

REFERENCE

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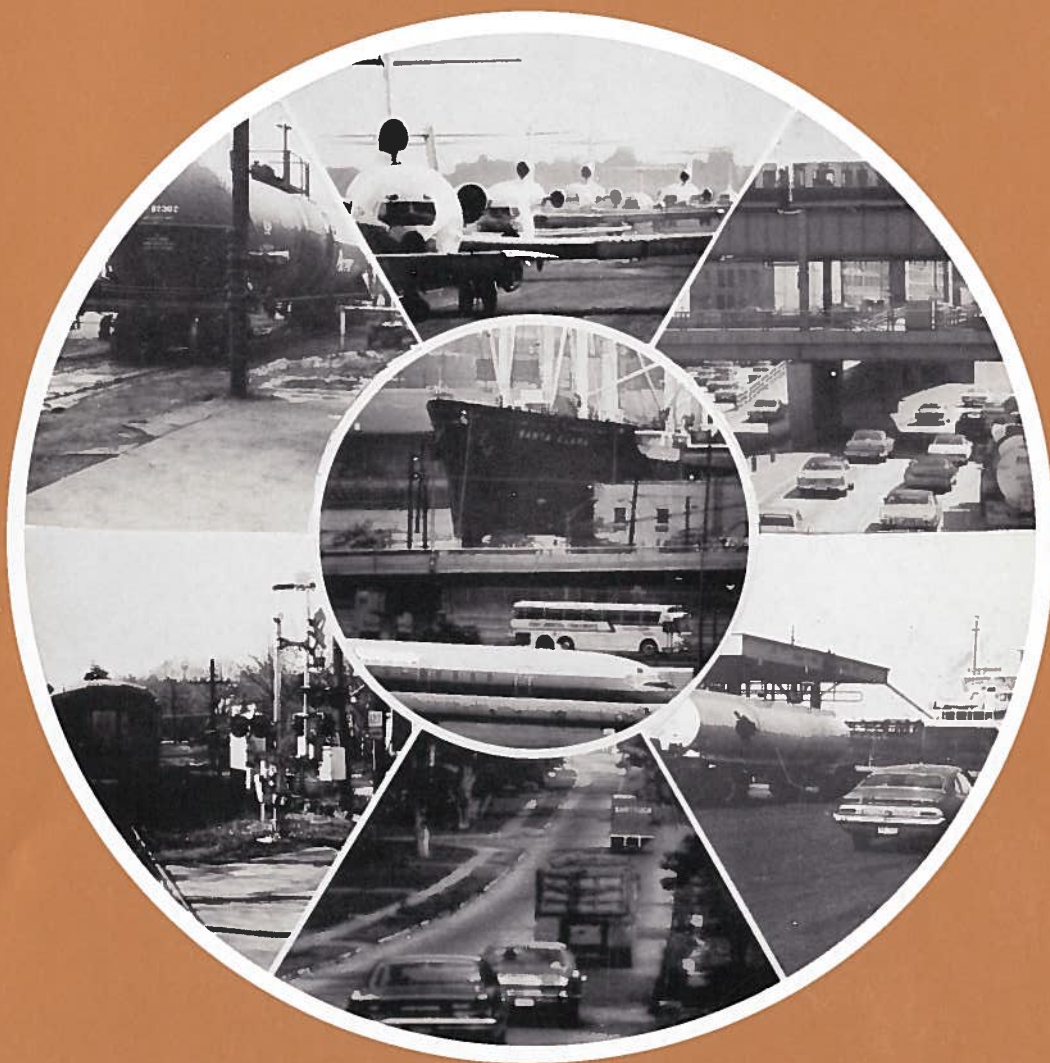
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of Transportation
**Research and
Special Programs
Administration**

Transportation Safety Information Report

Second Quarter 1984



Transportation Systems Center

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16. Abstract <p>The "Transportation Safety Information Report" is a compendium of selected national-level transportation safety statistics for all modes of transportation. The report presents and compares data on a monthly and quarterly basis for transportation fatalities, accidents, and injuries for the current and preceding year. The report is based on data input to the Transportation Information Safety System (TRANSIS) by representatives in each of DOT's modal administrations and the National Transportation Safety Board.</p>		13. Type of Report and Period Covered Second Quarter 1983/1984	
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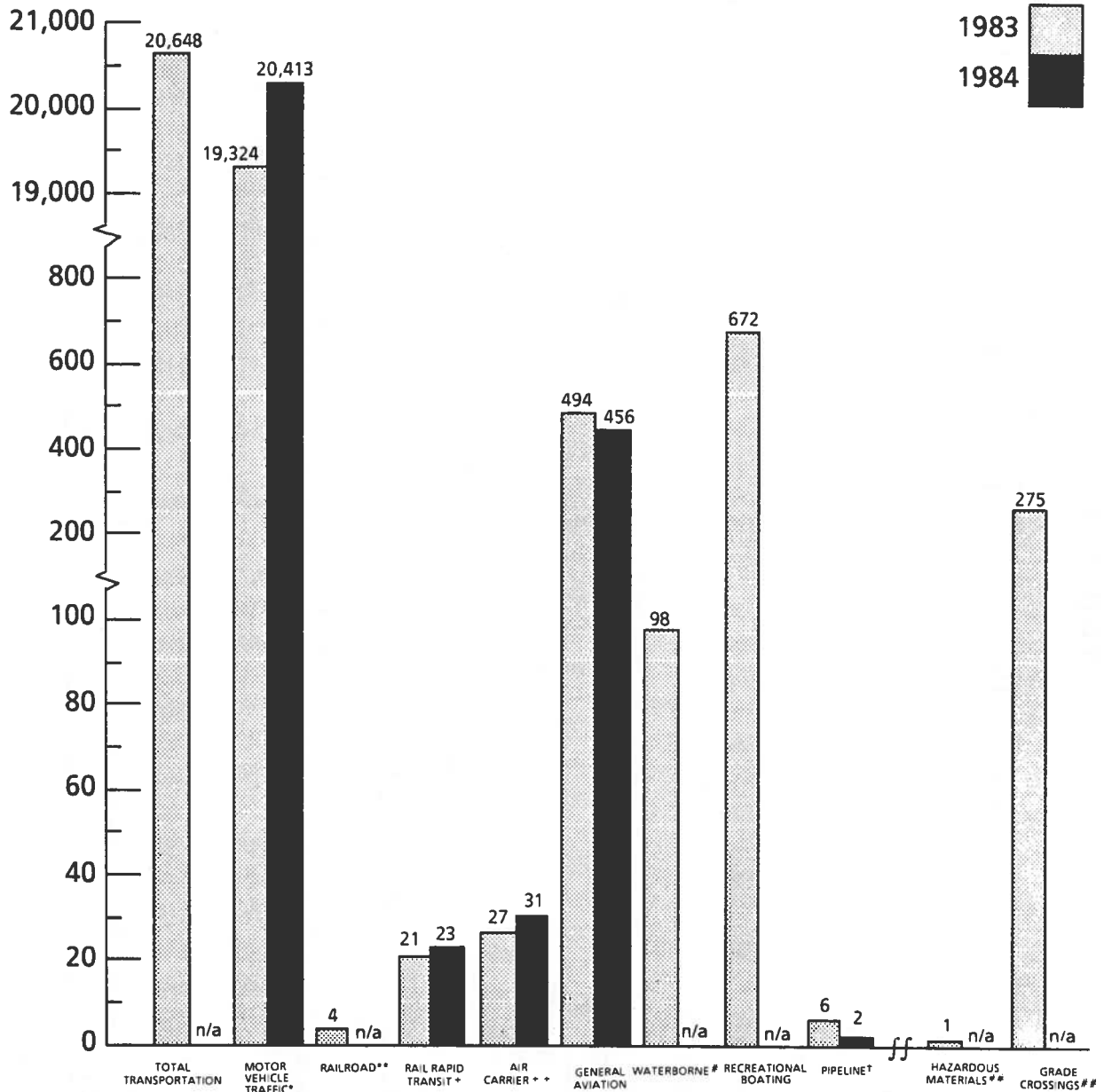
TRANSIS REPRESENTATIVES AND MANAGEMENT

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SUMMARY STATISTICS OF TRANSPORTATION SAFETY

CHART 1.

TRANSPORTATION FATALITIES BY MODE FIRST SIX MONTHS, 1983 - 1984



Note: 1984 Data are preliminary.

* Traffic fatalities are NHTSA's estimates based on a 30-day definition (see Glossary).

** Fatalities resulting from train accidents. Train-related grade crossing fatalities are not included.

† Fatalities resulting from train and nontrain incidents.

†† Air Carrier includes Commuter Carriers and Air Taxis (see Glossary).

Waterborne data are for vessel casualties only.

Highway-related grade crossing and hazardous materials fatalities are included in Total Transportation, but rail-related grade crossing fatalities are not included.

† Liquid Pipeline only; does not include gas.

TABLE 1.

