted under 14 CFR 135. Accidents involving flights not being conducted under either 14 CFR 121, 125, 127, or 135 are grouped by the Safety Board into the "General Aviation" category. 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

- During the third quarter of 1986, U.S. air carrier fatal accidents, fatalities and serious injuries all experienced a decrease when compared to the third quarter of 1985. Accidents increased slightly when the third quarter of 1985 is compared to the third quarter of 1986. Three accidents were reported in 1985 versus four in 1986. Fatal accidents declined from two to zero; fatalities dropped from 166 to zero; and serious injuries decreased from 15 to four during the same periods.
- Commuter carriers showed a decrease in fatalities, fatal accidents, and total accidents, while serious injuries remained unchanged when the third quarter of 1986 is compared with the corresponding 1985 period. However, on-demand air taxi fatalities, fatal accidents, and serious injuries all increased during the third quarter of 1986 when compared to the third quarter of 1985. Only total accidents dropped during this period.
- U.S. air carrier accidents, fatal accidents, fatalities, and serious injuries declined in the first nine months of 1986 when compared with the same period a year ago. Air carrier accidents fell from 20 to 15 and fatal accidents dropped from six to zero. During this period, the number of fatalities dropped significantly -- from 270 to zero. In the first nine months of 1985, 265 of the 270 fatalities are attributed to the following four crashes: Dallas, Texas resulting in 135 deaths; Milwaukee, Wisconsin, 31 deaths; La Paz, Bolivia, 29 deaths; and Reno, Nevada, 70 deaths.
- A comparison of commuter carrier and on-demand air taxi fatality, injury, and accident data showed a decline in all areas for the first nine months of 1986 versus the corresponding period of 1985.

## CHART 11.

### U.S. AIR CARRIER\* FATALITIES, 1985 - 1986



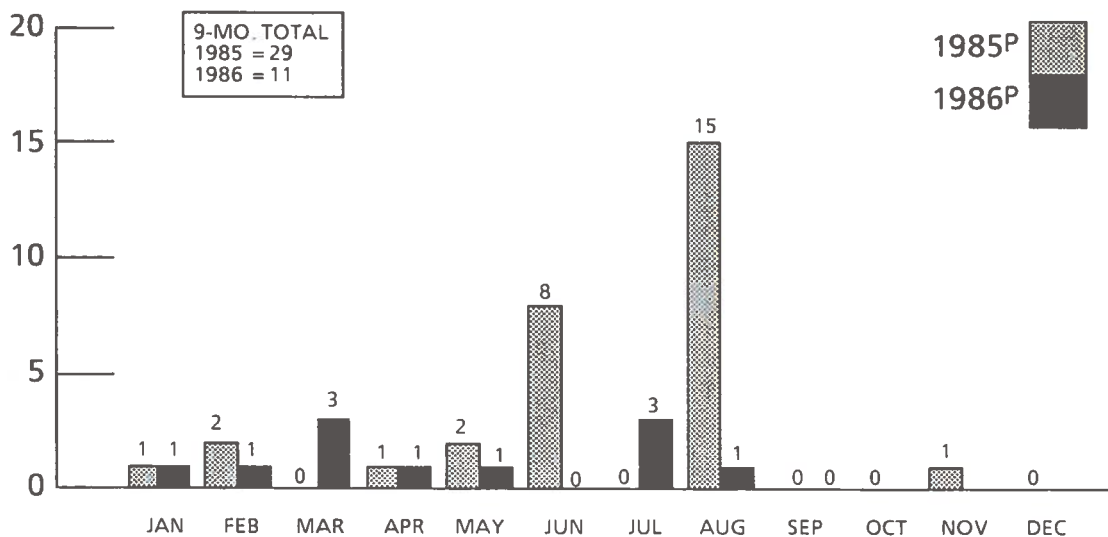
P = Preliminary.

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

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

## CHART 12.

### U.S. AIR CARRIER\* SERIOUS INJURIES, 1985 - 1986



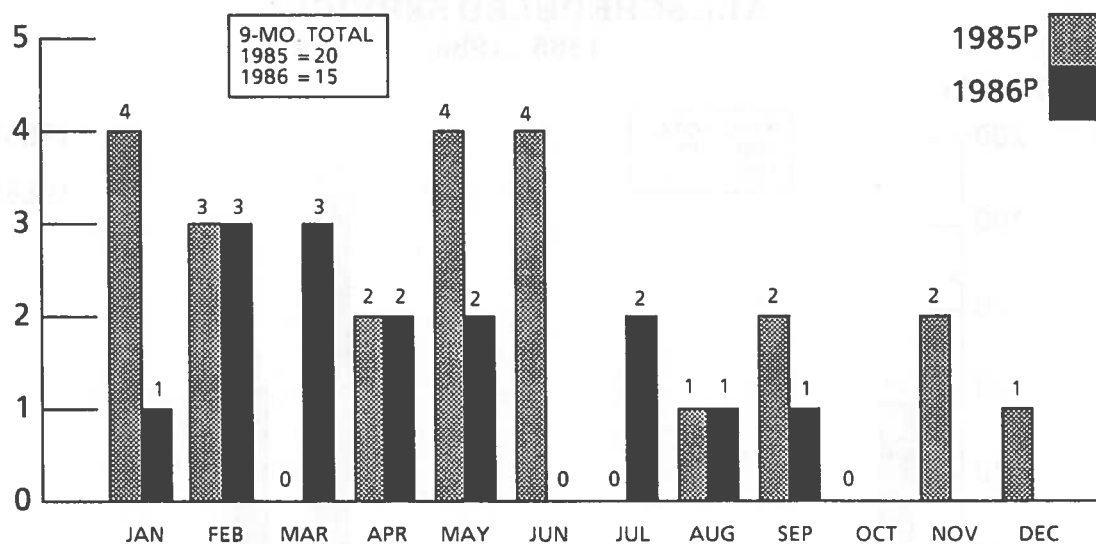
P = Preliminary.

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

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

### CHART 13.

#### U.S. AIR CARRIER ACCIDENTS\*, 1985 - 1986



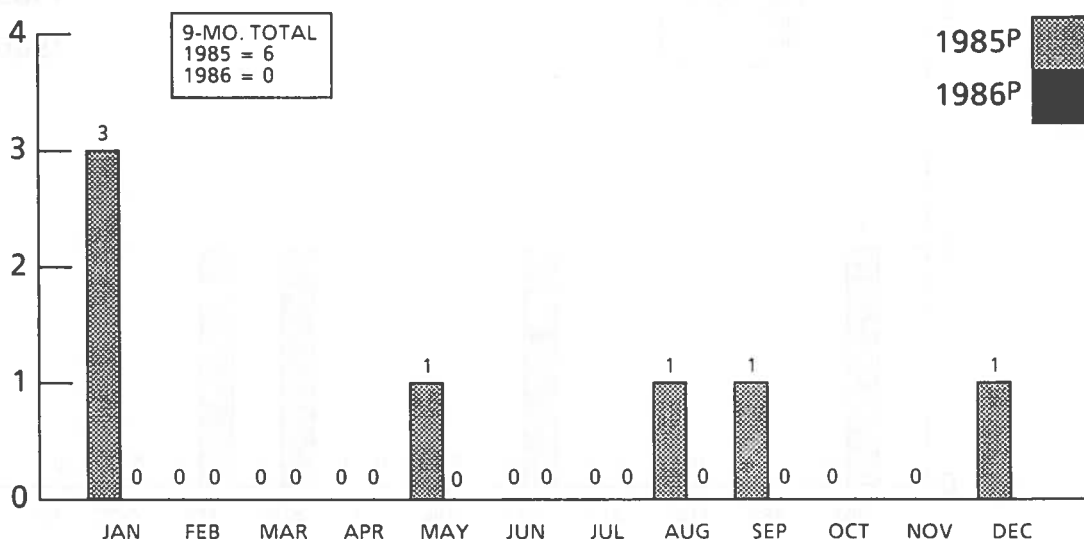
P = Preliminary.

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

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

### CHART 14.

#### U.S. AIR CARRIER\* FATAL ACCIDENTS, 1985 - 1986



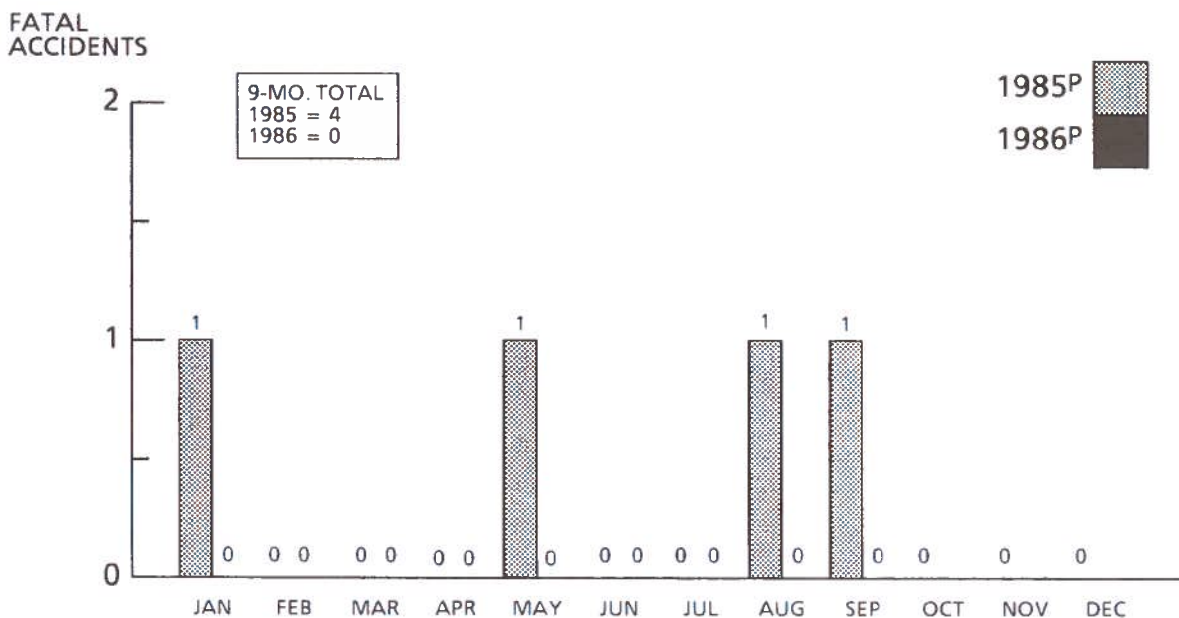
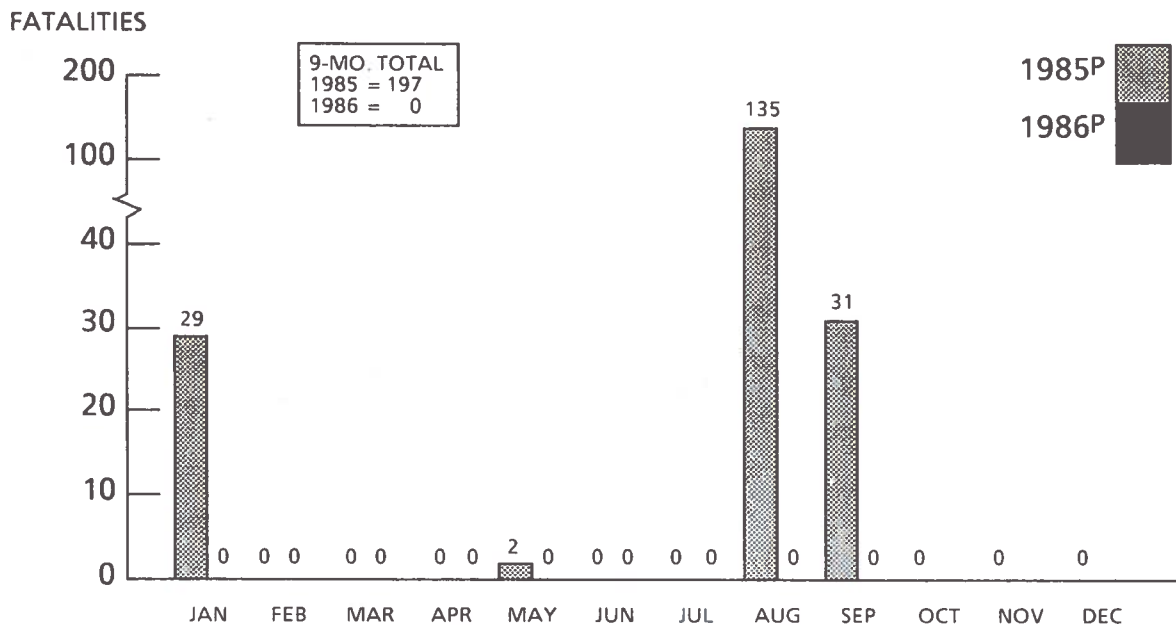
P = Preliminary.

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

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

## CHART 15.

### U.S. AIR CARRIER FATALITIES AND FATAL ACCIDENTS ALL SCHEDULED SERVICE\* 1985 - 1986



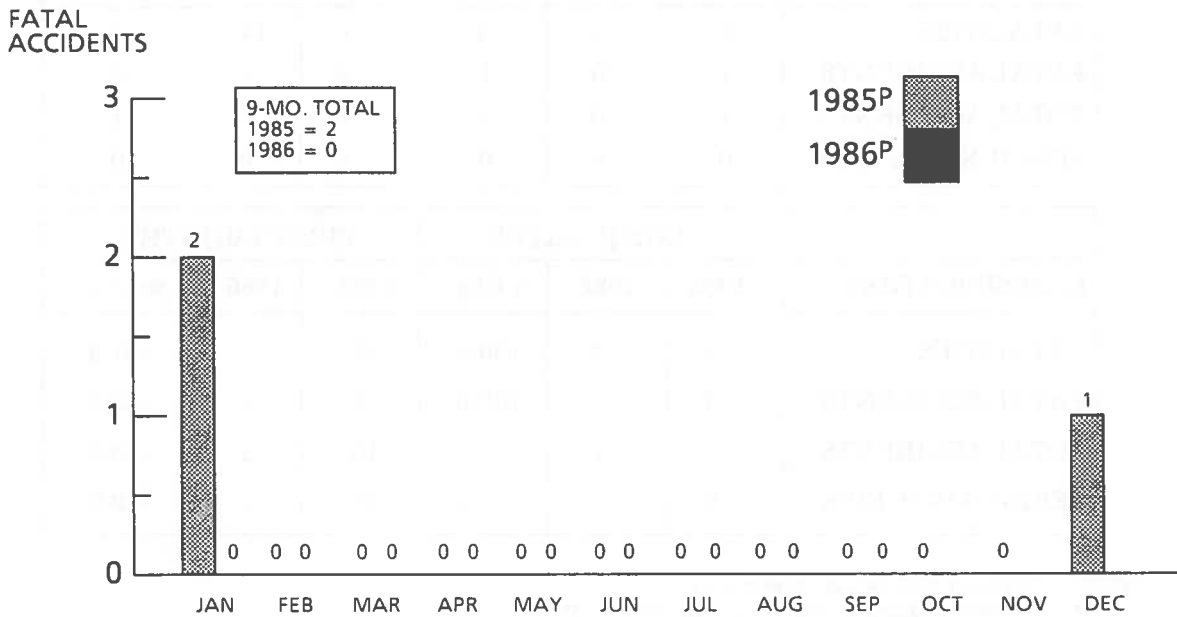
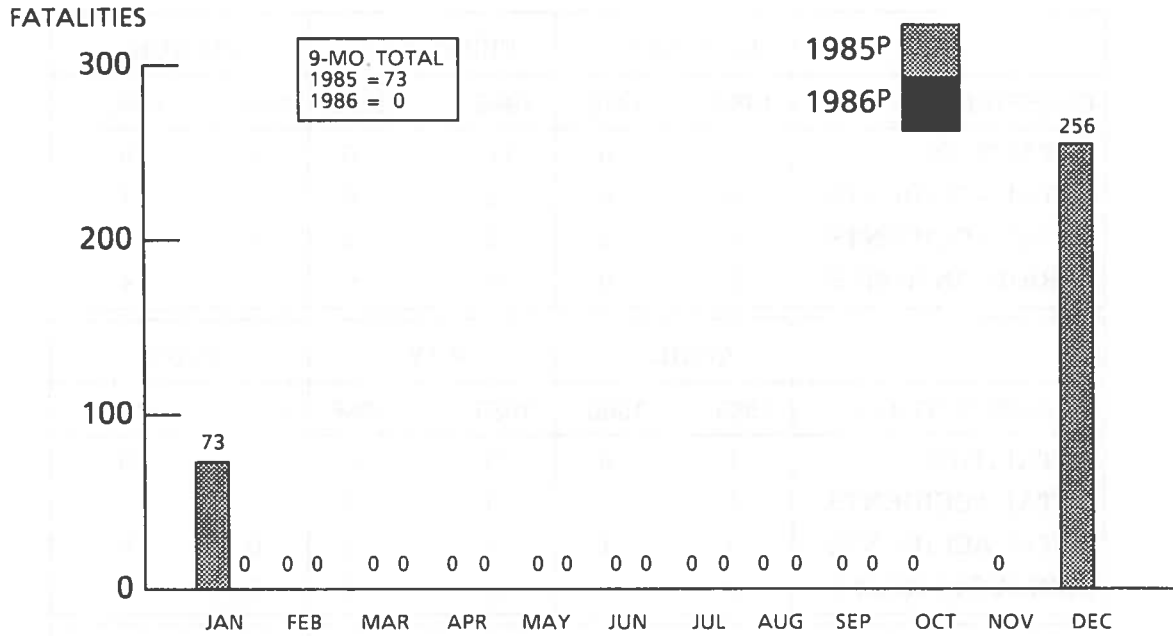
Note: 1985 and 1986 data are preliminary.