TRANSPORTATION FATALITIES BY MODE
FIRST SIX MONTHS, 1983 - 1984

CLASSIFICATION	JANUARY			FEBRUARY			MARCH		
	1983	1984	% CHANGE	1983	1984	% CHANGE	1983	1984	% CHANGE
MOTOR VEHICLE TRAFFIC*	2,901	2,911	+0.3%	2,709	2,936	+8.4%	3,082	3,391	+10.0%
RAILROAD**	2	0	-200.0%	0	3	+300.0%	0	1	+100.0%
RAIL RAPID TRANSIT+	4	6	+50.0%	3	6	+100.0%	2	3	+50.0%
AIR CARRIER++	9	5	-44.4%	2	1	-50.0%	7	8	+14.3%
GENERAL AVIATION	84	69	-17.9%	67	77	+14.9%	81	103	+27.2%
WATERBORNE#	13	n/a	-	55	n/a	-	8	n/a	-
RECREATIONAL BOATING	56	n/a	-	64	n/a	-	77	n/a	-
PIPELINES, GAS	1	6	+500.0%	0	4	+400.0%	0	2	+200.0%
PIPELINES, LIQUID	0	0	0.0%	0	2	+200.0%	6	0	-600.0%
TOTAL TRANSPORTATION	3,070	n/a	-	2,900	n/a	-	3,263	n/a	-
HAZARDOUS MATERIALS##	0	0	0.0%	1	0	-100.0%	0	2	+200.0%
GRADE CROSSING ONLY###	45	60	+33.3%	40	43	+7.5%	45	65	+44.4%
CLASSIFICATION	APRIL			MAY			JUNE		
	1983	1984	% CHANGE	1983	1984	% CHANGE	1983	1984	% CHANGE
MOTOR VEHICLE TRAFFIC*	3,257	3,410	+4.7%	3,670	3,769	+2.7%	3,705	3,996	+7.9%
RAILROAD**	2	11	+450.0%	0	0	0.0%	0	n/a	-
RAIL RAPID TRANSIT+	4	4	0.0%	6	0	-600.0%	2	4	+100.0%
AIR CARRIER++	0	5	+500.0%	0	6	+600.0%	9	6	-33.3%
GENERAL AVIATION	78	69	-11.5%	80	68	-15.0%	104	70	-32.7%
WATERBORNE#	12	n/a	-	7	n/a	-	3	n/a	-
RECREATIONAL BOATING	118	n/a	-	186	n/a	-	171	n/a	-
PIPELINES, GAS	0	n/a	-	0	n/a	-	1	n/a	-
PIPELINES, LIQUID	0	0	0.0%	0	0	0.0%	0	0	0.0%
TOTAL TRANSPORTATION	3,471	n/a	-	3,949	n/a	-	3,995	n/a	-
HAZARDOUS MATERIALS##	0	n/a	-	0	n/a	-	0	n/a	-
GRADE CROSSING ONLY###	61	46	-24.6%	47	64	+36.2%	37	n/a	-

TABLE 1. (Continued)

CLASSIFICATION	SECOND QUARTER TOTAL		FIRST SIX MONTHS		
	1983	1984	1983	1984	% CHANGE
MOTOR VEHICLE TRAFFIC*	10,632	11,175	19,324	20,413	+5.6%
RAILROAD**	2	n/a	4	n/a	-
RAIL RAPID TRANSIT +	12	8	21	23	+9.5%
AIR CARRIER + +	9	17	27	31	+14.8%
GENERAL AVIATION	262	207	494	456	-7.7%
WATERBORNE #	22	n/a	98	n/a	-
RECREATIONAL BOATING	475	n/a	672	n/a	-
PIPELINES, GAS	1	n/a	2	n/a	-
PIPELINES, LIQUID	0	0	6	2	-66.7%
TOTAL TRANSPORTATION	11,415	n/a	20,648	n/a	-
HAZARDOUS MATERIALS # #	0	n/a	1	n/a	-
GRADE CROSSING ONLY # #	145	n/a	275	n/a	-

NOTE:

- * 1984 Data are preliminary.
- ** Traffic fatalities are NHTSA's estimates based on a 30-day definition.
- + Fatalities resulting from train accidents. Train-related grade crossing fatalities are not included.
- + Fatalities resulting from train and nontrain incidents.
- # Air Carrier includes Commuter Carriers and Air Taxis (see Glossary).
- # Waterborne data are for vessel casualties only.
- # Highway-related grade crossing and hazardous materials fatalities are included in Total Transportation, but rail-related grade crossing fatalities are not included.

HIGHWAY

- During the first six months of 1984, estimated traffic fatalities increased 5.6 percent when compared with the same period a year ago. However, the number of reported highway fatalities was lower than the corresponding period in 1975.
- Preliminary estimates of travel show an increase of 4.7 percent during the first six months of 1984 over the same period in 1983.
- NHTSA's early traffic fatality estimates probably overstate the true increase in 1984. The estimation procedures changed in January when new reporting methods for counts from each of the States were introduced. There is not enough data under the new system to measure the error and adjust the procedures, but NHTSA believes that their figures are overestimated by 2 to 4 percent. If this is true, then traffic fatalities actually increased 2 to 4 percent during the first half of 1984. While this is still an increase, it is less than the growth in vehicle miles of travel, so that the overall fatality rate is actually declining.
- From 1980 to 1983, there was a drop in fatalities which the NHTSA attributes to both the recession, which slowed travel growth and changed travel patterns, and to enforcement of alcohol programs. In 12 States with good alcohol reporting, the number of dead drivers with Blood Alcohol Counts of .10 and above dropped 24 percent between 1980 and 1983. It is believed that the current rise in travel can be attributed to the rebounding economy.

TABLE 2.

HIGHWAY FATALITIES FOR 1984 COMPARED WITH 1983 AND 1975

JANUARY			FEBRUARY			MARCH		
1975	1983	1984	1975	1983	1984	1975	1983	1984
3,053	2,901	2,911	2,832	2,709	2,936	3,309	3,082	3,391
% CHANGE			% CHANGE			% CHANGE		
1975-84		1983-84	1975-84		1983-84	1975-84		1983-84
-4.7		+ 0.3	+ 3.7		+ 8.4	+ 2.5		+ 10.0
APRIL			MAY			JUNE		
1975	1983	1984	1975	1983	1984	1975	1983	1984
3,290	3,257	3,410	4,005	3,670	3,769	4,037	3,705	3,996
% CHANGE			% CHANGE			% CHANGE		
1975-84		1983-84	1975-84		1983-84	1975-84		1983-84
+ 3.6		+ 4.7	-5.9		+ 2.7	-1.0		+ 7.9

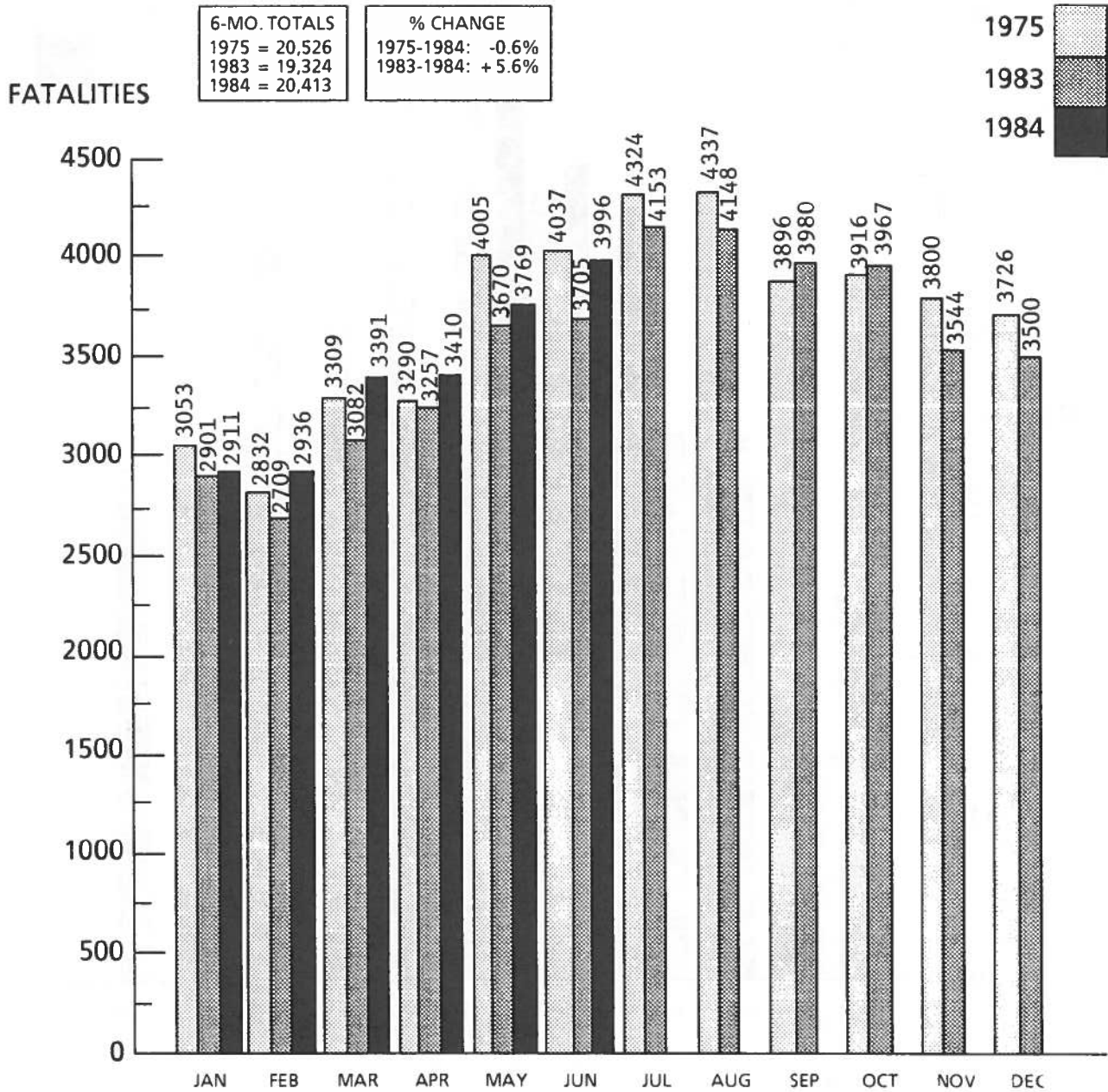
SECOND QUARTER			FIRST 6 MONTHS		
1975	1983	1984	1975	1983	1984
11,332	10,632	11,175	20,526	19,324	20,413
% CHANGE			% CHANGE		
1975-84		1983-84	1975-84		1983-84
-1.4		+ 5.1	-0.6		+ 5.6

NOTE: Figures are based on 30-day fatality definition (see Glossary).
1983-1984 Data are preliminary.

SOURCE: 1975-1984 Data are from NHTSA's Fatal Accident Reporting System (FARS).

CHART 2.

MOTOR VEHICLE TRAFFIC FATALITIES BY MONTH 1975, 1983 AND 1984

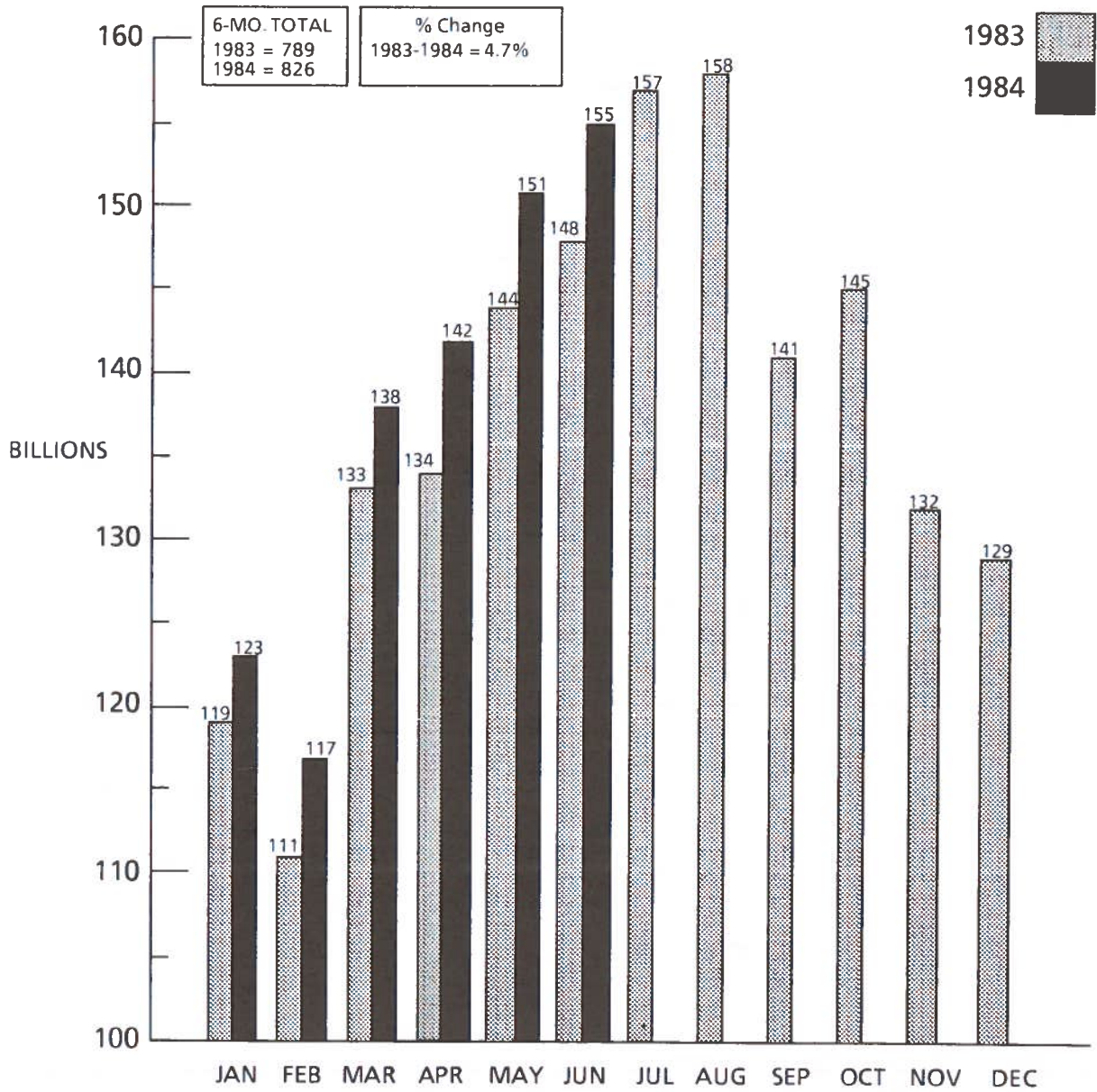


NOTE: Figures are based on 30-day fatality definition (see Glossary).
1983-1984 Data are preliminary.

SOURCE: 1975-1984 Data are from NHTSA's Fatal Accident Reporting System (FARS)

CHART 3.

MOTOR VEHICLE MILES OF TRAVEL, 1983 - 1984^P



^P = Preliminary.