\* All scheduled service operating under 14 CFR 121, 125, and 127.

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

## CHART 16.

### U.S. AIR CARRIER FATALITIES AND FATAL ACCIDENTS ALL NONSCHEDULED SERVICE\* 1985 - 1986



Note: 1985 and 1986 data are preliminary.

\* All nonscheduled service (charter) operating under 14 CFR 121, 125, and 127

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

**TABLE 4.**  
**COMMUTER CARRIERS\* ACCIDENTS, FATALITIES AND INJURIES**  
**1985-1986**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
FATALITIES	0	0	11	0	0	3
FATAL ACCIDENTS	0	0	2	0	0	1
TOTAL ACCIDENTS	1	1	2	2	2	1
SERIOUS INJURIES	2	0	0	0	0	4

	APRIL		MAY		JUNE	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
FATALITIES	1	0	0	0	0	0
FATAL ACCIDENTS	1	0	0	0	0	0
TOTAL ACCIDENTS	3	1	3	3	0	0
SERIOUS INJURIES	3	0	5	0	0	0

	JULY		AUGUST		SEPTEMBER	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
FATALITIES	1	0	8	0	14	0
FATAL ACCIDENTS	1	0	1	0	1	0
TOTAL ACCIDENTS	1	0	4	0	2	1
SERIOUS INJURIES	0	0	0	0	0	0

	THIRD QUARTER			FIRST 9 MONTHS		
CLASSIFICATION	1985	1986	% Chg	1985	1986	% Chg
FATALITIES	23	0	-100.0	35	3	-91.4
FATAL ACCIDENTS	3	0	-100.0	6	1	-83.3
TOTAL ACCIDENTS	7	1	-85.7	18	9	-50.0
SERIOUS INJURIES	0	0	0.0	10	4	-60.0

NOTE: 1985 and 1986 data are preliminary.  
 \* All scheduled service operating under 14 CFR 135.

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

**TABLE 5.****ON-DEMAND AIR TAXIS\* ACCIDENTS, FATALITIES AND INJURIES  
1985-1986**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
FATALITIES	5	8	10	4	5	1
FATAL ACCIDENTS	3	4	4	2	2	1
TOTAL ACCIDENTS	25	11	10	16	13	11
SERIOUS INJURIES	5	7	1	3	6	0

	APRIL		MAY		JUNE	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
FATALITIES	10	1	5	6	6	4
FATAL ACCIDENTS	2	1	3	4	3	2
TOTAL ACCIDENTS	13	7	13	9	15	11
SERIOUS INJURIES	2	0	5	1	1	2

	JULY		AUGUST		SEPTEMBER	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
FATALITIES	2	3	8	20	6	4
FATAL ACCIDENTS	1	2	3	5	4	2
TOTAL ACCIDENTS	11	8	13	12	11	10
SERIOUS INJURIES	0	5	2	0	2	0

	THIRD QUARTER			FIRST 9 MONTHS		
CLASSIFICATION	1985	1986	% Chg	1985	1986	% Chg
FATALITIES	16	27	+68.8	57	51	-10.5
FATAL ACCIDENTS	8	9	+12.5	25	23	-8.0
TOTAL ACCIDENTS	35	30	-14.3	124	95	-23.4
SERIOUS INJURIES	4	5	+25.0	24	18	-25.0

NOTE: 1985 and 1986 data are preliminary.

\* Non-scheduled service operating under 14 CFR 135.

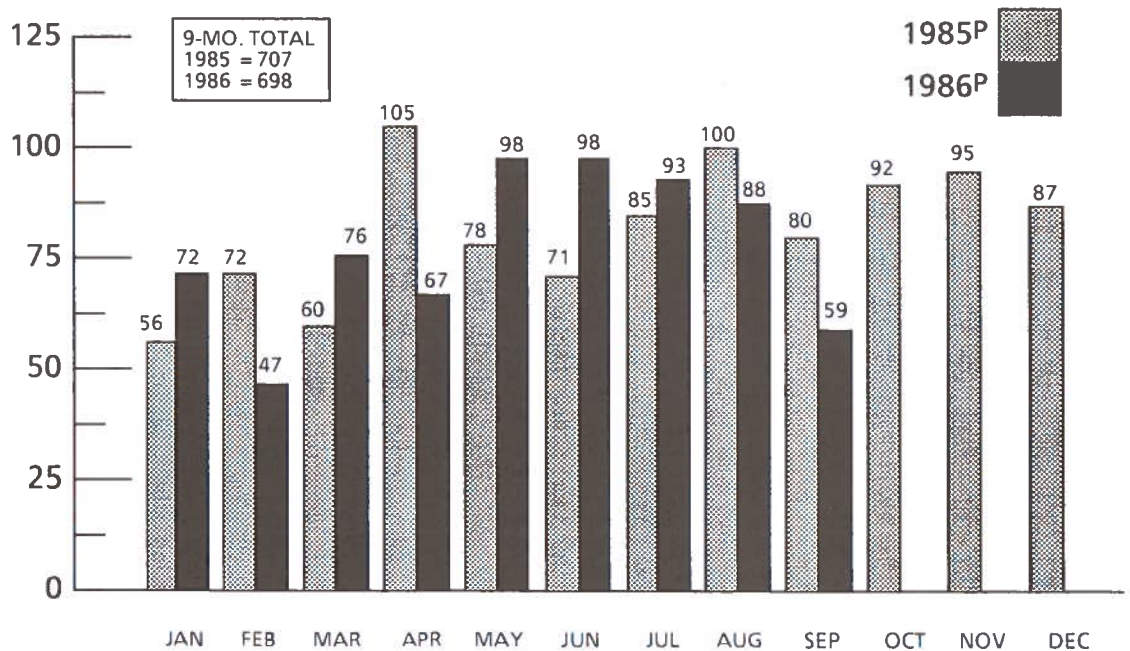
SOURCE: NTSB, Safety Studies & Analysis Division, SP-30.

## GENERAL AVIATION

- A comparison of General Aviation accidents, fatal accidents, fatalities and serious injuries during the third quarter of 1986 versus the third quarter of 1985 shows a decrease in all areas. The number of General Aviation accidents declined from 913 in 1985 to 803 in 1986, fatal accidents decreased slightly from 137 in 1985 to 134 in 1986, fatalities fell from 265 in 1985 to 240 in 1986, and serious injuries dropped from 167 in 1985 to 159 in 1986.
- The total number of General Aviation accidents declined from 2,229 in the first nine months of 1985 to 2,100 in the same nine-month period of 1986. Fatalities decreased slightly when the first nine months of 1986 is compared with the corresponding period of 1985, from 707 in 1985 to 698 in 1986. Fatal accidents also fell from 373 to 358 during the first nine months of 1985 and 1986. However, General Aviation serious injuries increased from 405 in the first nine months of 1985 to 447 in corresponding 1986 period.

### CHART 17.

#### U.S. GENERAL AVIATION\* FATALITIES, 1985 - 1986



P = Preliminary.

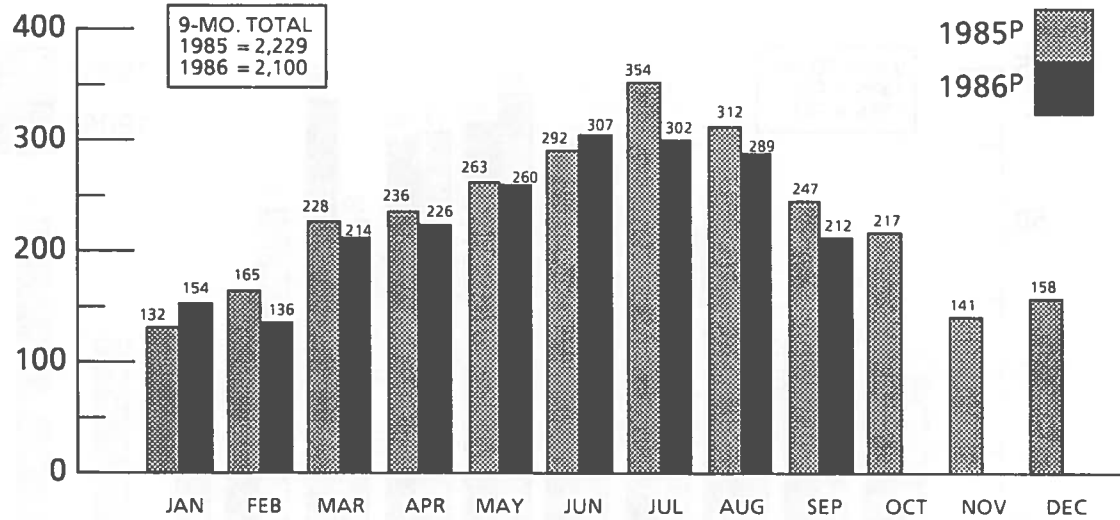
\* All operations other than those operations under 14 CFR 121, 125, 127, and 135.

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



## CHART 18.

### U.S. GENERAL AVIATION\* ACCIDENTS, 1985 - 1986



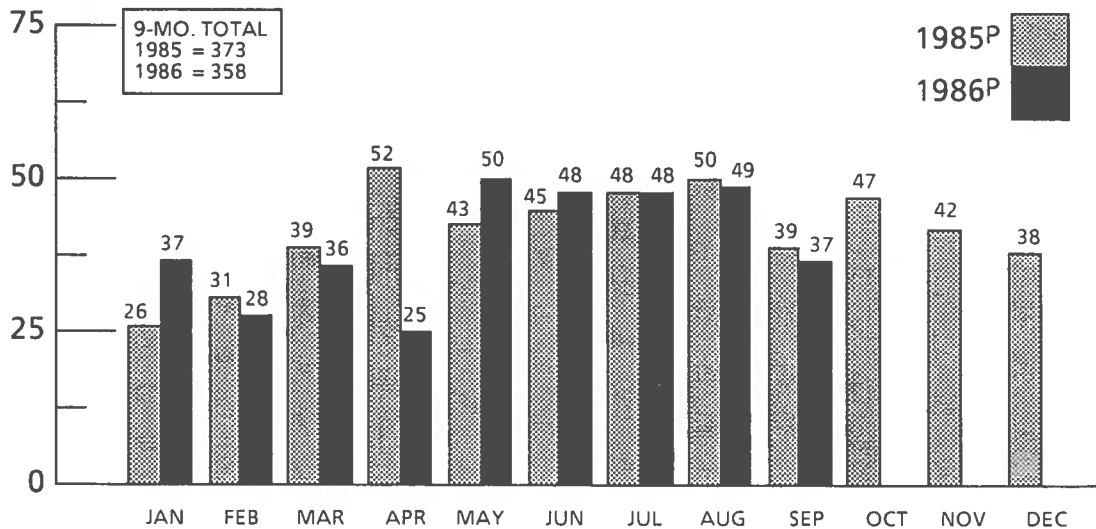
P = Preliminary.

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

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

## CHART 19.

### U.S. GENERAL AVIATION\* FATAL ACCIDENTS, 1985 - 1986



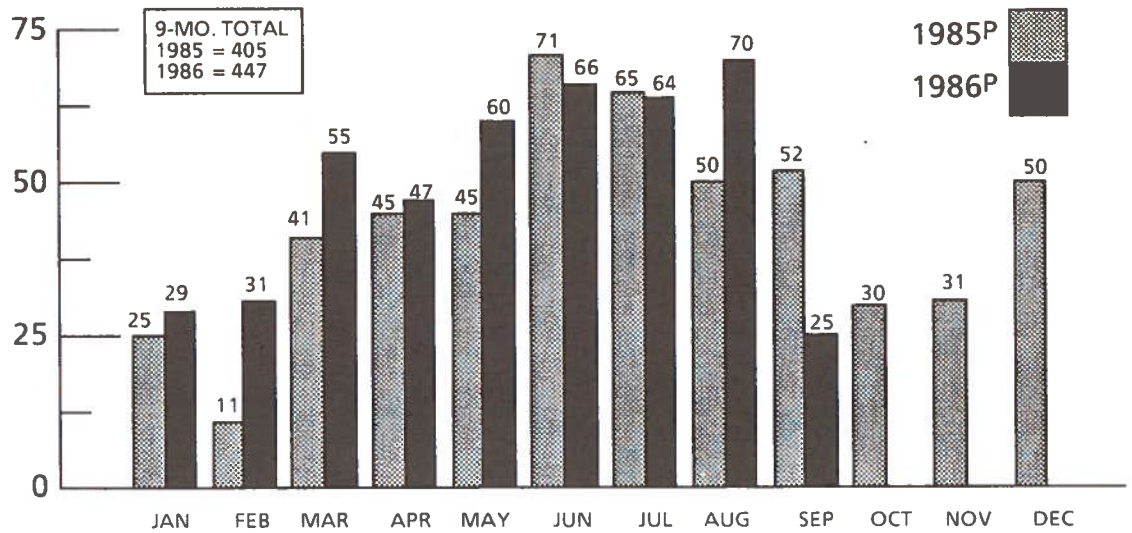
P = Preliminary.

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

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

## CHART 20.

### U.S. GENERAL AVIATION\* SERIOUS INJURIES, 1985 - 1986



P = Preliminary.