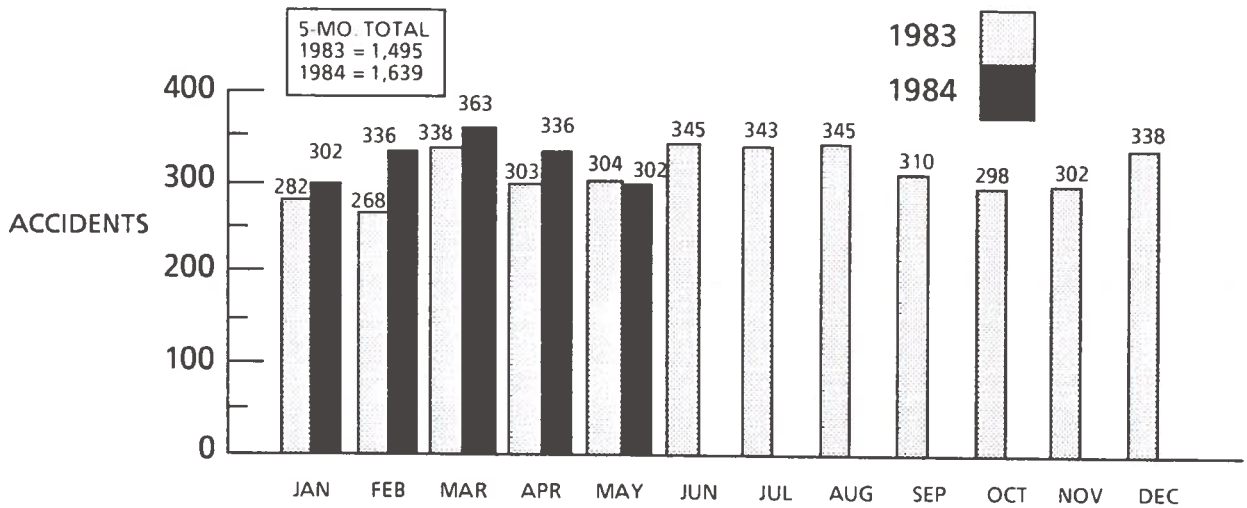
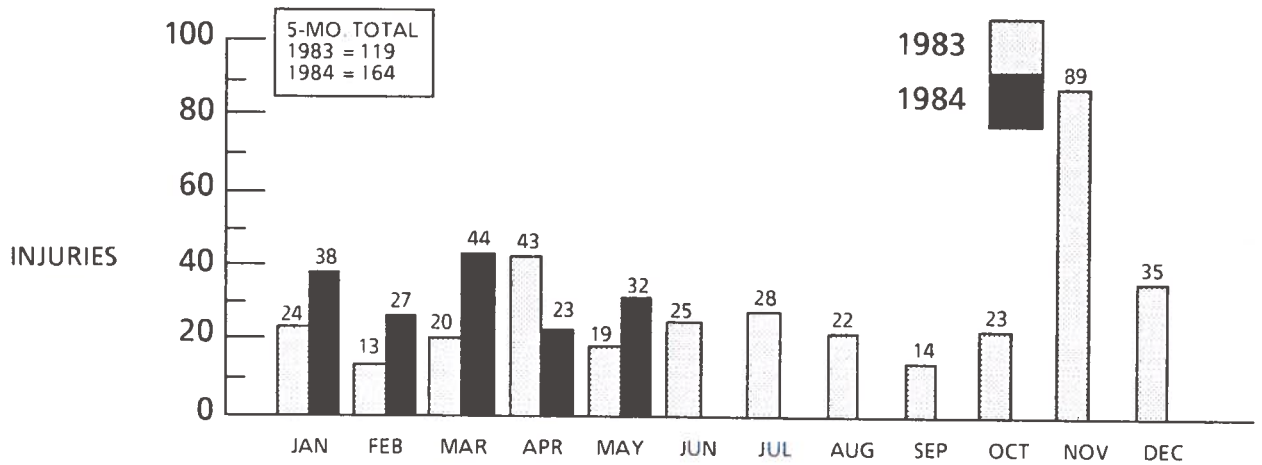
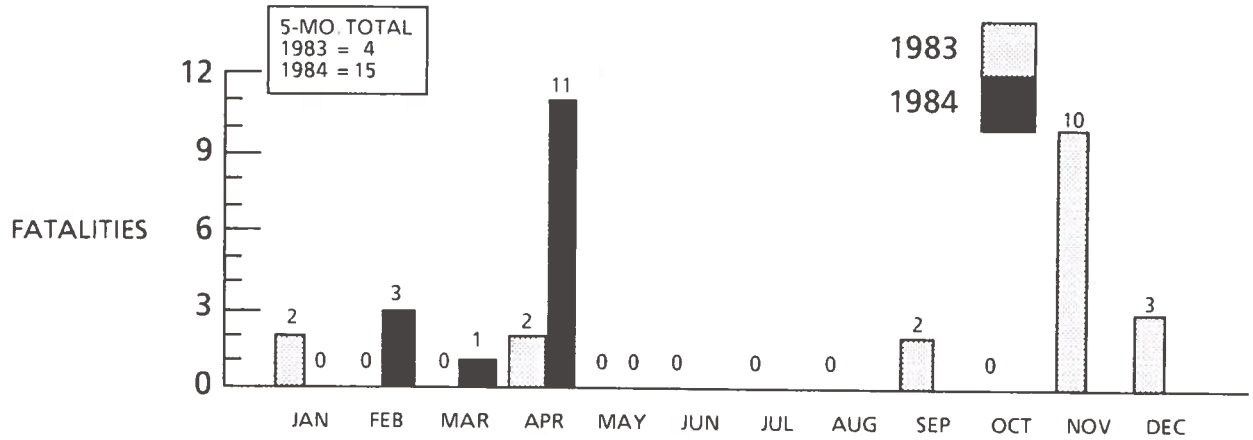
SOURCE: FHWA, Office of Highway Safety, HHS-22.

RAILROAD

- Accidents (excluding rail-highway grade crossings) increased by 9.6 percent during the first five months of 1984 when compared to the same time period in 1983. From January through May 1984, there were 1,639 reported accidents compared to 1,495 during the same period in 1983. However, when these data are normalized by the 11.7 percent increase in train miles travelled, there was a 1.8 percent decline in train accidents.
- The total number of rail-highway grade crossing accidents for January through May 1984, was 3,201 compared to 2,786 for the same five months of 1983, an increase of 14.9 percent. (Normalized by train miles the increase was 2.9 percent.) The number of grade crossing fatalities rose 16.8 percent, from 238 to 278 while the number of grade crossing injuries increased 29.5 percent, from 1,028 to 1,331.

CHART 4.

TRAIN ACCIDENT* FATALITIES, INJURIES AND ACCIDENTS, 1983-1984

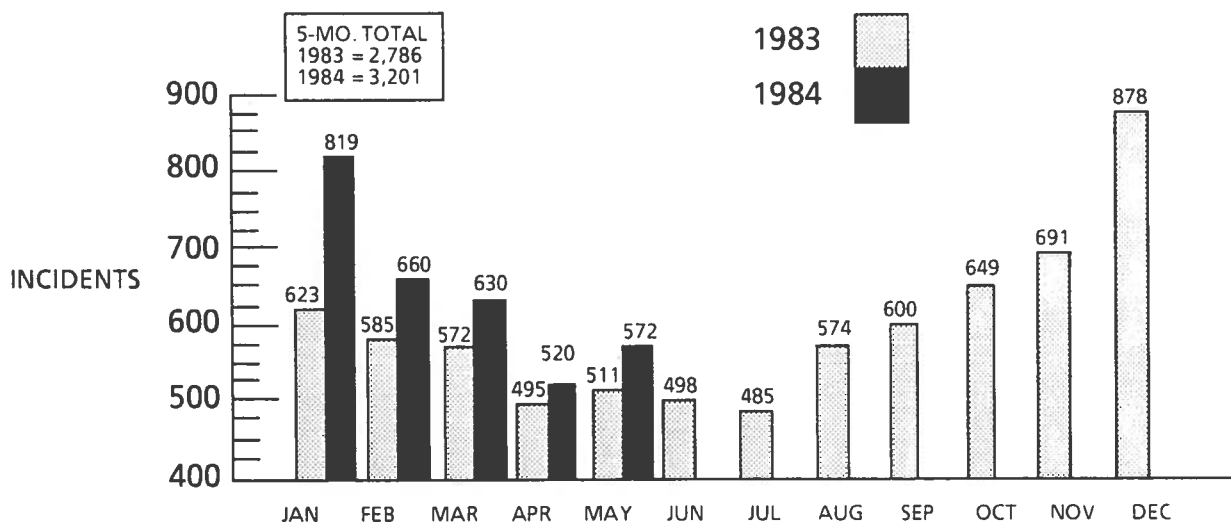
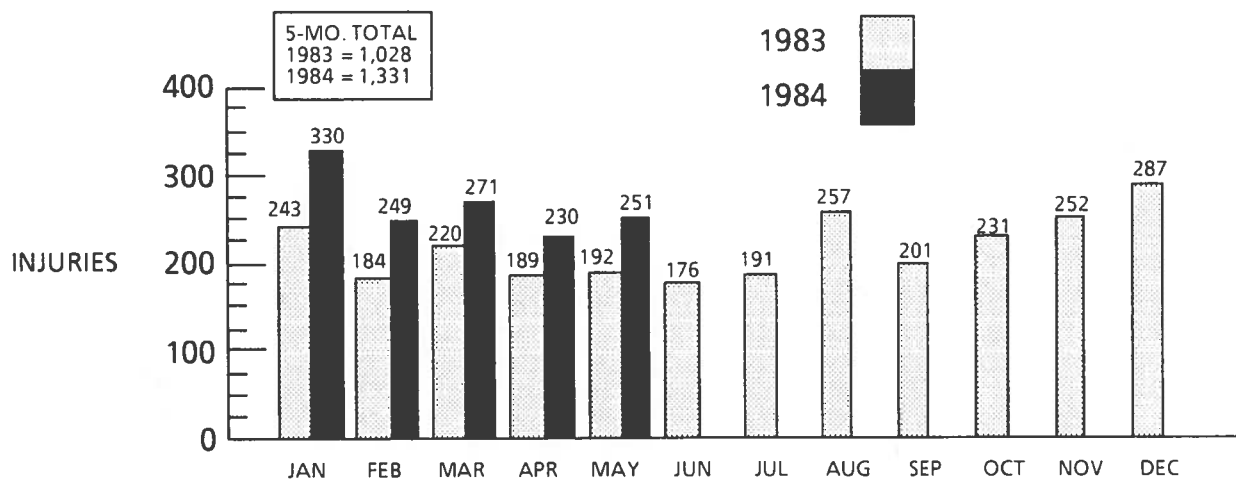
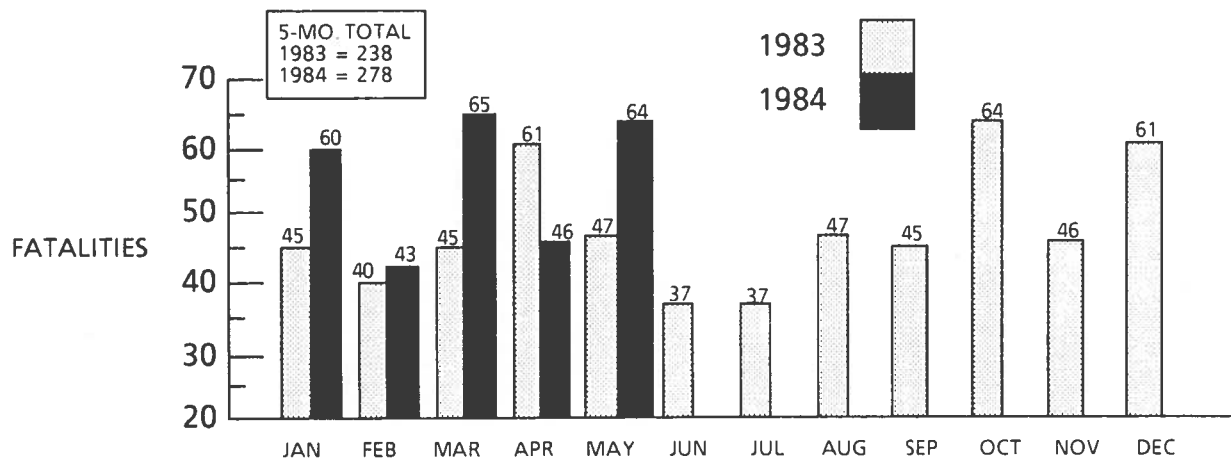


* See Glossary for Train Accident definition. This chart does not include Grade Crossings.
NOTE: 1984 Data are preliminary.