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

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

**TABLE 6.**

**GENERAL AVIATION FATALITIES BY TYPE OF FLYING, 1985 - 1986**

CLASSIFICATION	JANUARY		FEBRUARY		MARCH	
	1985	1986	1985	1986	1985	1986
PERSONAL	39	51	40	31	39	48
BUSINESS	7	17	13	8	14	15
CORPORATE/EXECUTIVE	4	2	4	0	1	0
AERIAL APPLICATION	0	1	0	0	0	0
INSTRUCTIONAL	2	1	7	3	2	6
OTHER	4	0	8	5	4	7
TOTAL GENERAL AVIATION	56	72	72	47	60	76

CLASSIFICATION	APRIL		MAY		JUNE	
	1985	1986	1985	1986	1985	1986
PERSONAL	82	38	53	65	32	48
BUSINESS	8	11	8	19	11	6
CORPORATE/EXECUTIVE	0	7	1	0	2	0
AERIAL APPLICATION	3	2	1	1	2	10
INSTRUCTIONAL	3	5	0	2	7	0
OTHER	9	4	15	11	17	34
TOTAL GENERAL AVIATION	105	67	78	98	71	98

CLASSIFICATION	JULY		AUGUST		SEPTEMBER	
	1985	1986	1985	1986	1985	1986
PERSONAL	57	58	77	76	46	35
BUSINESS	12	8	12	5	7	14
CORPORATE/EXECUTIVE	1	0	0	3	0	0
AERIAL APPLICATION	0	5	2	0	1	3
INSTRUCTIONAL	1	6	5	3	4	0
OTHER	14	16	4	1	22	7
TOTAL GENERAL AVIATION	85	93	100	88	80	59

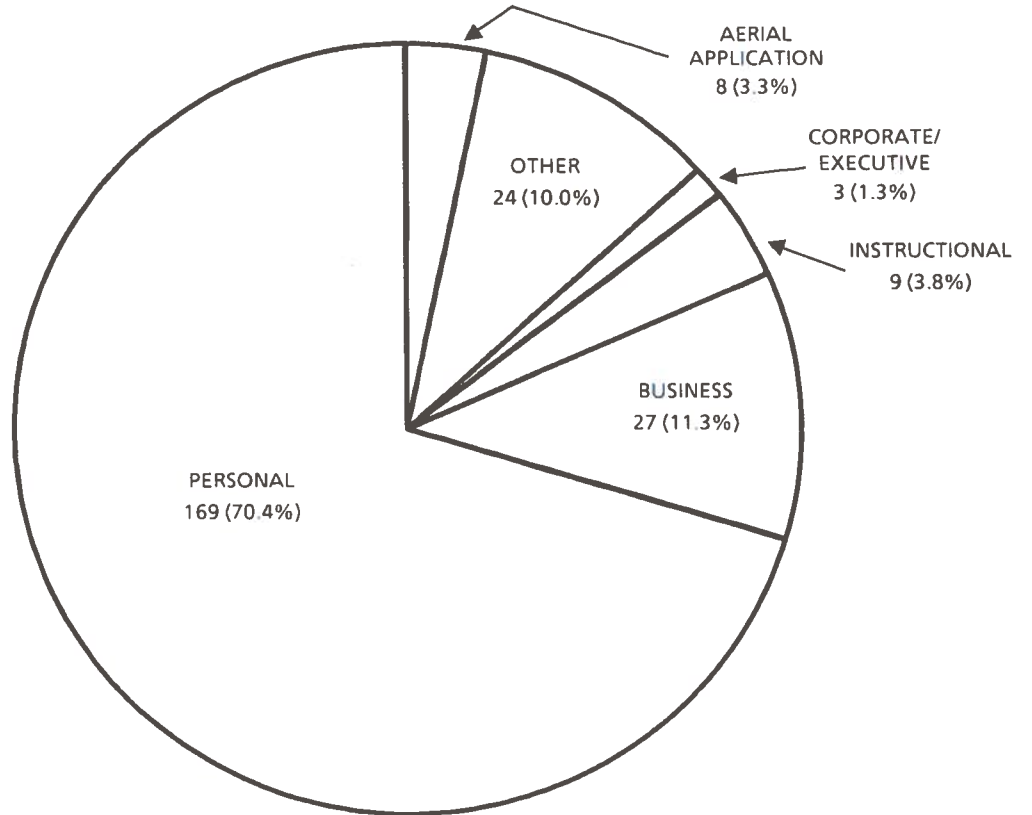
CLASSIFICATION	THIRD QUARTER			FIRST 9 MONTHS		
	1985	1986	% Chg	1985	1986	% Chg
PERSONAL	180	169	-6.1	465	450	-3.2
BUSINESS	31	27	-12.9	92	103	+12.0
CORPORATE/EXECUTIVE	1	3	+200.0	13	12	-7.7
AERIAL APPLICATION	3	8	+166.7	9	22	+144.4
INSTRUCTIONAL	10	9	-10.0	31	26	-16.1
OTHER	40	24	-40.0	97	85	-12.4
TOTAL GENERAL AVIATION	265	240	-9.4	707	698	-1.3

NOTE: 1985 and 1986 data are preliminary.

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

### CHART 21.

### GENERAL AVIATION FATALITIES BY AIRCRAFT CLASSIFICATION, THIRD QUARTER, 1986



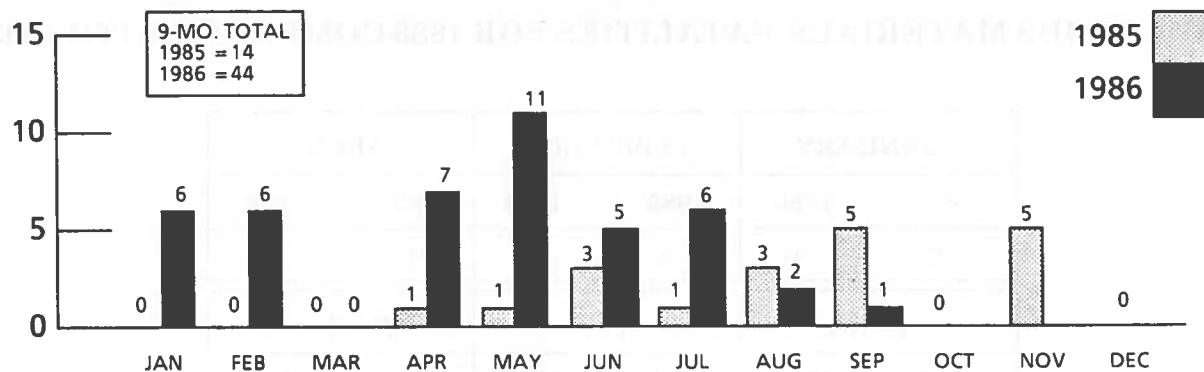
**TOTAL FATALITIES: 240**

Note: 1986 data are preliminary

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

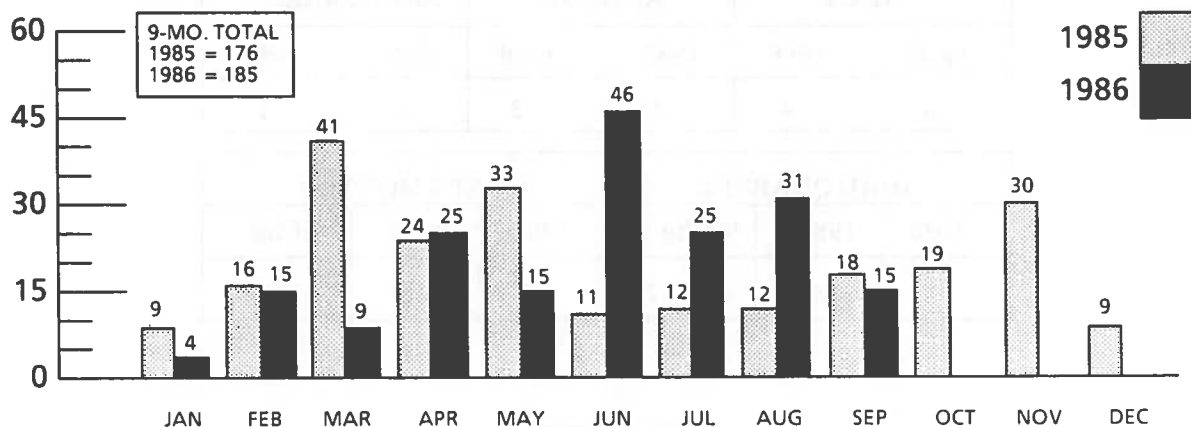
**CHART 32A.**

**HAZARDOUS MATERIALS MAJOR INJURIES\*, 1985-1986**



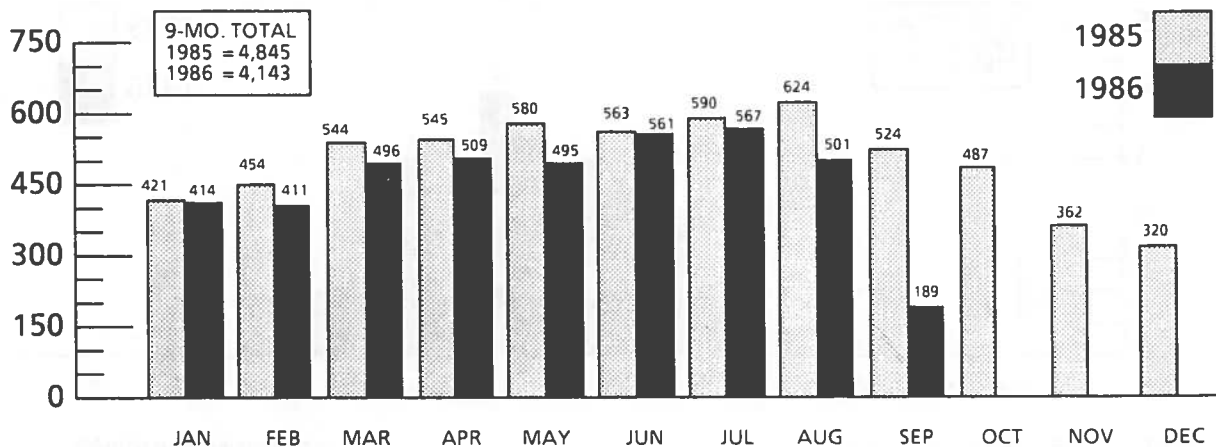
**CHART 32B.**

**HAZARDOUS MATERIALS MINOR INJURIES\*, 1985-1986**



**CHART 33.**

**HAZARDOUS MATERIALS INCIDENTS\*\*, 1985-1986**



\* See Glossary for definition.

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

Data supplied as of 01/09/87.

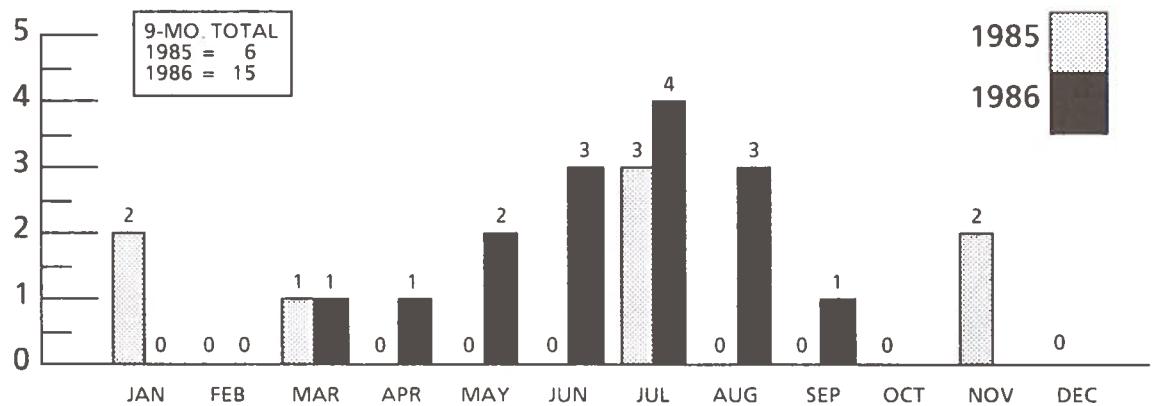
NOTE: 1986 data are preliminary.

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

**TABLE 8.**  
**HAZARDOUS MATERIALS FATALITIES FOR 1986 COMPARED WITH 1985**

JANUARY		FEBRUARY		MARCH	
1985	1986	1985	1986	1985	1986
2	0	0	0	1	1
APRIL		MAY		JUNE	
1985	1986	1985	1986	1985	1986
0	1	0	2	0	3
JULY		AUGUST		SEPTEMBER	
1985	1986	1985	1986	1985	1986
3	4	0	3	0	1
THIRD QUARTER			FIRST 9 MONTHS		
1985	1986	% Chg	1985	1986	%Chg
3	8	+166.7	6	15	+150.0

**CHART 31.**  
**HAZARDOUS MATERIALS FATALITIES, BY MONTH, 1985-1986**



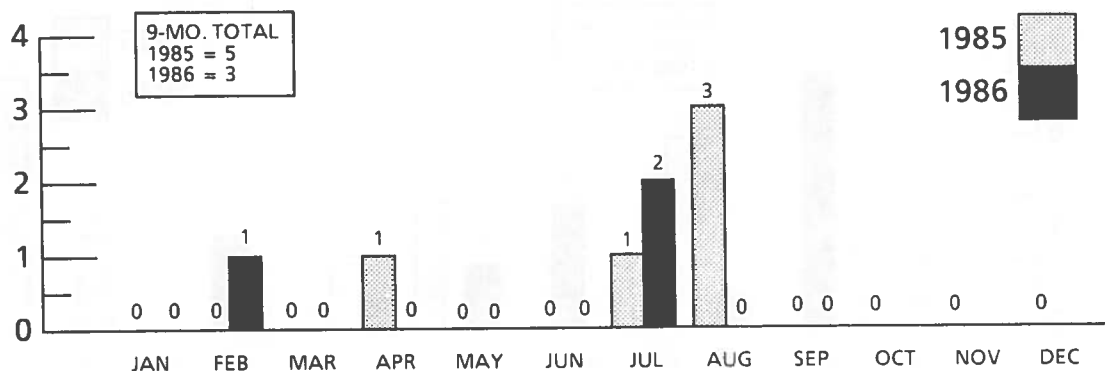
NOTE: 1986 data are preliminary.

Data supplied as of 01/09/87.

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

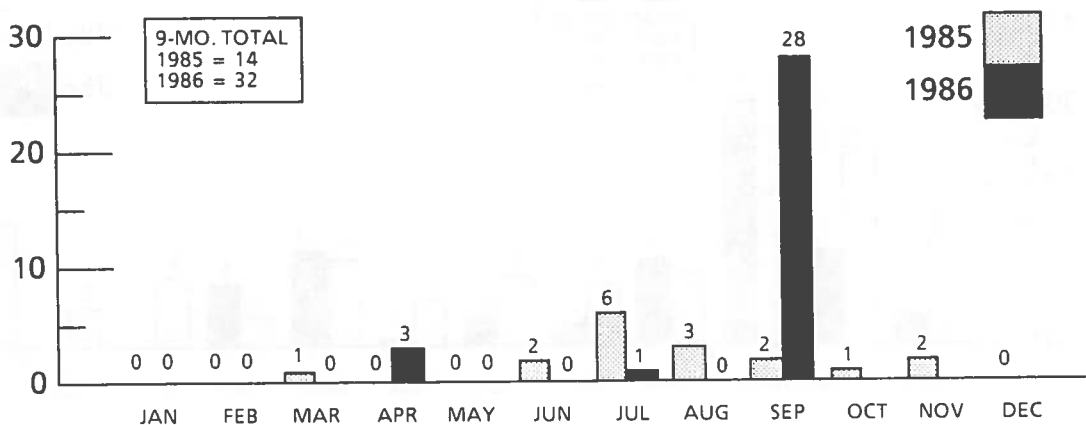
### CHART 30A.