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

CHART 5.

GRADE CROSSING* FATALITIES, INJURIES AND INCIDENTS, 1983-1984



* See Glossary for definition.
NOTE: 1984 Data are preliminary.

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

RAIL RAPID TRANSIT

- Collisions with persons were the predominant type of Rail Rapid Transit (RRT) revenue train accidents in the second quarter of 1984. Of the seven accidents reported in this quarter, six were of this type (86 percent). In the second quarter of 1983, fires were the predominant type of revenue train accidents. Ten of the 21 train accidents (48 percent) resulted from fires during this quarter.

The following table summarizes train accidents by type.

	1983 SECOND QUARTER	1984* SECOND QUARTER
Collision with Other Train	0	0
Collision with Obstacle	0	0
Collision with Person	1	6
Derailment	9	0
Fire	10	1
Rail-Highway Crossing	1	0
Total	21	7

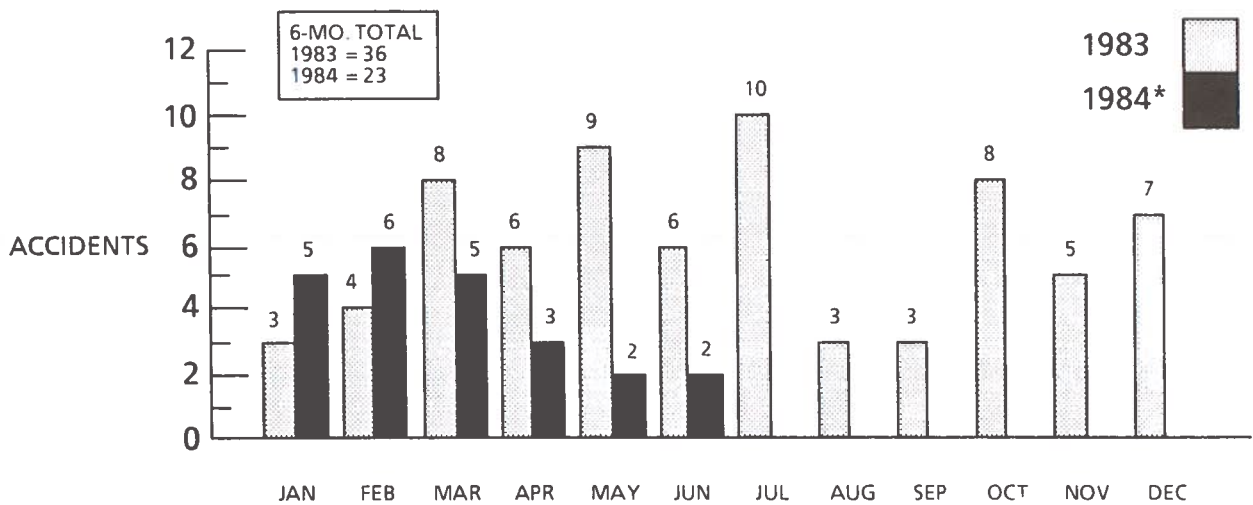
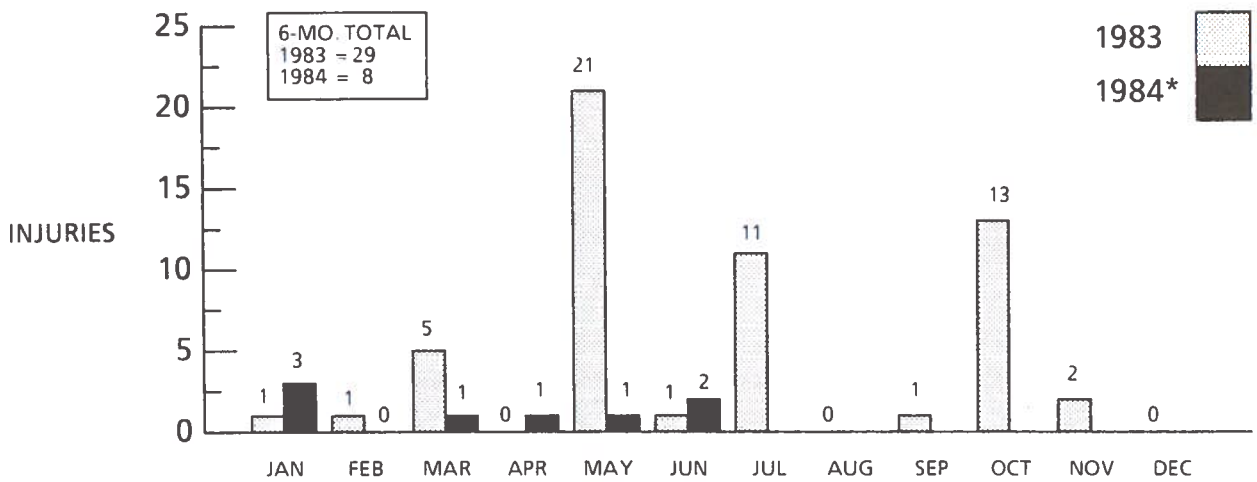
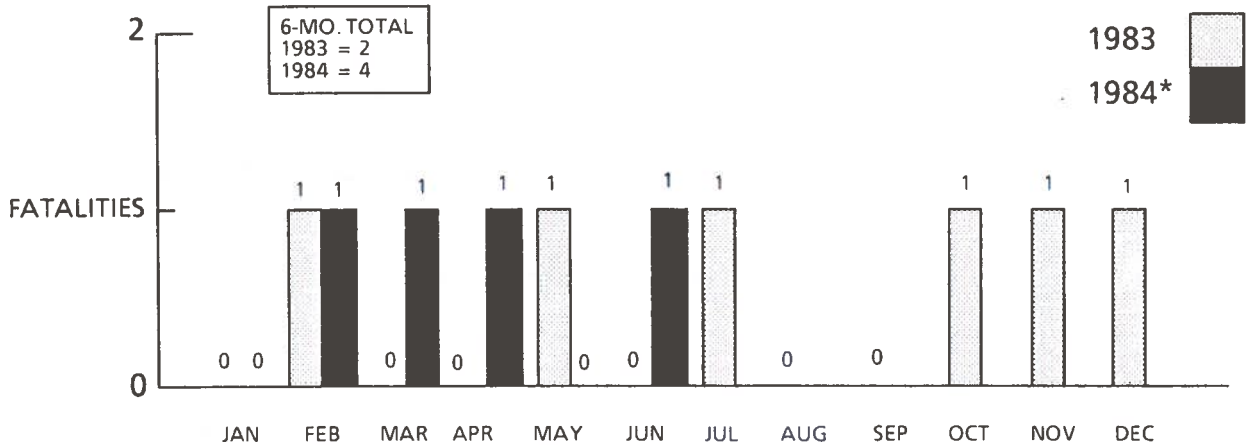
- Of the 547 RRT train and nontrain casualties (injuries and fatalities) reported in the second quarter of 1984, 356 resulted from slips and falls; while in the second quarter of 1983, 343 of the 527 casualties also resulted from slips and falls. This type accident accounted for 65 percent of all casualties reported during these periods.

* Preliminary data prior to verification.

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

CHART 6.