#### LIQUID PIPELINE FATALITIES, 1985-1986



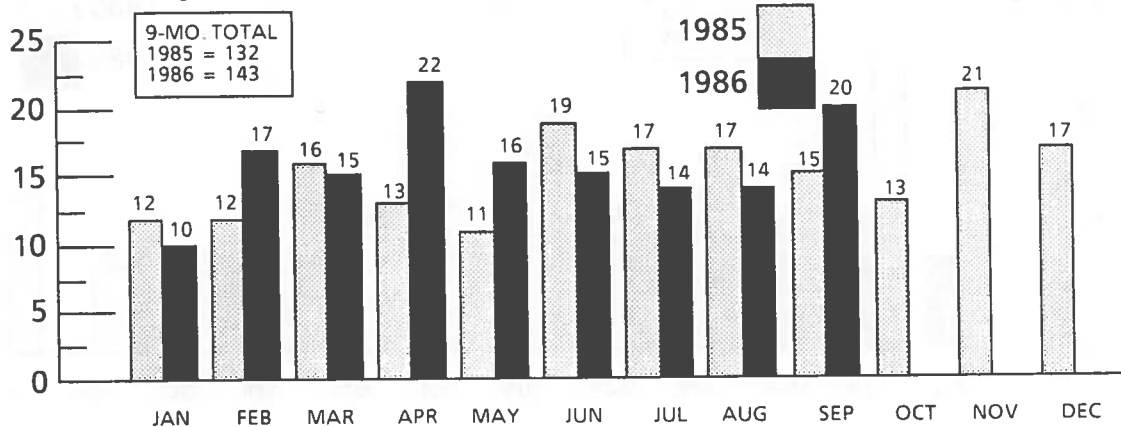
### CHART 30B.

#### LIQUID PIPELINE INJURIES, 1985-1986



### CHART 30C.

#### LIQUID PIPELINE LEAKS/FAILURES, 1985-1986

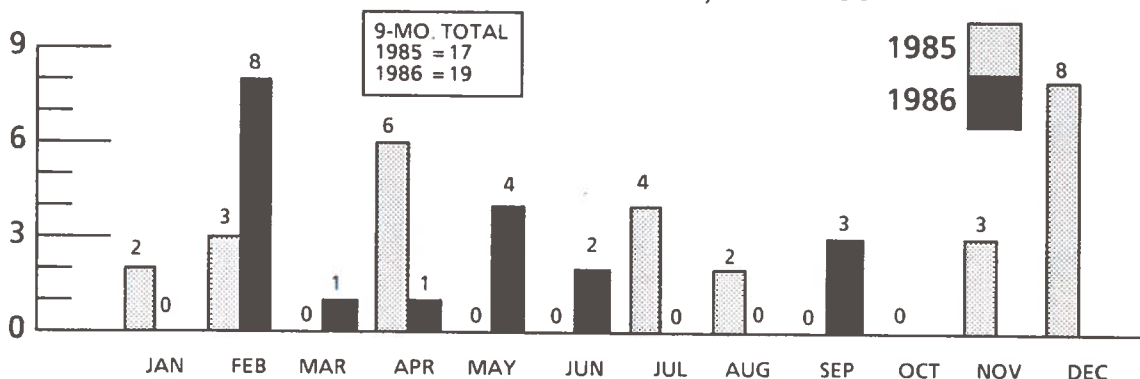


NOTE: 1986 data are preliminary.  
Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

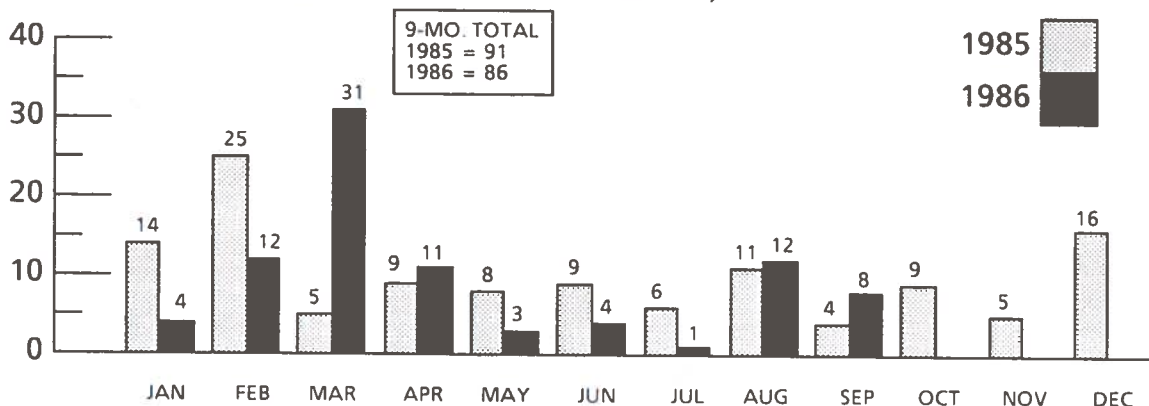
Data supplied as of 04/10/87.

SOURCE: Liquid Pipeline: DOT F 7000.0.  
RSPA, Office of Pipeline Safety, DPS-40.

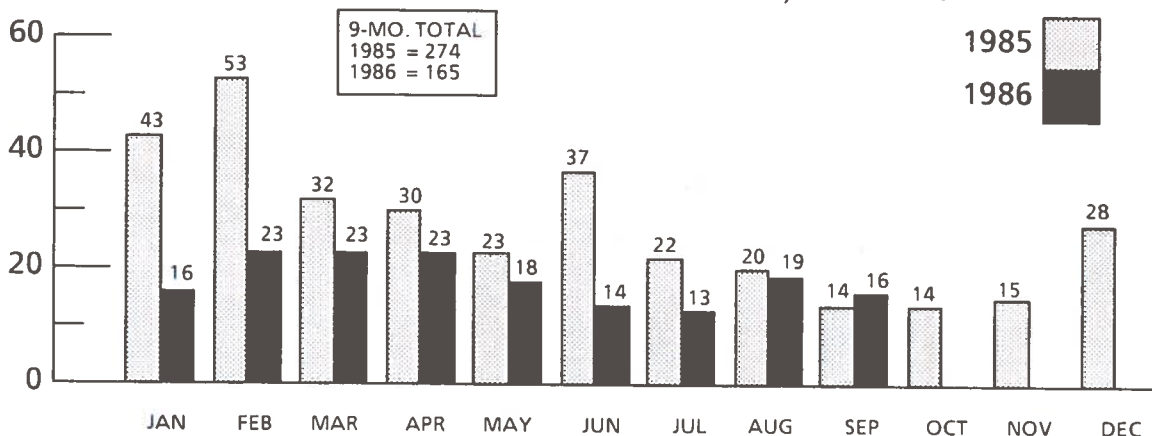
**CHART 29A.**  
**GAS PIPELINE FATALITIES, 1985-1986**



**CHART 29B.**  
**GAS PIPELINE INJURIES, 1985-1986**



**CHART 29C.**  
**GAS PIPELINE LEAKS/FAILURES, 1985-1986**



NOTE: 1986 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 04/10/87.

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



**TABLE 7.**

**PIPELINE FATALITIES FOR 1986 COMPARED WITH 1985**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
GAS PIPELINE	2	0	3	8	0	1
LIQUID PIPELINE	0	0	0	1	0	0
TOTAL	2	0	3	9	0	1

	APRIL		MAY		JUNE	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
GAS PIPELINE	6	1	0	4	0	2
LIQUID PIPELINE	1	0	0	0	0	0
TOTAL	7	1	0	4	0	2

	JULY		AUGUST		SEPTEMBER	
CLASSIFICATION	1985	1986	1985	1986	1985	1986
GAS PIPELINE	4	0	2	0	0	3
LIQUID PIPELINE	1	2	3	0	0	0
TOTAL	5	2	5	0	0	3

	THIRD QUARTER			FIRST 9 MONTHS		
CLASSIFICATION	1985	1986	% Chg	1985	1986	% Chg
GAS PIPELINE	6	3	-50.0	17	19	+11.8
LIQUID PIPELINE	4	2	-50.0	5	3	-40.0
TOTAL	10	5	-50.0	22	22	0.0

NOTE: 1986 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 04/10/87.

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

# **MATERIALS TRANSPORT**

## **PIPELINES**

- Fatalities resulting from incidents involving pipelines transporting gas and liquid materials remained constant in the first nine months of 1985 and 1986 -- 22 fatalities were reported for each period. However, the number of fatalities occurring during the third quarter of 1986 decreased when compared with the same period of 1985, as shown in Table 7.
- The number of gas and liquid pipeline leaks/failures experienced a decrease during the third quarter of 1986 and the first nine months of 1986 when compared with the same 1985 periods. There were 105 leaks/failures in the third quarter of 1985 versus 96 in 1986 and 406 during the first nine months of 1985 compared with 308 in 1986.
- Gas and liquid pipeline injuries increased from 32 in the third quarter of 1985 to 50 in the third quarter of 1986 and from 105 during the first nine months of 1985 to 118 in the corresponding period of 1986.

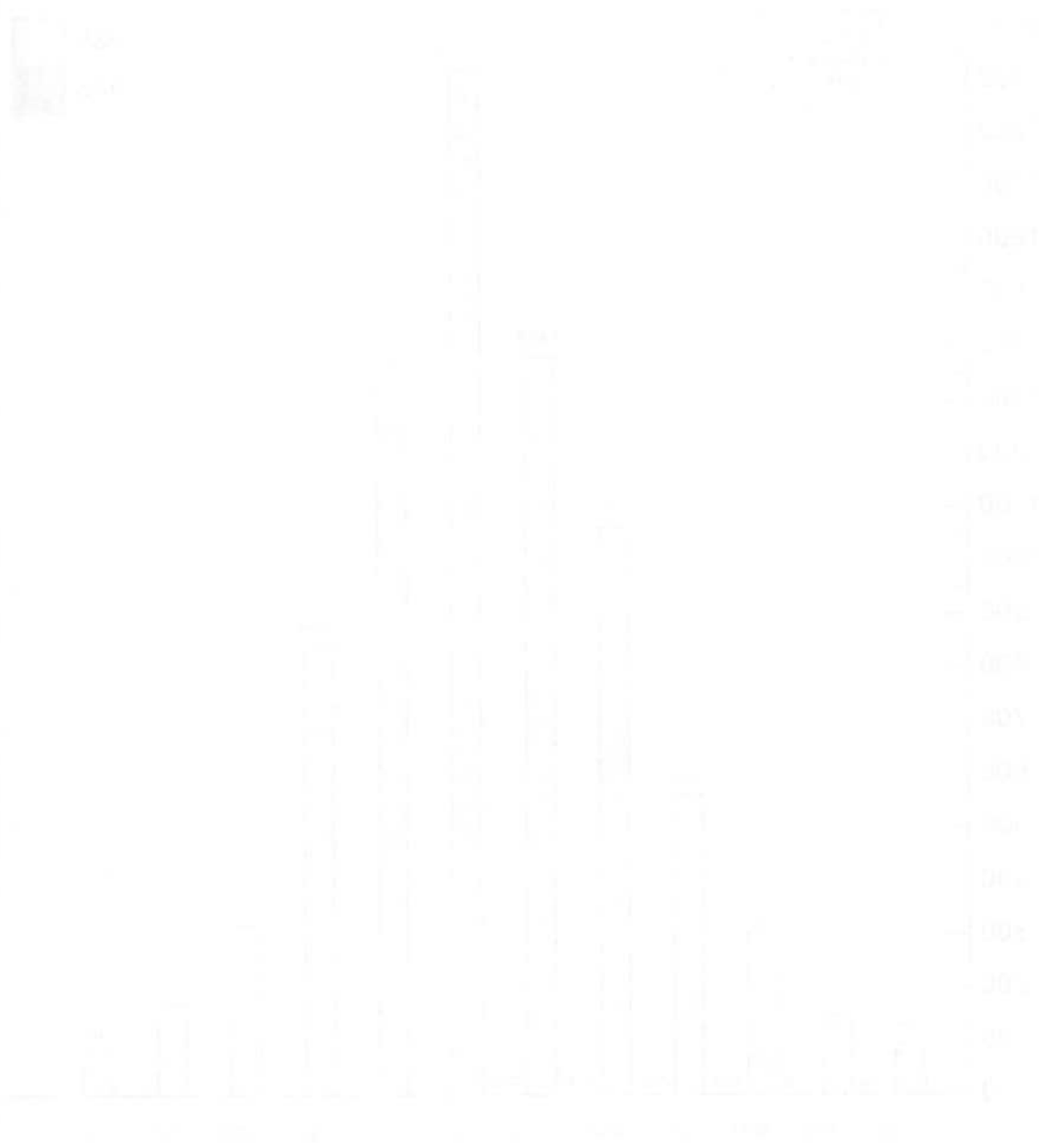
## **HAZARDOUS MATERIALS**

- The number of hazardous materials fatalities increased from three in the third quarter of 1985 to eight in the third quarter of 1986. The number of fatalities also increased when the first nine months of 1986 is compared with the same period of 1985 -- from six in 1985 to 15 in 1986.
- The number of incidents involving the transportation of hazardous materials declined in the third quarter of 1986 and also in the first nine months of 1986 when compared with the same periods of 1985. There were 1,738 incidents reported during the third quarter of 1985 and 1,257 during the corresponding period of 1986. The nine month totals for 1985 and 1986 were 4,845 and 4,143, respectively.
- When the third quarter of 1985 is compared with the third quarter of 1986, major injuries remained constant, with nine being reported in each quarter. However, during the same periods, minor injuries increased from 42 to 71.

Major injuries also rose when the first nine months of 1986 are compared with the first nine months of 1985 -- from 14 in 1985 to 44 in 1986, while minor injuries increased from 176 in the first nine months of 1985 to 185 in the corresponding 1986 period.

# FIGURE 1

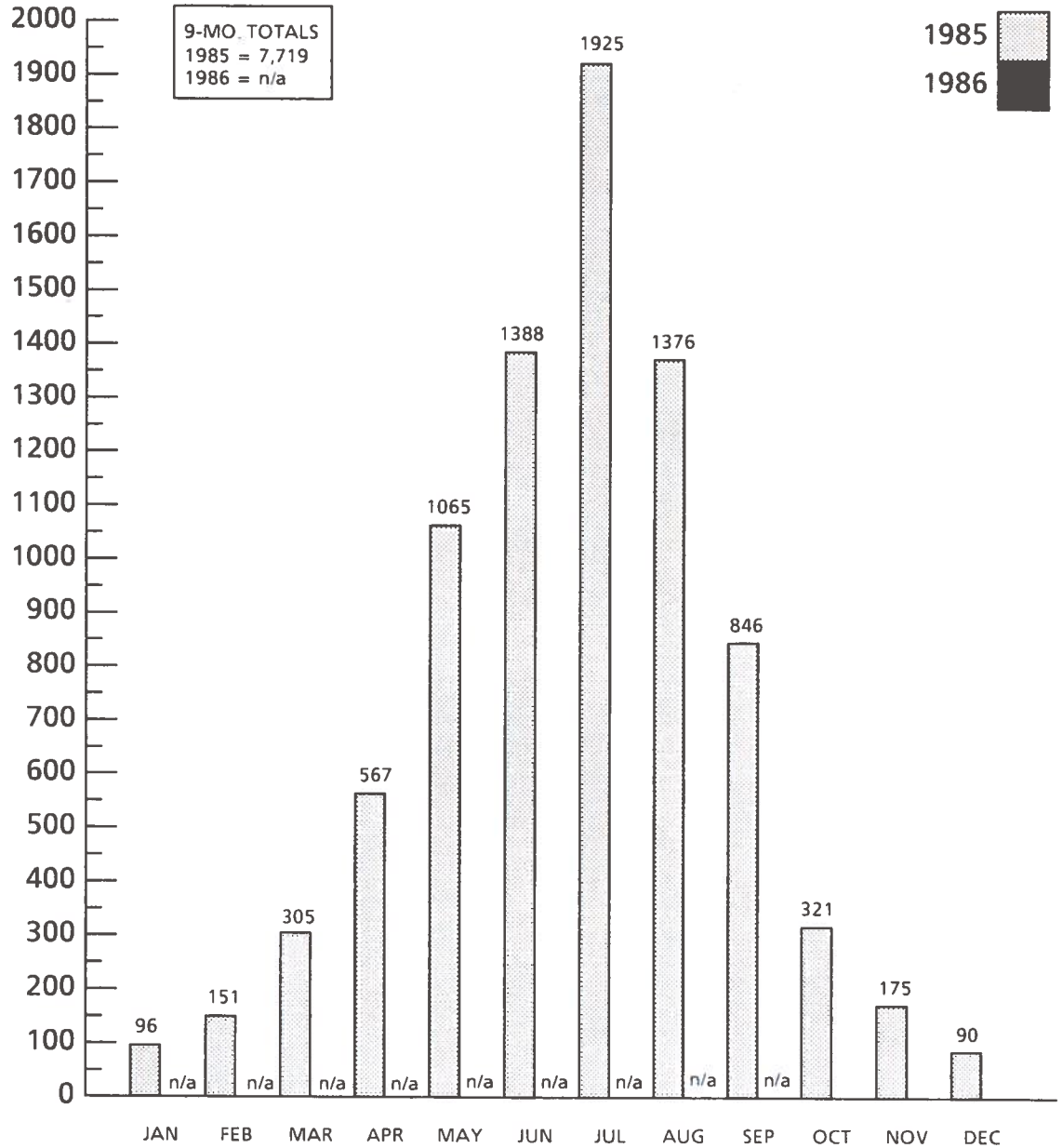
MEAN ANNUAL RAINFALL (INCHES) BY MONTH AND YEAR