RRT TRAIN FATALITIES, ACCIDENTS AND INJURIES, 1983-1984

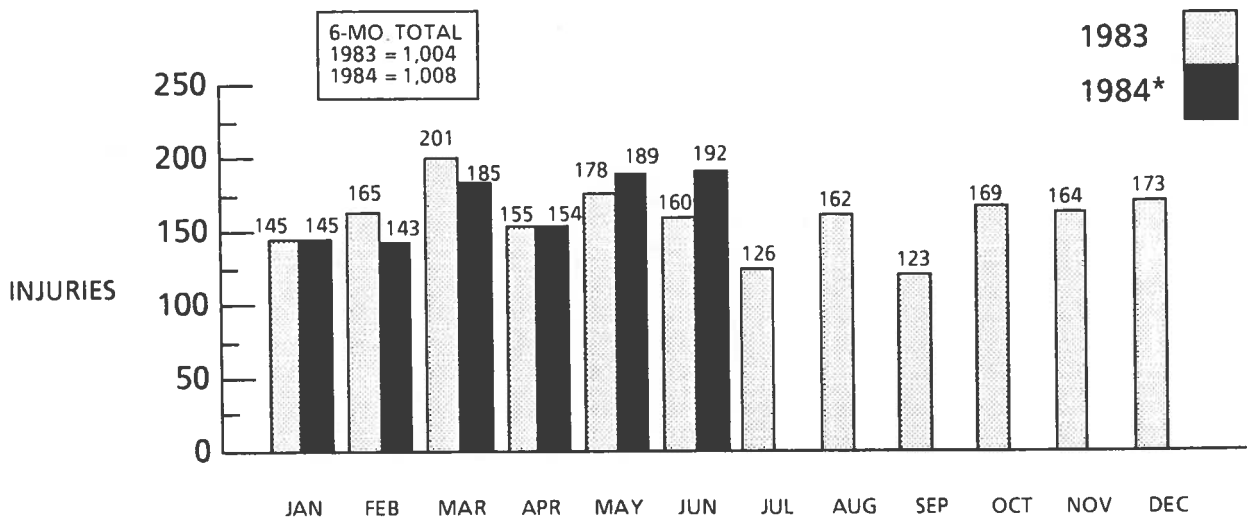
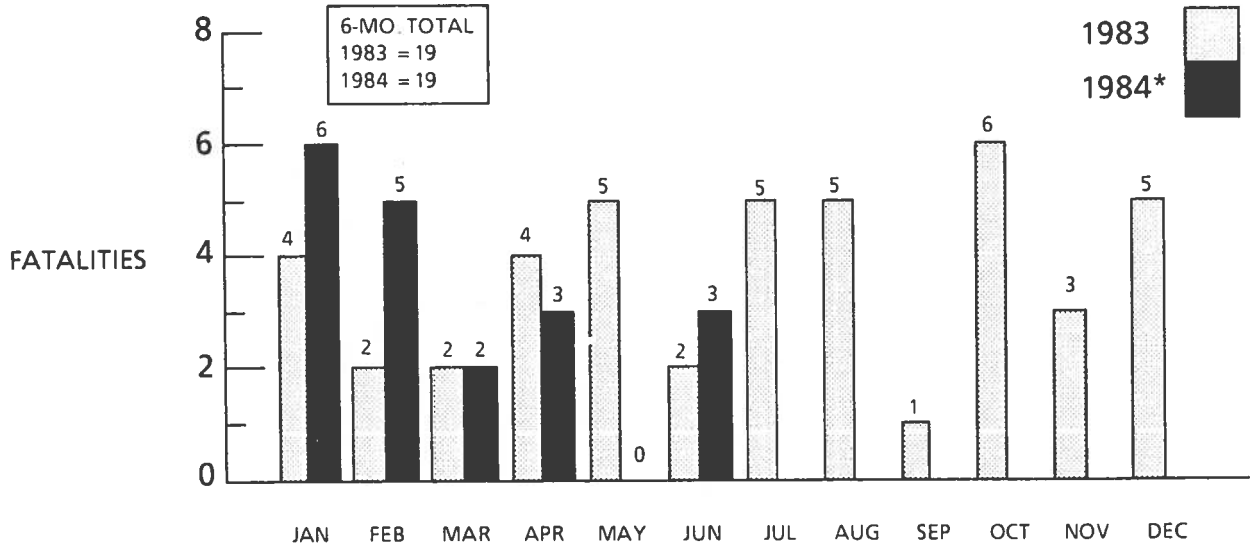


* Preliminary data prior to verification.

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

CHART 7.

RRT NONTRAIN FATALITIES AND INJURIES, 1983 - 1984



* Preliminary data prior to verification.

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

AVIATION

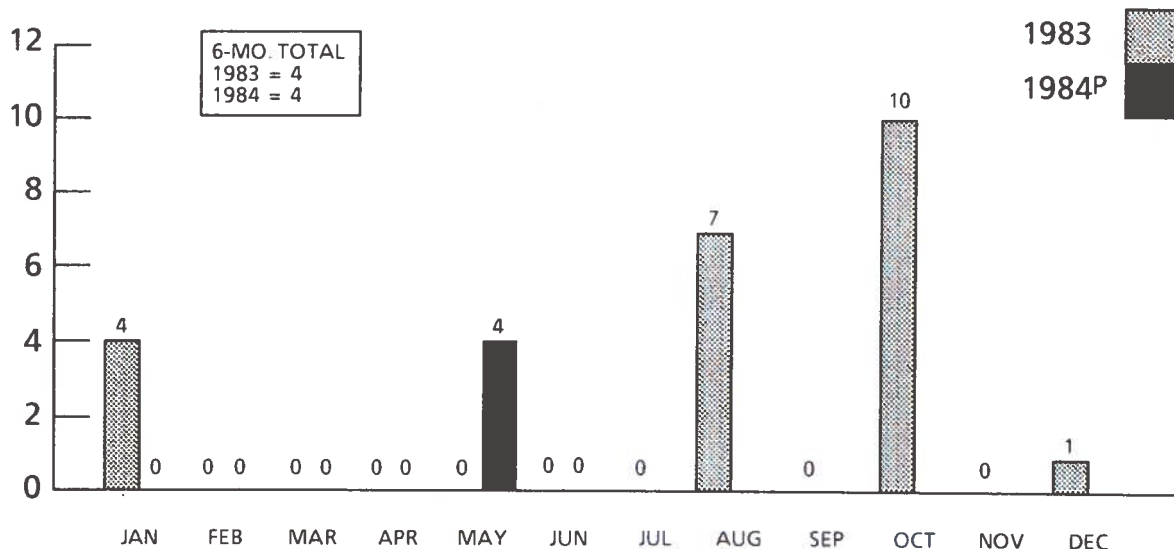
Beginning in January 1982, the National Transportation Safety Board began reporting aviation accident data according to the Federal Aviation Regulations under which the aircraft was operated at the time of an accident. Revenue operations of Air Carriers, Commercial Operators and deregulated All Cargo Carriers, using large aircraft, are conducted under 14 CFR 121. 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 or 14 CFR 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. Further exposure data now obtained from the CAB will be obtainable in less and less detail until the CAB's demise, at which time much of this data will be obtained from the FAA. Therefore, it is appropriate to begin using FAA definitions of such terms as air carriers and general aviation.

AIR CARRIER

- During the second quarter of 1984, there was one fatal accident resulting in four fatalities while there were no fatal accidents reported during the same period in 1983. However, the number of reported accidents for both years was identical (six).
- U.S. Air Carrier accidents increased slightly during the first six months of 1984 while fatal accidents decreased when compared to the first six months of 1983. However, there were four fatalities in the first six months of each year.
- The total number of Near Mid-Air Collision (NMAC's) Reports for the second quarter decreased from 81 in 1983 to 67 in 1984. This decrease represents a 17.3 percent reduction in the number of reported NMAC's.

CHART 8.

U.S. AIR CARRIER* FATALITIES, 1983 - 1984



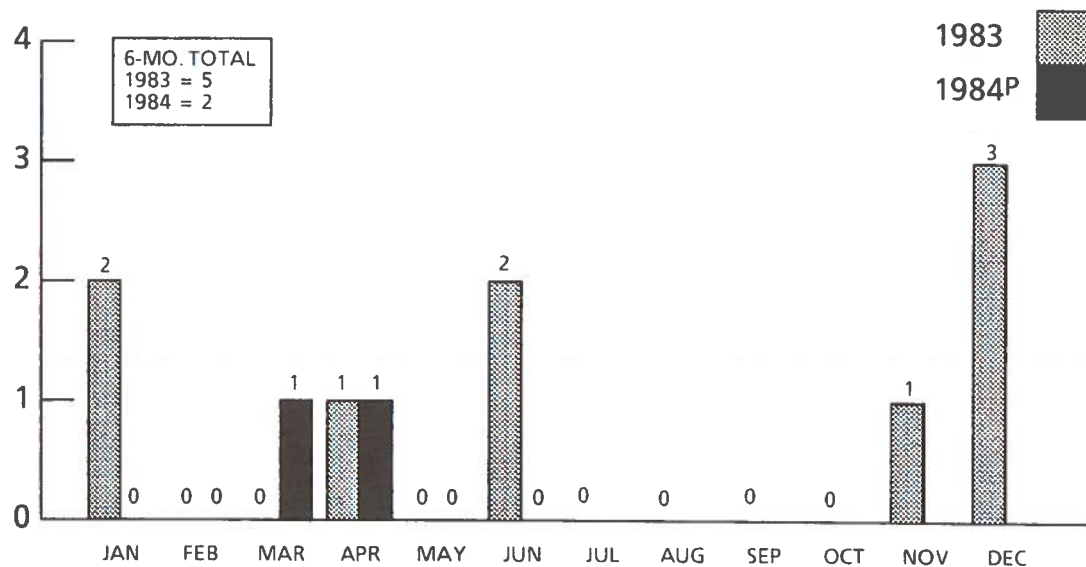
P = Preliminary.

* Large carriers operating under 14 CFR 121 (and 127).

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

CHART 9.

U.S. AIR CARRIER* SERIOUS INJURIES, 1983 - 1984



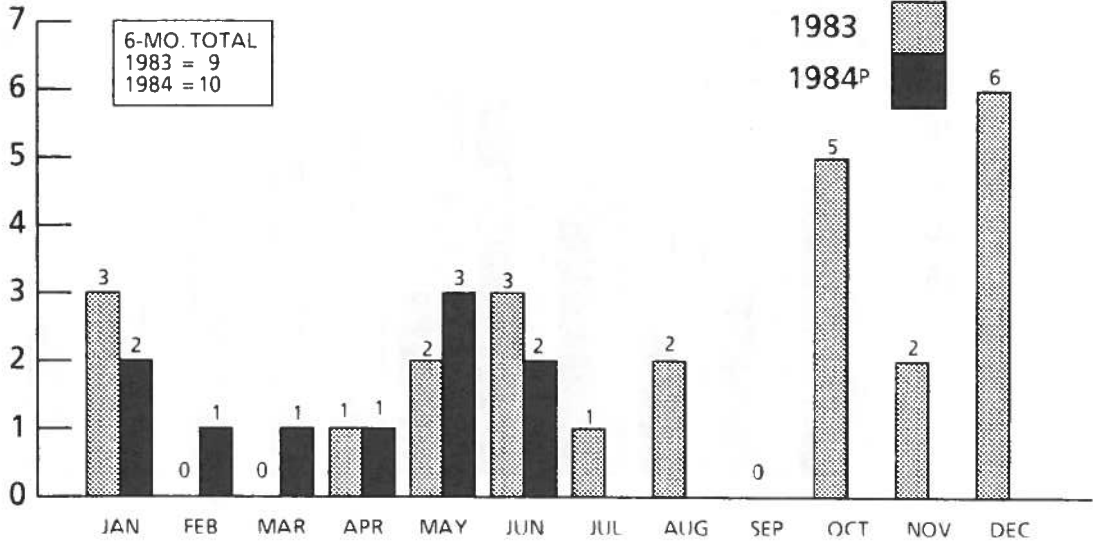
P = Preliminary.

* Large carriers operating under 14 CFR 121 (and 127).

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

CHART 10.

U.S. AIR CARRIER ACCIDENTS*, 1983 - 1984



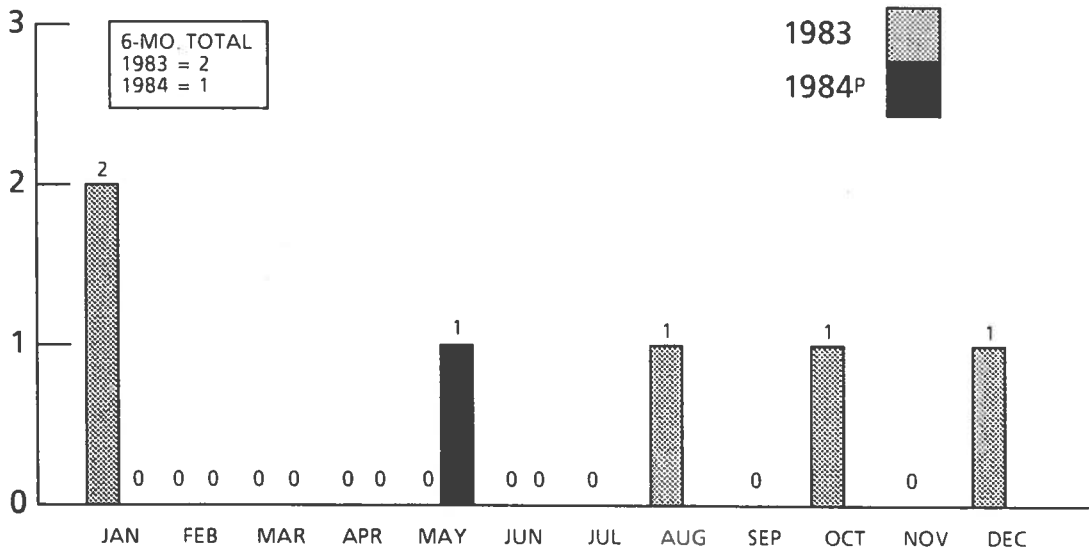
^P = Preliminary.

* Large carriers operating under 14 CFR 121 (and 127).

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

CHART 11.

U.S. AIR CARRIER* FATAL ACCIDENTS, 1983 - 1984



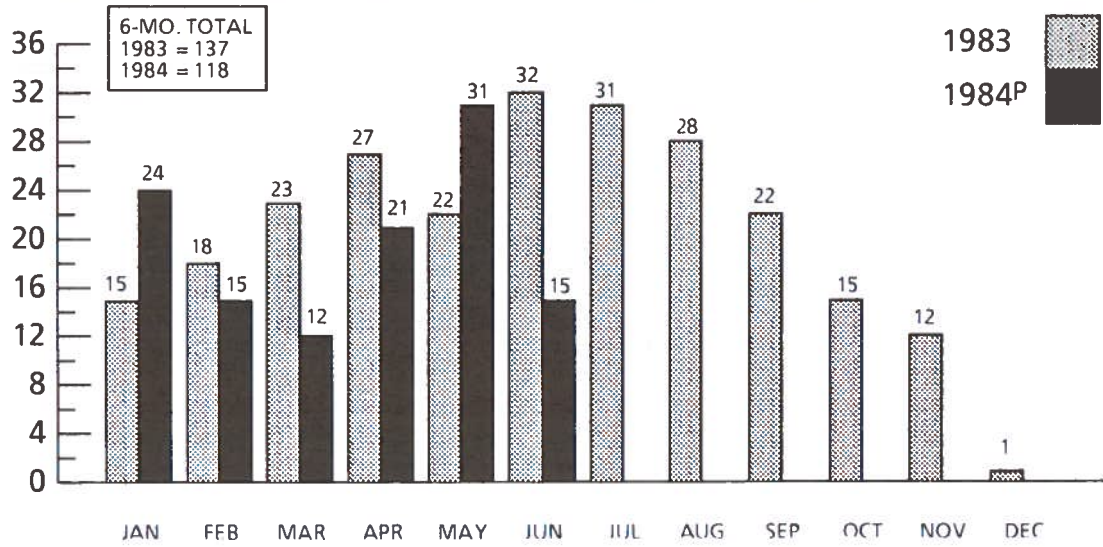
^P = Preliminary.

* Large carriers operating under 14 CFR 121 (and 127)

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

CHART 12.

U.S. CIVIL AVIATION NEAR COLLISIONS*, 1983 - 1984



P = Preliminary.

* Both aircraft airborne, includes General Aviation and Air Carrier.

SOURCE: FAA, Safety Analysis Division, ASF-200, NMAC Data Base.

TABLE 3.**COMMUTER CARRIERS* ACCIDENTS, FATALITIES AND INJURIES
1983-1984**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1983	1984	1983	1984	1983	1984
FATALITIES	1	0	0	0	0	3
FATAL ACCIDENTS	1	0	0	0	0	1
TOTAL ACCIDENTS	2	1	2	2	0	1
SERIOUS INJURIES	0	0	8	0	0	0

	APRIL		MAY		JUNE	
CLASSIFICATION	1983	1984	1983	1984	1983	1984
FATALITIES	0	0	0	0	0	0
FATAL ACCIDENTS	0	0	0	0	0	0
TOTAL ACCIDENTS	0	1	1	2	1	1
SERIOUS INJURIES	0	0	0	2	0	1

	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1983	1984	% Chg	1983	1984	% Chg
FATALITIES	0	0	-	1	3	+200.0
FATAL ACCIDENTS	0	0	-	1	1	
TOTAL ACCIDENTS	2	4	+100.0	6	8	+33.3
SERIOUS INJURIES	0	3	+300.0	8	3	-62.5

NOTE: 1984 Data are preliminary.

* All scheduled service operating under 14 CFR 135 (commuter air carriers)

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

TABLE 4.

**ON-DEMAND AIR TAXIS* ACCIDENTS, FATALITIES AND INJURIES
1983-1984**

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1983	1984	1983	1984	1983	1984
FATALITIES	4	5	2	1	7	5
FATAL ACCIDENTS	3	3	1	1	3	2
TOTAL ACCIDENTS	13	10	5	9	16	10
SERIOUS INJURIES	1	2	0	2	3	5

	APRIL		MAY		JUNE	
CLASSIFICATION	1983	1984	1983	1984	1983	1984
FATALITIES	0	5	0	2	9	6
FATAL ACCIDENTS	0	2	0	1	4	2
TOTAL ACCIDENTS	5	6	11	7	11	4
SERIOUS INJURIES	0	1	6	0	3	0

	SECOND QUARTER			FIRST 6 MONTHS		
CLASSIFICATION	1983	1984	% Chg	1983	1984	% Chg
FATALITIES	9	13	+44.4	22	24	+9.1
FATAL ACCIDENTS	4	5	+25.0	11	11	-
TOTAL ACCIDENTS	27	17	-37.0	61	46	-24.6
SERIOUS INJURIES	9	1	-88.9	13	10	-23.1

NOTE: 1984 Data are preliminary.