Source: National Oceanic and Atmospheric Administration, National Climatic Data Center

# CHART 28.

## RECREATIONAL BOATING, REPORTED ACCIDENTS 1985-1986

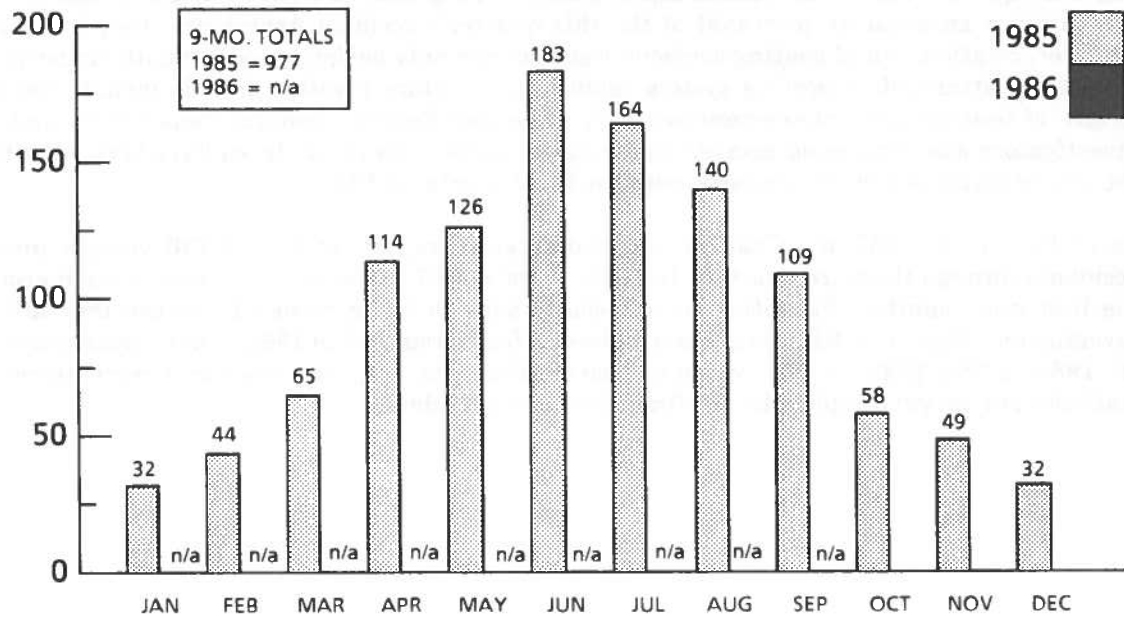


n/a: Not available.

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

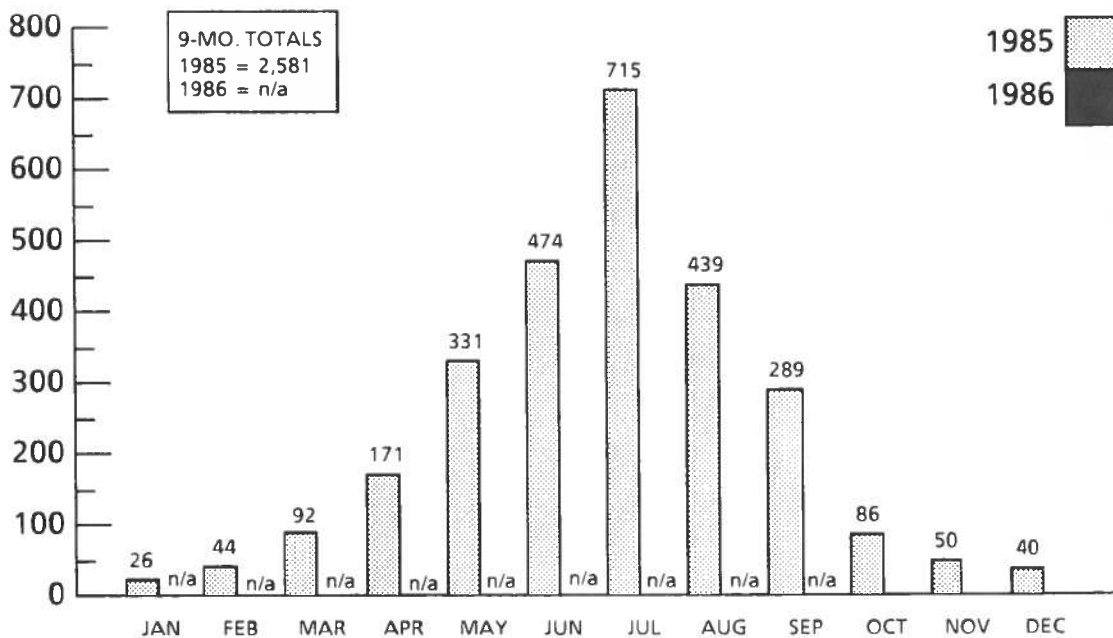
### CHART 26.

#### RECREATIONAL BOATING FATALITIES, 1985-1986



### CHART 27.

#### RECREATIONAL BOATING INJURIES, 1985-1986



n/a: Not available.

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

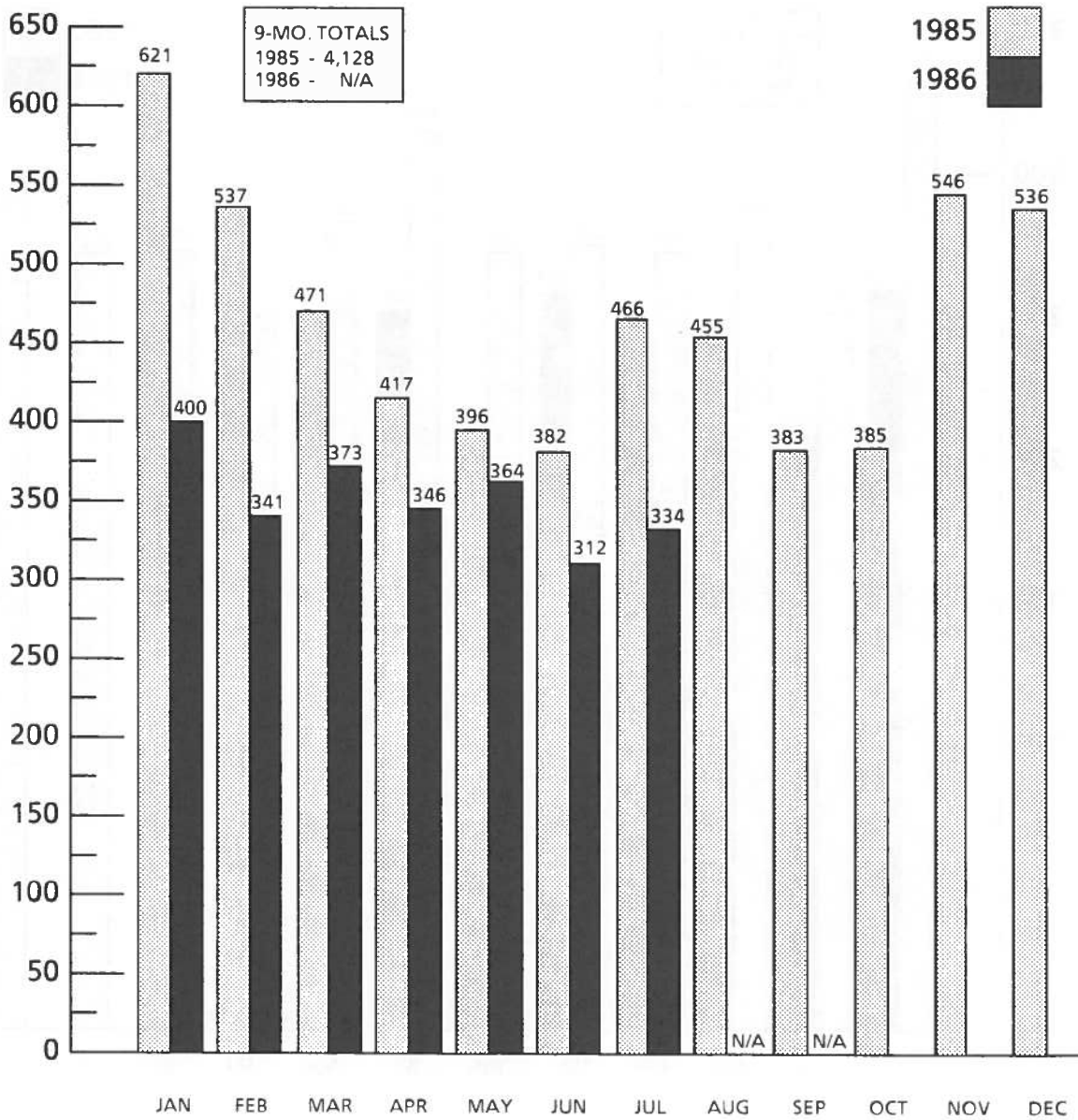
## RECREATIONAL BOATING

The third quarter 1986 Recreational Boating accident statistics are not complete at this time. Since they are not an accurate portrayal of the 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. So far, seven percent fewer fatalities have been reported when the third quarter of 1986 is compared with the third quarter of 1985.

As of January 8, 1987, the Coast Guard had received reports of only 6,730 vessels involved in accidents through the third quarter. In 1985, there were 7,719 vessels reported to be in accidents in the first nine months. Fatalities are especially slow in being reported because they are usually investigated. Reports of 910 have been received so far, versus 977 in 1985. The comparison of injuries is: 1986 - 2,365; 1985 - 2,581. When comparing these figures, remember that recreational boating statistics are not yet complete for the first nine month of 1986.

## CHART 25.

### VESSELS\* INVOLVED IN WATERBORNE ACCIDENTS, 1985-1986



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

NOTE: Data for 1985 and 1986 are incomplete.

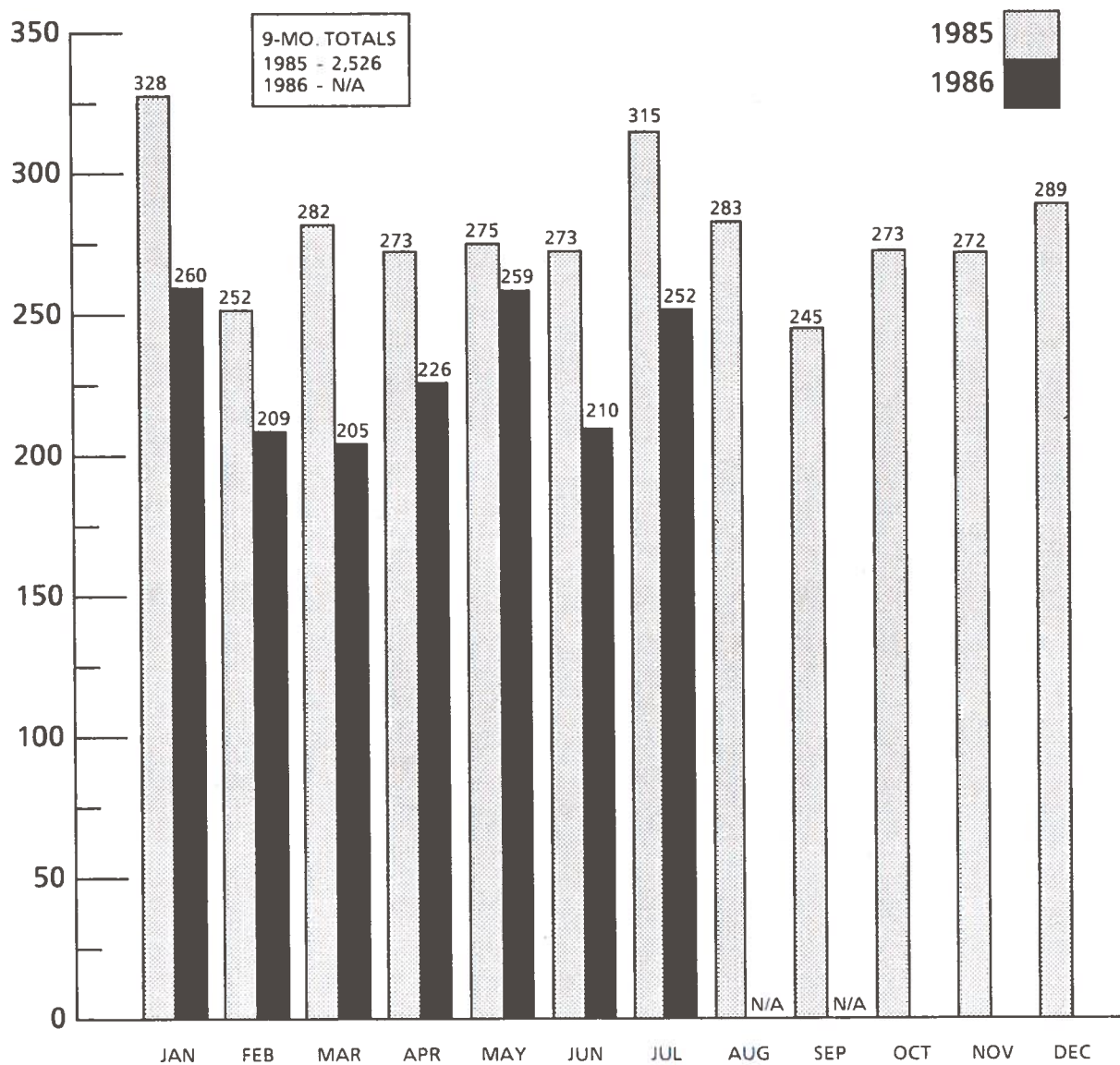
More than one vessel may be involved in a marine accident.

N/A: Not available.

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

## CHART 24.

### WATERBORNE ACCIDENTS BY MONTH, 1985-1986



NOTE: More than one vessel may be involved in a marine accident.  
Data for 1985 and 1986 are incomplete.

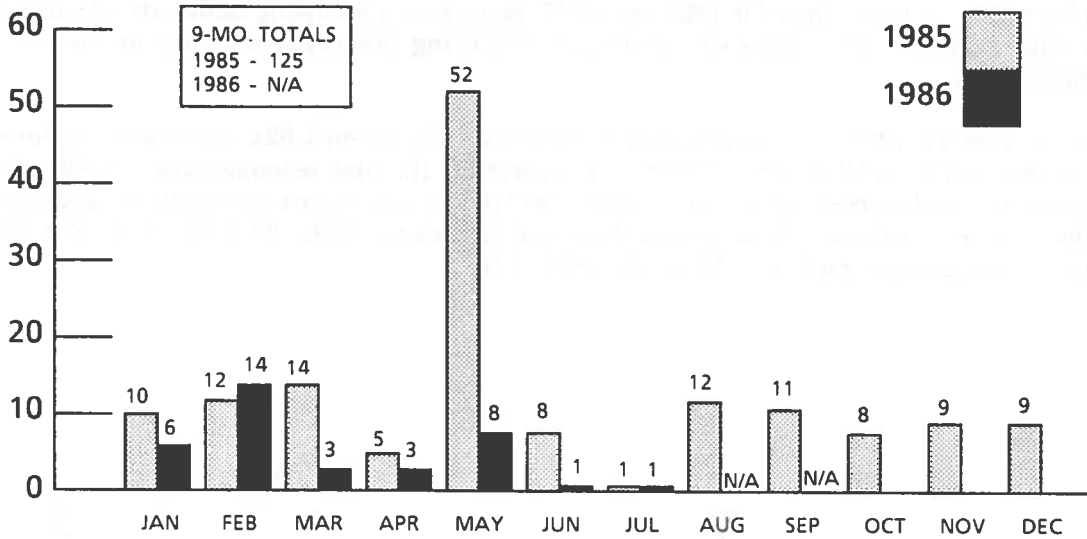
N/A: Not available.

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



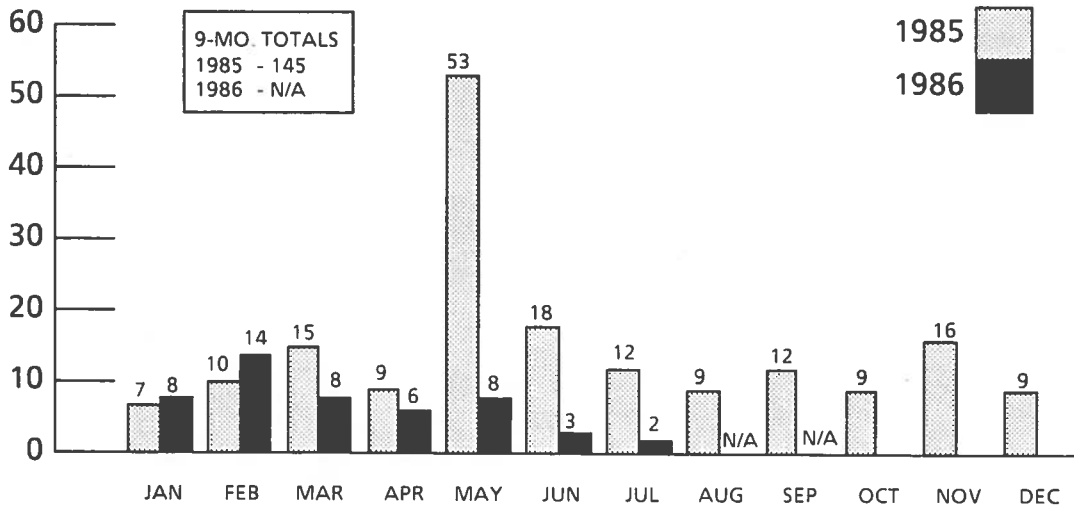
### CHART 22.

#### WATERBORNE FATALITIES RESULTING FROM VESSEL CASUALTIES\*, 1985 - 1986



### CHART 23.

#### WATERBORNE INJURIES RESULTING FROM VESSEL CASUALTIES\*, 1985 - 1986



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

NOTE: Data for 1985 and 1986 are incomplete.

N/A: Not available.

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

# **MARINE**

## **WATERBORNE**

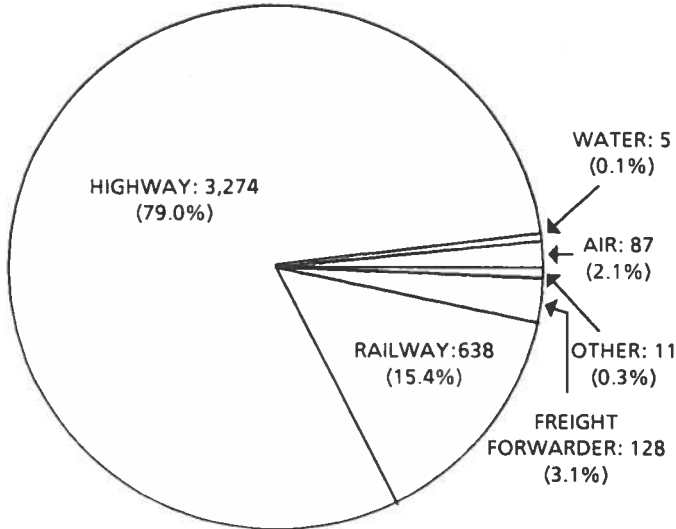
Users of Waterborne statistics should exercise caution when comparing accident, fatality and injury data for 1985 and 1986. Data for 1985 and 1986 shown in the following tables are incomplete at this time since many of the marine casualties are still being investigated or are in various stages of completion.

As of January 21, 1987, the Coast Guard has received reports on 1,621 waterborne accidents in the first seven months of 1986; while 1,998 were reported in the first seven months of 1985. During the same seven-month period, 2,470 vessels were involved in waterborne accidents in 1986 versus 3,290 in 1985. The comparison of fatalities for the seven months is: 1986 - 36, 1985 - 102. The comparison of injuries for the same period is: 1986 - 49, 1985 - 124.

### CHART 34.

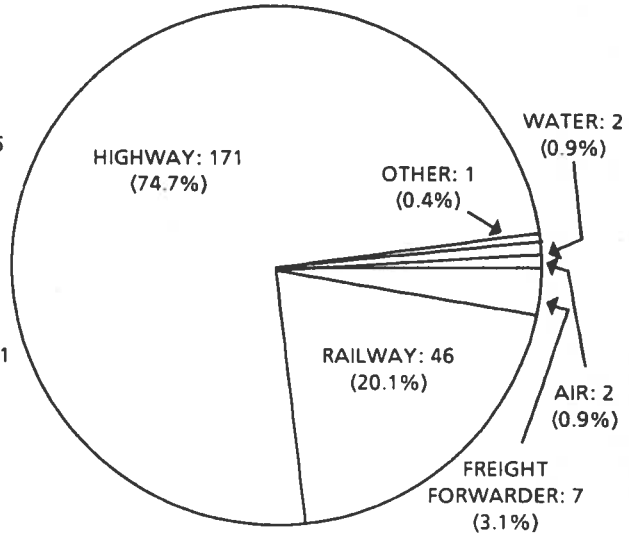
## HAZARDOUS MATERIALS INCIDENTS, INJURIES, DEATHS AND DAMAGES BY MODE, FIRST NINE MONTHS 1986<sup>P</sup>

#### Incidents



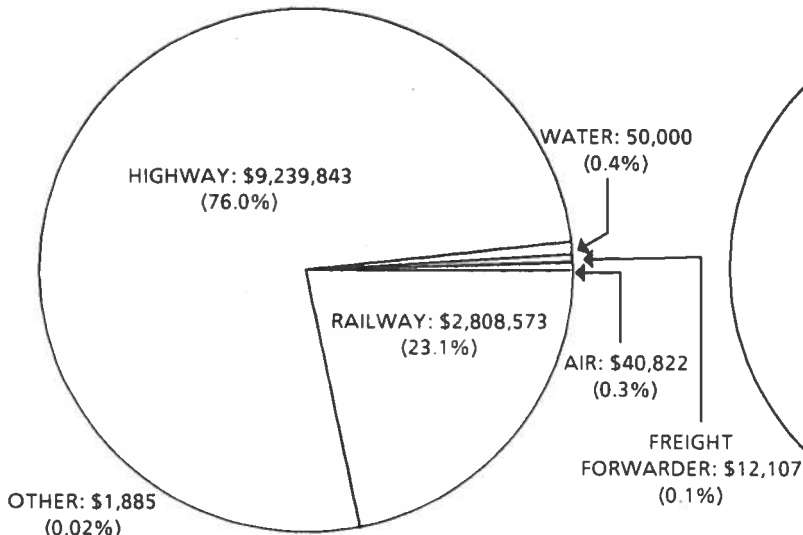
**TOTAL INCIDENTS: 4,143**

#### Injuries\*



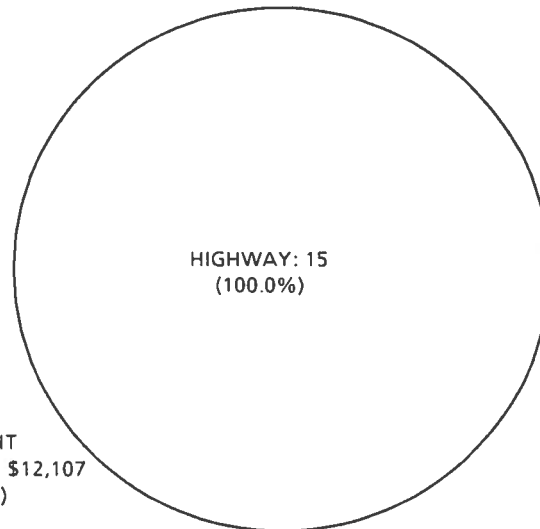
**TOTAL INJURIES: 229**

#### Damages



**TOTAL DAMAGES: \$12,153,230**

#### Deaths



**TOTAL DEATHS: 15**

<sup>P</sup> = Preliminary.

\* Includes Major and Minor Injuries.

Data supplied as of 01/09/87.

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



# **MAJOR DOT SAFETY REGULATIONS**

**JULY 1, 1986 - SEPTEMBER 30, 1986**

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 140 and 142 -- Workplace Safety and Health Requirements for Facilities on the Outer Continental Shelf**

The Coast Guard is issuing regulations concerning personal protective equipment and general working conditions on Outer Continental Shelf (OCS) facilities. These regulations address the need identified in the OCS Lands Act Amendments of 1978 to promote safe working conditions by regulating hazards in the workplace. This rule is part of a continuing effort by the Coast Guard to improve safety of life and property on the OCS. Effective Date January 12, 1987. (51 FR 25054, July 10, 1986.)

## **FEDERAL AVIATION ADMINISTRATION**

### **14 CFR Parts 25 and 121 -- Improved Flammability Standards for Materials Used in the Interiors of Transport Category Airplane Cabins**

These amendments upgrade the fire safety standards for cabin interior materials in transport category airplanes by: (1) establishing new fire test criteria for type certification; (2) requiring that the cabin interiors of airplanes manufactured after a specified date and used in air carrier service comply with these new criteria; and (3) requiring that the cabin interiors of all other airplanes type certificated after January 1, 1985, and used in air carrier service, comply with these new criteria upon the first replacement of the cabin interior after a specified date. These amendments are the result of research and fire testing and are intended to increase airplane fire safety.

The FAA also requests additional comments on the final flammability criteria for possible refinement of either the test procedures or acceptance criteria. Effective date August 20, 1986. (51 FR 26026, July 21, 1986.)

## **AIRWORTHINESS DIRECTIVES**

### **14 CFR Part 39 -- Fokker Model F27 Series Airplanes**

This amendment adds a new airworthiness directive (AD) that requires inspection, and modification or replacement, as necessary, of the hinge installations on the forward cabin partition bulkhead and door of certain Fokker Model F27 series airplanes to prevent the possible blockage of the doorway. One case was reported of a partially blocked evacuation path through the doorway caused by the detached door during a crash landing. The blockage was attributed to cabin floor deformation which

lifted the door to a lift-off hinge arrangement and to door inertia. Blockage of an evacuation path would adversely affect evacuation. Effective date August 7, 1986. (51 FR 23731, July 1, 1986.)

#### **14 CFR Part 39 -- Sikorsky Model S-76A Helicopters**

This amendment amends an existing airworthiness directive (AD) which requires frequent repetitive inspections of the vertical pylon on Sikorsky Model S-76A helicopters beginning at 2,400 hours time-in-service except for those helicopters which have been modified to strengthen the vertical pylon. This amendment is needed to require more frequent repetitive inspections of the vertical pylon for additional helicopters and for the helicopters with a modified vertical pylon. It is prompted by cracking of the pylon forward spar which has been found in the modified vertical pylons. Effective date July 10, 1986. (51 FR 24134, July 2, 1986.)

#### **14 CFR Part 39 -- British Aerospace Model BAe 125-800A Series Airplanes**

This amendment adds a new airworthiness directive (AD) that requires incorporation of a modification to the Electronic Flight Instrument System (EFIS) power supply on certain British Aerospace Model BAe 125-800A series airplanes. This action is prompted by a report of overheating in the EFIS power supply. This condition, if not corrected, can lead to loss of electrical power to the EFIS, which can result in loss of certain critical flight instruments. Effective date August 8, 1986. (51 FR 24134, July 2, 1986.)

#### **14 CFR Part 39 -- Mitsubishi Heavy Industries, Limited, Model MU-2B, MU 2B-10, MU-2B-15, MU-2B-20, MU-2B-25, MU-2B-26, MU-2B-30, MU-2B-35, and MU-2B-36 Airplanes**

This amendment supersedes an existing airworthiness directive (AD) 80-18-12R1 (Amendment 39-3956), applicable to certain Mitsubishi Heavy Industries, Limited (MHI), MU-2B, -10, -15, -20, -25, -26, -30, -35, and -36 airplanes. The existing AD requires repetitive inspections and replacement, as necessary, of certain nose landing gear strut assembly components on the above airplanes. The superseding AD shortens the hours time-in-service (TIS) for accomplishment of the initial inspection. The new AD is needed because the FAA has learned of three incidents of cracks in the nose landing gear outer cylinder assembly which were discovered prior to the first inspection specified in AD 80-18-12R1. A crack in the nose landing gear outer cylinder assembly could lead to collapse of the nose landing gear. This action will help prevent failure of the nose landing gear strut. Effective date August 13, 1986. (51 FR 24812, July 9, 1986.)

#### **14 CFR Part 39 -- Rolls-Royce Limited RB211-22B,-535C, and -524 Series Turbofan Engines**

This amendment adopts a new airworthiness directive (AD) which requires removal from service of stage 1 and 2 high pressure compressor (HPC) disk assemblies installed on certain Rolls-Royce RB211 series turbofan engines. The AD is needed to prevent fracture of the stage 1 HPC disk, due to material property deviations induced during the manufacturing process, which could result in uncontained engine failure. Effective date August 14, 1986. (51 FR 25192, July 11, 1986.)

#### **14 CFR Part 39 -- DeHavilland Model DHC-7 Series Airplanes**

This amendment adds a new airworthiness directive (AD) that requires modification of the internal circuitry of the paralleling control box of the 400 Hz AC electrical power system on certain Model DHC-7 airplanes. Reports indicate that failures of the 400 Hz inverters do not activate crew warning

lights. This action is necessary to assure proper operation of the crew warning lights and thereby reduce the potential for complete failure. Effective date September 4, 1986. (51 FR 25521, July 15, 1986.)

#### **14 CFR Part 39 -- McDonnell Douglas Model DC-9 and C-9 (Military) Series Airplanes, Fuselage Numbers 1 Through 1242**

This amendment amends an existing airworthiness directive (AD), applicable to certain McDonnell Douglas Model DC-9 and C-9 (Military) series airplanes, that requires inspection of the elevator boost cylinder rod end nut. This amendment is necessary to revise the fuselage number applicability and provide a modification that constitutes terminating action for repetitive inspection requirements of this AD. Effective August 21, 1986. (51 FR 25872, July 17, 1986.)

#### **14 CFR Part 39 -- Boeing Model 727 and 737 Series Airplanes**

This action clarifies Airworthiness Directive (AD) 83-01-05, applicable to all Boeing Models 727 and 737 series airplanes, which requires installation of engine start valve position indicator in the cockpit. By its terms, the existing AD applies to all Model 727 and 737 airplanes. However, the AD was issued prior to type certification of the Model 737-300, was not intended to apply to it, and cannot be applied appropriately to this model since it is equipped with a different starting system. This action is necessary to exclude the Model 737-300 from the applicability of the AD. Effective date August 4, 1986. (51 FR 26228, July 22, 1986.)

#### **14 CFR Part 39 -- Cessna Models 150, 150A, 150B, and 150C Airplanes**

This action adopts a new airworthiness directive (AD) applicable to Cessna Models 150, 150A, 150B, and 150C airplanes which have been modified by the installation of an engine larger in size and/or horsepower than the Continental O-200-A. The AD requires weighing the airplane to determine the empty weight and center of gravity (cg) location and, if necessary, the installation of ballast. This action is necessary to prevent operation of the airplane outside the approved cg envelope wherein unknown flight characteristics could lead to loss of control of the airplane. Effective date July 24, 1986. (51 FR 26229, July 22, 1986.)

#### **14 CFR Part 39 - DeHavilland DHC-6 Models 1, 100, 200 and 300 Airplanes**

This amendment adopts a new airworthiness directive (AD) applicable to DeHavilland Models DHC-6 Models 1, 100, 200 and 300 airplanes which requires inspection of the four horizontal tail attachment brackets for loose rivets and subsequent replacement of the rivets. The manufacturer and the FAA have received reports that operators have found loose rivets in the tailplane front and rear spar attachment brackets on airplanes which have been modified previously in accordance with DeHavilland Service Bulletin (S/B) No. 6/438, which could result in the loss of the stabilizer. The inspection will detect the loose rivets and preclude the possible loss of the stabilizer. Effective date July 25, 1986. (51 FR 26231, July 22, 1986.)

#### **14 CFR Part 39 -- General Electric CF6-80A/A1/A2/A3 Turbofan Engines**

This amendment adopts a new airworthiness directive (AD) which requires inspection of certain stage 1 high pressure turbine (HPT) disks installed in General Electric CF6-80A/A1/A2/A3 turbofan

engines. The AD is needed to prevent cracking of the stage 1 HPT disk which could result in an uncontained engine failure. Effective date July 23, 1986. (51 FR 26376, July 23, 1986.)

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

This amendment adds a new airworthiness directive (AD) applicable to certain Boeing Model 757-200 airplanes that requires inspection for proper self-locking torque of certain self-locking nuts, and replacement, if necessary. This action is prompted by detection of several nuts that were found to have insufficient self-locking torque for proper self-locking. This situation, if not corrected, could result in the loss of an affected nut and the loss of proper retention of the associated airplane component. Effective date September 5, 1986. (51 FR 27523, August 1, 1986.)

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

This amendment adopts a new airworthiness directive (AD) which requires purging of wing spar mounted fuel fire shutoff valves on McDonnell Douglas DC-10 and KC-10A (Military) series airplanes. This AD is prompted by reports of restricted movement of emergency fire handles that are necessary for emergency fuel shutoff and to discharge the fire agent. This AD is necessary to reduce the potential unsafe condition resulting from the loss of fuel shutoff and fire extinguishing capabilities. Effective date August 18, 1986. (51 FR 27526, August 1, 1986.)

#### **14 CFR Part 39 -- SAAB-Fairchild Corporation Model SF340A Series Airplanes**

The action amends and 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 SAAB-Fairchild Corporation Model SF-340A series airplanes by individual telegrams. This AD requires a series of operating restrictions in response to reports of engine flameouts. This action is necessary to prevent engine flameouts which may occur during flight in icing conditions. Terminating action for certain of the operation restrictions is also provided. Effective date August 18, 1986. (51 FR 27527, August 1, 1986.)

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

This amendment adds a new airworthiness directive (AD) which requires the inspection for corrosion, repair if necessary, and optional modification of the aft pressure bulkhead web and lower chord on certain Boeing Model 747 airplanes. This action is prompted by reports of corrosion in the aft pressure bulkhead web and lower chord that, if not corrected, could result in possible loss of cabin pressure. Effective date September 10, 1986. (51 FR 27830, August 4, 1986.)

#### **14 CFR Part 39 -- Boeing Model 747 Series Airplanes With the Escape Slide Cool Gas Generator Inflation System Installed**

This amendment adds a new airworthiness directive (AD) which requires inspection and replacement, if necessary, of the self-locking nuts used to secure the escape slide inflation and the manual inflation cable to the cool gas generator trigger mechanism on certain Boeing Model 747 airplanes. This action is prompted by several reports of defective (insufficient locking torque) self-locking nuts. This condition, if not corrected, could prevent automatic inflation or manual inflation depending on which nut is loose. If both nuts are sufficiently loose, the slide will not inflate. Failure



to automatically inflate may cause a delay in inflation or the assumption that the slide is not usable, thus delay and jeopardizing successful emergency evacuation of the airplanes. Effective date September 10, 1986. (51 FR 27832, August 4, 1986.)

#### **14 CFR Part 39 -- SAAB-Fairchild Corporation Model SF-340A Series Airplanes**

This amendment adds a new airworthiness directive (AD) applicable to SAAB-Fairchild airplanes, that requires replacement of the pitch trim synchronizer with an elevator synchronizer in which loading resistors have been added. This action is necessary to prevent uncommanded motion of the right-hand actuator to its end-limit position. Such uncommanded action could result in sudden nose up attitude without warning. Effective date September 10, 1986. (51 FR 27833, August 4, 1986.)

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

This amendment adds a new airworthiness directive (AD) applicable to certain Boeing Model 747 airplanes, which requires an inspection for loose or failed bolts used for the forward attachment of the Numbers 1, 2, 3, 6, 7, and 8 trailing edge flap tracks to the wing lower surfaces. This action is prompted by a recent inflight separation of a portion of the Number 2 flap assembly. This condition, if not corrected, could lead to reduced controllability of the airplane. Effective date September 11, 1986. (51 FR 28061, August 5, 1986.)

#### **14 CFR Part 39 -- SAAB-Fairchild Corporation Model SF-340A Series Airplanes**

This amendment adds a new airworthiness directive (AD) that requires modification to the engine cable controls on certain SAAB-Fairchild Model SF-340A airplanes. This action is prompted by reports of an incorrect fitting of O-ring seals. This situation, if not corrected, could lead to freezing of the engine cable(s). Effective date September 11, 1986. (51 FR 28063, August 5, 1986.)

#### **14 CFR Part 39 -- Boeing Model 737 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires inspection for proper self-locking torque of certain self-locking nuts on certain Boeing Model 737 airplanes, and replacement, if necessary. This action is prompted by detection of several nuts that were found to have insufficient self-locking torque for proper self-locking. This condition, if not corrected, could result in the loss of an affected nut and the loss of proper retention of the associated airplane component. Effective date September 11, 1986. (51 FR 28065, August 5, 1986.)

#### **14 CFR Part 39 -- Boeing Model 727 and 727-100 Series Airplanes**

This amendment adds a new airworthiness directive (AD) that supersedes an existing AD that requires inspection, and repair, if necessary, of the wing center section front spar on certain Boeing Model 727 airplanes. Since issuance of the existing AD, there have been reports of cracking in areas adjacent to those required to be inspected, and cracking in areas previously repaired. This AD expands the area that must be inspected, eliminates one repair procedure referenced in the existing AD, and requires reinspection of areas previously repaired in accordance with that procedure. Effective date September 11, 1986. (51 FR 20866, August 5, 1986.)

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

This amendment adds a new airworthiness directive (AD) applicable to certain Boeing Model 747 airplanes, which requires repetitive inspections for cracking, and repair, as necessary, of lower lobe body frames (sections 42 and 48) of the fuselage. This action is prompted by a recent finding of numerous body frame structure cracks in the lower lobe of the fuselage. Failure of the structure could lead to rapid decompression. Effective date September 17, 1986. (51 FR 28691, August 11, 1986.)

#### **14 CFR Part 39 -- Allison Gas Turbine Division, General Motors Corporation, Allison Model 250-C28B and -C28C Engines**

This amendment adopts a new airworthiness directive (AD) which requires monitoring for excessive oil consumption and/or smoking on deceleration/shutdown until installation of Number 8 Bearing Scavenge Line Air/Oil Centrifugal Separator Assembly, P/N 23034722, on certain Allison Model 250-C28B and -C28C engines required not later than January 31, 1987. The AD is needed to prevent possible internal oil fires that could lead to an on-speed first stage turbine wheel failure/uncontained failure. Effective date August 13, 1986. (51 FR 28806, August 12, 1986.)

#### **14 CFR Part 39 -- Pratt & Whitney (PW) JT8D-1, -1A, -1B, -7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR Turbofan Engines**

This amendment amends an existing airworthiness directive (AD) which requires ongoing inspection of combustion chambers on certain PW JT8D engines. The amendment is needed to correct an omission, clarify existing repair criteria, and allow one time repair of circumferential cracks in the 2-3 seam area of non-fusion weld overlaid chambers. Effective date August 8, 1986. (51 FR 28807, August 12, 1986.)

#### **14 CFR Part 39 -- Allison Gas Turbine Division, General Motors Corporation, Allison Model 250-C28 and -C30 Series Engines**

This action publishes in the **Federal Register** and makes effective as to all persons an amendment which amends Amendment 39-5188, 51 FR 732, Airworthiness Directive (AD) 85-25-07, effective January 6, 1986, which was previously made effective as to all known U.S. owners and operators of certain Allison Model 250-C28 and -C30 series engines by individual letters. The AD requires repetitive inspections of outer combustion case assembly P/Ns 6899237 and 23009569 until mandatory replacement with P/Ns 23030910 and 23030911, respectively, is accomplished on certain Model 250-C28 and -C30 series engines. The AD is needed to prevent possible failure of outer combustion case assembly P/Ns 6899237 and 23009569 which could result in an inflight sudden loss of power/shutdown. Effective date August 15, 1986. (51 FR 29090, August 14, 1986.)

#### **14 CFR Part 39 -- Airbus Industrie Model A300 B2 and B4 Series Airplanes**

This amendment adopts a new airworthiness directive (AD) that requires inspections for cracks and repairs or modifications, as necessary, of the fuselage, wings, and vertical stabilizer structures, of certain Airbus Industrie Model A300 B2 and B4 series airplanes. This amendment is prompted by reports that cracks have been detected in several areas of the fuselage, wings, and vertical stabilizer structure during fatigue tests conducted by the manufacturer. If these cracks are not detected and repaired, structural failure could occur. Effective date September 26, 1986. (51 FR 29910, August 21, 1986.)

#### **14 CFR Part 39 -- Beech 90 and 100 Series Airplanes**

This amendment adopts a new airworthiness directive (AD), applicable to Beech 90 and 100 series airplanes which requires inspection of the wing and center main spar structure for evidence of fatigue cracking. Ten instances of cracking have been found over a three year period. The actions of this AD will detect these cracks and preclude catastrophic failure of the wing spar. Effective date September 26, 1986. (51 FR 29912, August 21, 1986.)

#### **14 CFR Part 39 -- DeHavilland Model DHC-7 Airplanes**

This amendment adopts a new airworthiness directive (AD), applicable to DeHavilland Model DHC-7 series airplanes that requires conductivity surveys, modification, and repair, if necessary, of the upper wing surface structure behind the engine. This action is prompted by reports of "wet starts" of the engine, resulting in external combustion of fuel. This condition, if not corrected, could result in damage and weakening of the wing upper surface structure. Effective date September 26, 1986. (51 FR 29914, August 21, 1986.)

#### **14 CFR Part 39 -- HTL Advanced Technology Fire Extinguisher Discharge Outlets Installed on Boeing Models 707, 727, 737, 747, 757, and 767 Series Airplanes, and on Airbus Industrie Model A300 and A310 Series Airplanes**

This amendment adopts a new airworthiness directive (AD) which requires physical and x-ray inspections of certain HTL Advanced Technology fire extinguisher discharge outlets. The action is prompted by an incident during which a fire bottle discharge head separated from the bottle during a ground discharge operation. This action is necessary to ensure that extinguishing agent is directed to the intended location during a fire. Effective date September 26, 1986. (51 FR 29915, August 21, 1986.)

#### **14 CFR Part 39 -- Boeing Model 737-300 Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires replacement of air conditioning ducts installed on certain Model 737-300 airplanes. This action is necessary because it has been discovered that the ducts have unsatisfactory flammability characteristics and do not comply with the flammability requirements of Federal Aviation Regulations (FAR) 25.853. The ducts presently installed could contribute to the propagation of a fire occurring on the airplane. Effective date October 2, 1986. (51 FR 30327, August 26, 1986.)

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

This amendment adopts a new airworthiness directive (AD), applicable to all Boeing Model 767 series airplanes which requires the incorporation of a stronger access door for the opening within the empennage that provides access to the vertical fin. This action is needed because the vertical fin could be overpressurized to the point of structural failure in the event of an aft pressure bulkhead rupture. Effective date October 2, 1986. (51 FR 30328, August 26, 1986.)

**14 CFR Part 39 -- McDonnell Douglas Corporation Model DC-10-10, -15, -30, -40, and KC-10A (Military) Series Airplanes**

This amendment adopts a new airworthiness directive (AD) which requires replacement or modification of tanks 1, 2, and 3 transfer pump check valves and associated pressure switches, and installation of additional surge relief valves on McDonnell Douglas Model DC-10 and KC-10A (Military) series airplanes. The AD is prompted by numerous incidents in which failures occurred in fuel transfer lines. This action is necessary to minimize the potential of unusable fuel being trapped in any of the wing tanks and possible fuel imbalance, resulting in a reduction of airplane control or loss of range, or both. Effective date October 2, 1986. (51 FR 30330, August 26, 1986.)

**14 CFR Part 39 -- McDonnell Douglas Model DC-10-10, -15, -30, -40, and KC-10A (Military) Series Airplanes**

This amendment adds a new airworthiness directive (AD) which requires modification of the right-hand forward passenger door partition shroud panel assemblies on McDonnell Douglas Model DC-10 and KC-10A (Military) series airplanes. This action is prompted by reports in production that an interference condition could occur when moving the forward door handle to the emergency position. This AD is necessary to minimize the potential for interference between the right-hand forward door handle and the shroud, which could result in the loss on one use of emergency door exit. Effective date October 2, 1986. (51 FR 30331, August 26, 1986.)

**14 CFR Part 39 -- British Aerospace (BAe) Model DH-125-1A and DH 125-3A Series Airplanes**

This amendment publishes in the **Federal Register** and make 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 British Aerospace Models DH-125-1A and DH 125-3A series by individual priority letters. This AD requires inspection and repair of the flap drive torque shaft assembly to prevent loss of control due to asymmetric flap deployment. Effective date September 15, 1986. (51 FR 31089, September 2, 1986.)

**14 CFR Part 39 -- Allison Gas Turbine Division, General Motors Corp., Allison Models 250-C30 and 250-C30S Series Engines**

This amendment supersedes existing Airworthiness Directive (AD) 84-24-02, Amendment 39-4957, 49 FR 48531, effective December 18, 1984, which applies to Model 250-C30 and -C30S engines installed in Sikorsky Model S-76A helicopters. This AD is needed to define the final corrective actions to further reduce the possibility of, and to provide improved protection against, uncontained gas producer turbine wheel failures of certain Allison Model 250-C30 series engines installed in but not limited to, Sikorsky S-76A, Bell 206L-1, modified to incorporate the Allison 250-C30P engines, Bell 206L-3, and McDonnell Douglas Helicopter Company (Hughes) 369F and 369F model aircraft. Effective date October 3, 1986. (51 FR 32780, September 16, 1986.)

**14 CFR Part 39 -- DeHavilland of Canada, Ltd. Model DHC-8 Series Airplanes**

This action publishes in the **Federal Register** and makes effective as to all known persons an amendment adopting a new airworthiness directive (AD) which was previously made effective as to all known U.S. owners and operators of DeHavilland Model DHC-8 series airplanes by individual telegrams. This AD requires deactivation of the ground spoilers and roll control spoilers in the ground mode. This action is necessary to prevent an uncommanded deployment of ground spoilers

and roll control spoilers in the ground mode, and to preclude a hazardous loss of lift in a critical phase of flight. Effective date October 6, 1986. (51 FR 33031, September 18, 1986.)

**14 CFR Part 39 -- Pratt & Whitney (PW) JT8D-1, -1A, -1B, -7, -7A, -7B, -9, -9A, -11, -15, -15A, -17, -17A, -17R, and -17AR Turbofan Engines**

This amendment amends an existing airworthiness directive (AD) which requires a one time eddy current inspection and subsequent replacement of high pressure compressor (HPC) removable sleeve spacers stages 7-8 and 9-10. This amendment requires eddy current inspection and subsequent replacement of HPC removable sleeve spacers stage 8-9. The amendment is needed to prevent failure of HPC removable sleeve spacers stage 8-9 which could result in inflight engine shutdowns, engine cowl penetration, and airframe damage. Effective date November 4, 1986. (51 FR 33240, September 19, 1986.)

**14 CFR Part 39 -- Boeing Model 707-300 Series Airplanes Modified by Shannon Supplemental Type Certificate (STC) SA2699NM**

This amendment adopts a new airworthiness directive (AD) which requires modification of core cowl doors and related structure on certain Boeing Models 707-300 series airplanes, modified with "quiet" nacelles in accordance with Supplemental Type Certificate SA2699NM. This proposal is prompted by reports of in-flight loss of core cowl doors. The loss of these doors could result in damage to the airplane or injury to the public on the ground. Effective date October 13, 1986. (51 FR 33736, September 23, 1986.)

**14 CFR Part 39 -- British Aerospace Model BAe 125 Series Airplanes**

This amendment adopts a new airworthiness directive, applicable to British Aerospace (BAe) Model 125 DH/BH/HS airplanes fitted with Garrett TFE 731-3R-1H engines, which requires an inspection of the forward engine mountings and repair, if necessary. This amendment is prompted by reports of damage caused by interference between the forward engine mounts and the top center cowling. Failure to repair the forward engine mountings could result in failure of the engine mounts. Effective date October 20, 1986. (51 FR 33738, September 23, 1986.)

**14 CFR Part 39 -- Bell Helicopter Textron, Inc., Model 214ST, 214B, and 214B-1 Helicopters**

This amendment adopts a new airworthiness directive (AD) which requires replacement of the main rotor (M/R) drag brace assembly on certain Bell Helicopter Textron, Inc. (BHTI), Model 214ST, 214B, and 214B-1 helicopters with one that has a new nut design and a new thread design on the M/R drag brace barrel. The new drag brace assembly has a reduced retirement life of 2,500 hours on the Model 214ST. This AD is required to prevent failure of the M/R drag brace assembly which could result in loss of the helicopter. Effective date October 18, 1986. (51 FR 34582, September 30, 1986.)

## FEDERAL RAILROAD ADMINISTRATION

### 49 CFR Parts 218 and 221 -- Rear End Marking Device - Passenger, Commuter and Freight Trains

FRA is amending 49 CFR Part 221 in response to changes in railroad operations and technology developments that have occurred since initial adoption of this rule. The amendments will permit railroads greater flexibility in selecting the personnel who perform the required inspection of rear end marking devices and will accommodate recently developed telemetry devices that provide an electronic check on the marker's condition and display that information on a monitor located in the locomotive cab. In addition, FRA is adopting new procedures in Part 221 to protect non-train crew personnel who perform the inspection and making a corresponding amendment to 49 CFR Part 218. FRA is taking this action in response to technological change, to enhance railroad safety by enabling the crew to monitor the functioning of the rear end marker while the train is enroute, and in recognition of the many requests it has received for waivers of compliance that seek expansion of the categories of personnel permitted to conduct the required inspections. Effective date August 11, 1986. (51 FR 25180, July 10, 1986.)

## NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

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

This notice responds to a petition for reconsideration of the May 22, 1985 notice amending Standard No. 108, *Lamps, Reflective Devices, and Associated Equipment*, 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.

The petition was filed by Ford Motor Company. Petitioner asked for the deletion of paragraph §4.5.8 which prohibits simultaneous activation of upper and lower beams of a four lamp system each containing a single standardized replaceable light source, claiming that the agency has shown no safety need for it. The petition is denied because of the potential that combined beam use could result in more than 75,000 candela emission at the H-V test point on each side of the vehicle and more than 5,000 candela at the 4D-V test point. This could cause excess glare down the road to oncoming drivers and excess glare in the foreground.

Petitioner also called attention to duplicative language in paragraph §4.1.1.36(a)(2). Its petition for correction is granted and the standard is amended to remove that language. Effective date July 2, 1986. (51 FR 24152, July 2, 1986.)

### 49 CFR Parts 571 and 572 -- Anthropomorphic Test Dummies; Hybrid III Test Dummy

This notice adopts the Hybrid III test dummy as an alternative to the Part 572 test dummy in testing done in accordance with Standard No. 208, *Occupant Crash Protection*. The notice sets forth the specification, instrumentation, calibration test procedures, and calibration performance criteria for the Hybrid III test dummy. The notice also amends Standard No. 208 so that effective October 23, 1986, manufacturers have the option of using either the existing Part 572 test dummy or the Hybrid III test dummy until August 31, 1991. As of September 1, 1991, the Hybrid III will replace the Part

572 test dummy and be used as the exclusive means of determining a vehicle's conformance with the performance requirements of Standard No. 208.

The notice also establishes a new performance criterion for the chest of the Hybrid III test dummy which will limit chest deflection. The new chest deflection limit applies only to the Hybrid III since only that test dummy has the capability to measure chest deflection.

These amendments enhance vehicle safety by permitting the use of a more advanced test dummy which is more human-like in response than the current test dummy. In addition, the Hybrid III test dummy is capable of making many additional sophisticated measurements of the potential for human injury in a frontal crash. Effective date October 23, 1986. (51 FR 26688, July 25, 1986.)

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

This notice makes nonsubstantive amendments to Federal Motor Vehicle Safety Standard No. 108 to remove original equipment requirements that are no longer in effect and to clarify that most of those requirements may still be met by equipment manufactured to replace such original equipment, to adopt a common typographical manner in referring to materials incorporated by reference, and to correct errors appearing in the Code of Federal Regulations. Effective date August 6, 1986. (51 FR 28238, August 6, 1986.)

#### **49 CFR Parts 509 and 571 -- Federal Motor Vehicle Safety Standards; Seat Belt Assembly Anchorages**

This notice responds to two petitions for reconsideration of the amendments to Standard No. 210, *Seat Belt Assembly Anchorages*, published on October 10, 1985. Those amendments required manufacturers to provide anchorages for a lap safety belt in automatic-restraint equipped vehicles in which the automatic restraint system cannot be used to restrain a child safety seat. In addition, the amendments required manufacturers to provide certain safety information in their vehicle owner's manual describing how to install the lap belt. Also, the owner's manual was to state that children are safer when properly restrained in the rear seating positions than in front seating positions and that, in a vehicle with a rear seating position, the center rear seating position is the safest. Two manufacturers, American Motors Corporation (AMC) and Toyota Motor Corporation (Toyota), filed timely petitions seeking reconsideration of those amendments. In response to AMC's petition, the agency has amended the lap belt anchorage requirement to make it clear that if a manufacturer voluntarily provides a manual lap or lap/shoulder belt at the front right passenger's seat, it does not have to provide an additional set of anchorages. AMC's remaining requests to permit the use of self-tapping safety belt anchorage bolts and to extend the September 1, 1987 effective date are denied. Toyota's request to delete the requirement that manufacturers state that the center rear seat is the safest seating position is granted. Effective date August 19, 1986. (51 FR 29552, August 19, 1986.)

#### **49 CFR Part 571 -- Federal Motor Vehicle Safety Standards; Occupant Crash Protection and Seat Belt Assemblies**

This notice responds to eight petitions for reconsideration of several of the amendments to Standard No. 208, *Occupant Crash Protection*, that appeared in the **Federal Register** of Friday, March 21, 1986. In response to the petitions, the agency is modifying the test dummy positioning procedures. However, so as not to affect compliance testing done using the old procedures, the agency is permitting manufacturers to use either the old or new procedures for a one year period. Beginning September 1, 1987, the new procedures would be mandatory. This notice denies a request to extend

the September 1, 1989 effective date for dynamic testing of manual lap/shoulder belts in the front seat of passenger cars. (The Dynamic test requirement would go into effect on that date only if the automatic restraint requirement is rescinded.) A response to four petitions asking the agency to reinstate certain of the test requirements of Standard No. 209, *Seat Belts Assemblies*, for dynamically-tested manual lap/shoulder belts, and to revise the current exemption for automatic belts, will be addressed separately at a later date. Effective date September 5, 1986. (51 FR 31765, September 5, 1986.)

## RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

### **49 CFR Part 172 -- Transportation of Hazardous Materials; IMO Proper Shipping Names**

This action is being taken to authorize, under approval procedures, the use of current International Maritime Organization (IMO) shipping names which have not as yet been incorporated into the Optional Hazardous Materials Table at 49 CFR 172.102. This action is necessary to allow export and import shipments of hazardous materials to move in commerce in compliance with IMO requirements for shipping names. The intended effect of this action is to facilitate international trade in chemicals by allowing international shipments to move in compliance with the latest amendments of the International Maritime Dangerous Goods Code (IMDG Code) Effective date July 15, 1986. (51 FR 25639, July 15, 1986.)

### **49 CFR Parts 171, 172 and 174 -- Placarding Tank Cars Which Contain Hazardous Material Residue; Delay of Effective Date**

RSPA published a final rule in the **Federal Register** on June 25, 1986, (51 FR 23075), under Docket HM-180 (FR Document 86-14276). This final rule amended the Department's Hazardous Materials Regulations by changing the definition of the word "RESIDUE" and requiring the use of RESIDUE placards instead of EMPTY placards on tank cars which contain hazardous materials residue. The final rule has an effective date of October 1, 1986. RSPA has received numerous telephone calls from shippers and carriers regarding the unavailability of RESIDUE placards from suppliers. Based on these calls and to allow shippers and carriers adequate time to obtain RESIDUE placards, RSPA believes it is necessary to delay the effective date of the final rule.

In consideration of the foregoing, the effective date of the final rule issued under Docket HM-180, Amendment Nos. 171-88, 172-104 and 174-60 is changed from October 1, 1986 to March 3, 1987. Effective date March 3, 1987. (51 FR 33900, September 24, 1986.)



# 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 (1) an event that involves the release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility resulting in a death, or personal injury necessitating in-patient hospitalization; or estimated property damage, including cost of gas lost, of the operator or others, or both, of \$50,000 or more; (2) an event that results in an emergency shutdown of an LNG facility; or (3) an event that is significant, in the judgement of the operator, even though it did not meet the criteria of (1) or (2).

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

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

## **RAIL RAPID TRANSIT (RRT)**

**Casualty** - A fatality or injury in accordance with SIRAS thresholds.

**Casualty Report** - A SIRAS report containing specific information on individual casualties (fatalities or injuries) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

**Collision With Obstacle** - A SIRAS train accident type involving the collision of a rail transit revenue train with obstacles (e.g., shopping carts, foreign objects, etc.) other than trains and persons.

**Collision With Person** - A SIRAS train accident type involving the collision of a rail transit revenue train with a person on a track or platform.

**Collision With Other Train** - A SIRAS trains accident type involving the collision of a rail transit revenue train with another rail transit train (e.g., revenue or non-revenue train, work train, etc.).

**Derailment** - A SIRAS train accident type involving a rail transit revenue train's leaving the rails.

**Fatality** - A death confirmed within 30 days after an incident which occurs under the train accident, fire and casualty thresholds.

**Fire** - A fire incident involving the phenomenon of combustion manifested in light, flame and heat.

**Fire Report** - A SIRAS report containing specific information on individual fires (station fires, train in revenue service fires, and right-of-way) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

**Train Accident** - An event involving one or more trains resulting in any casualty or property damage in accordance with SIRAS thresholds.

**Train Accident Report** - A SIRAS report containing specific information on individual trains accidents (collisions with trains, collisions with obstacles, collisions with persons, derailments, or rail-highway crossings) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

## 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.

**NOTES**

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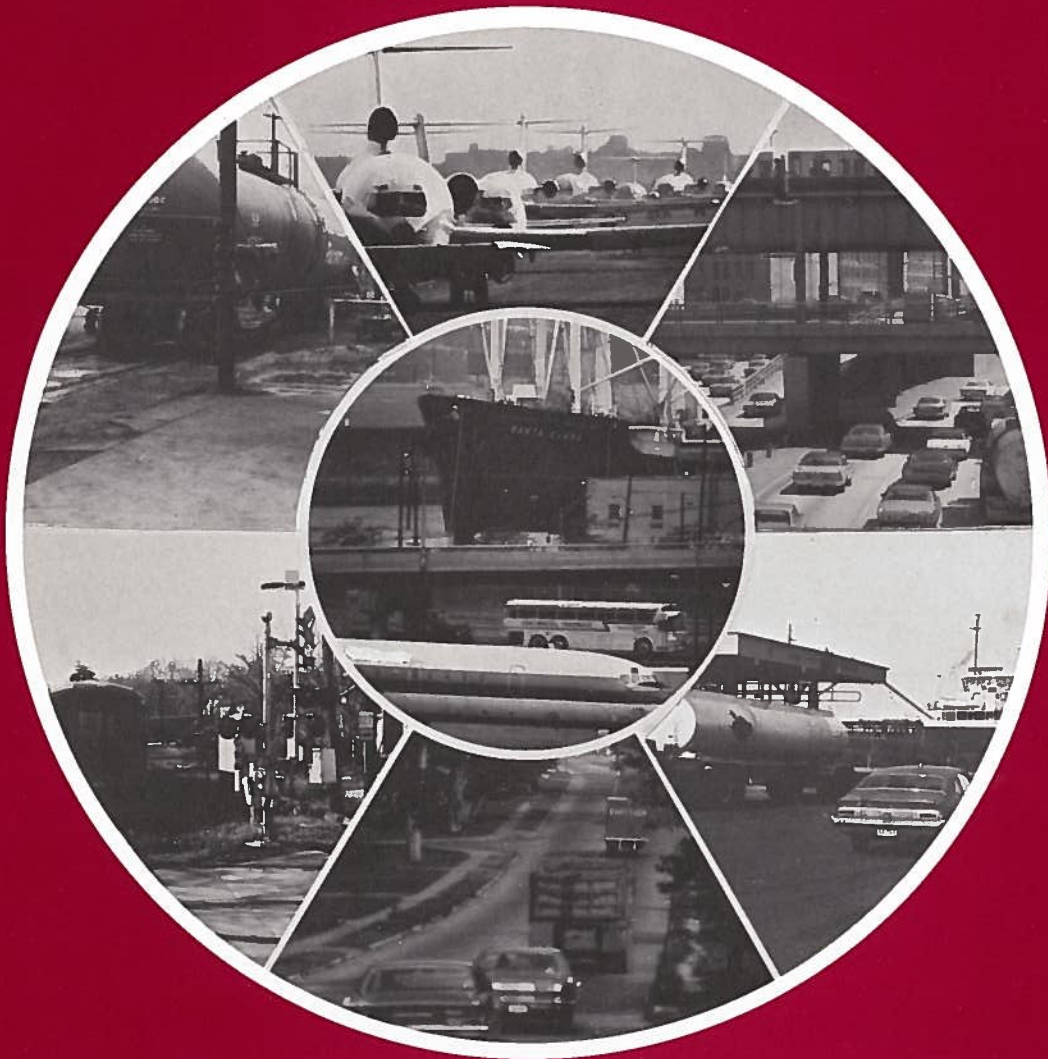
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U.S. Department  
of Transportation  
**Research and  
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# Transportation Safety Information Report

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**Transportation Systems Center**