* Non-scheduled service operating under 14 CFR 135.

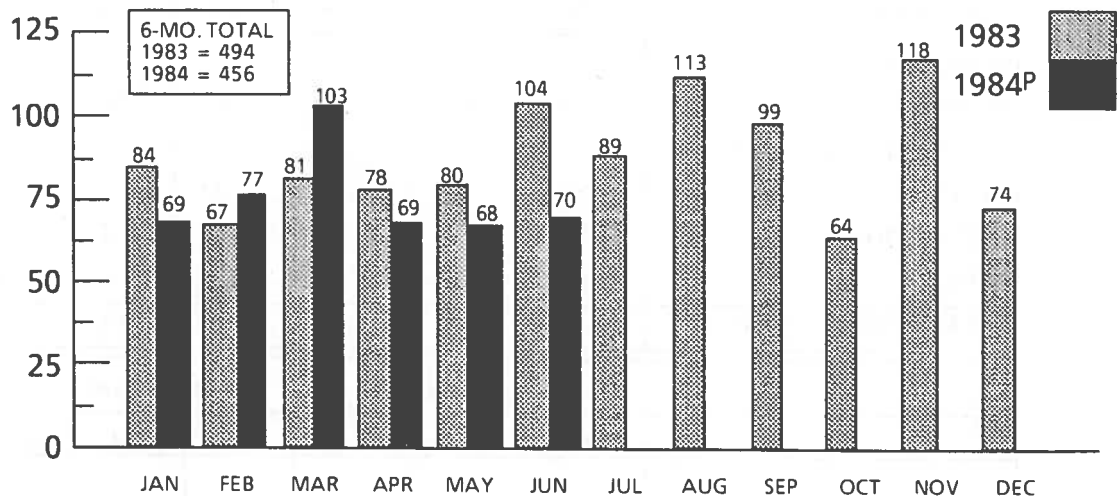
SOURCE: NTSB, Safety Studies & Analysis Division, SP-10.

GENERAL AVIATION

- The total number of General Aviation (G/A) fatalities decreased from 262 in the second quarter of 1983 to 207 for the same quarter of 1984. This represents an improvement of 21 percent.
- During the second quarter, the total number of G/A accidents and serious injuries increased from 872 and 140 in 1983 to 879 and 154, respectively, for the comparable quarter in 1984. However, G/A fatal accidents dropped from 138 to 126.
- During the first half of 1984 compared to the same period in 1983, G/A accidents increased slightly--from 1,461 to 1,470. Nevertheless, the number of G/A fatal accidents and fatalities declined for the same period. There were 456 fatalities and 246 fatal accidents reported for the first six months of 1984 compared with 494 fatalities and 257 fatal accidents for the same period last year. Serious injuries increased from 250 to 269 for the same periods.

CHART 13.

U.S. GENERAL AVIATION* FATALITIES, 1983 - 1984



P = Preliminary.

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

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

TABLE 5.

GENERAL AVIATION FATALITIES BY TYPE OF FLYING, 1983-1984

	JANUARY		FEBRUARY		MARCH	
CLASSIFICATION	1983	1984	1983	1984	1983	1984
PERSONAL	62	42	40	51	71	72
BUSINESS	17	14	17	10	4	20
CORPORATE/EXECUTIVE	2	4	0	1	0	0
AERIAL APPLICATION	0	0	0	1	2	0
INSTRUCTIONAL	2	1	2	6	4	1
OTHER	1	8	8	8	0	10
TOTAL GENERAL AVIATION	84	69	67	77	81	103

	APRIL		MAY		JUNE	
CLASSIFICATION	1983	1984	1983	1984	1983	1984
PERSONAL	41	48	58	47	73	44
BUSINESS	20	19	12	8	16	7
CORPORATE/EXECUTIVE	4	0	0	0	0	0
AERIAL APPLICATION	0	0	1	2	3	4
INSTRUCTIONAL	6	1	7	2	4	6
OTHER	7	1	2	9	8	9
TOTAL GENERAL AVIATION	78	69	80	68	104	70

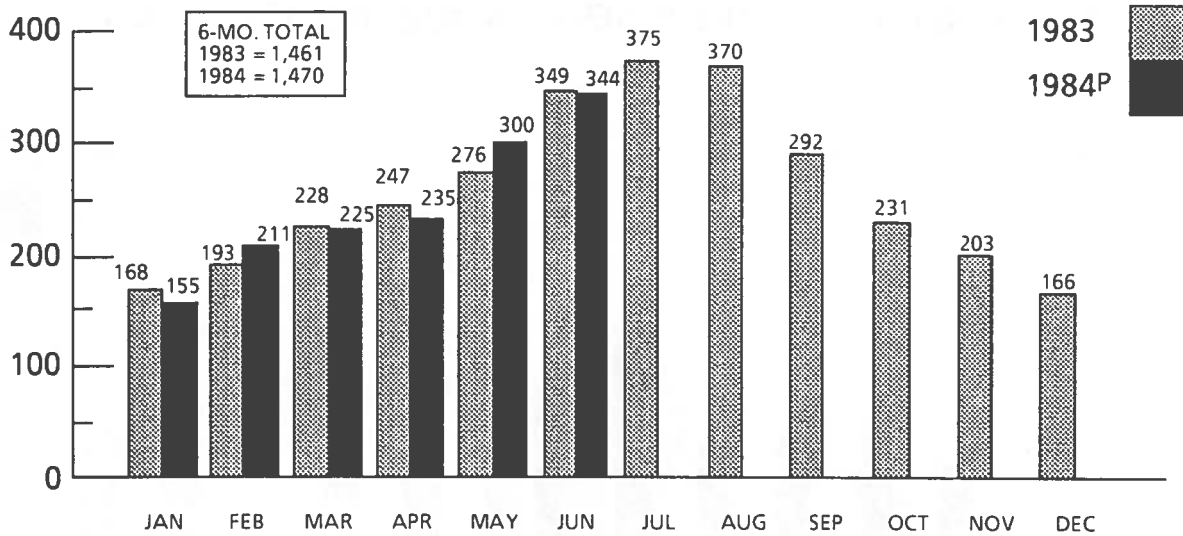
	SECOND QUARTER			FIRST 6 MONTHS		
	1983	1984	% Chg	1983	1984	% Chg
PERSONAL	172	139	-19.2	345	304	-11.9
BUSINESS	48	34	-29.2	86	78	-9.3
CORPORATE/EXECUTIVE	4	0	-400.0	6	5	-16.7
AERIAL APPLICATION	4	6	+50.0	6	7	+16.7
INSTRUCTIONAL	17	9	-47.1	25	17	-32.0
OTHER	17	19	+11.8	26	45	+73.1
TOTAL GENERAL AVIATION	262	207	-21.0	494	456	-7.7

NOTE: 1984 Data are preliminary.

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

CHART 14.

U.S. GENERAL AVIATION* ACCIDENTS, 1983 - 1984



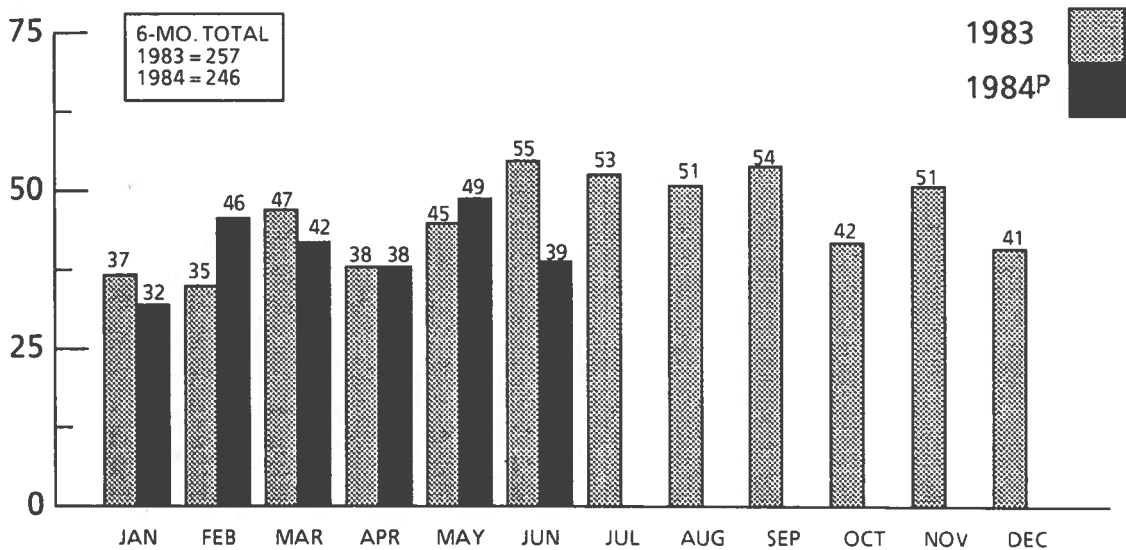
^P = Preliminary.

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

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

CHART 15.

U.S. GENERAL AVIATION* FATAL ACCIDENTS, 1983 - 1984



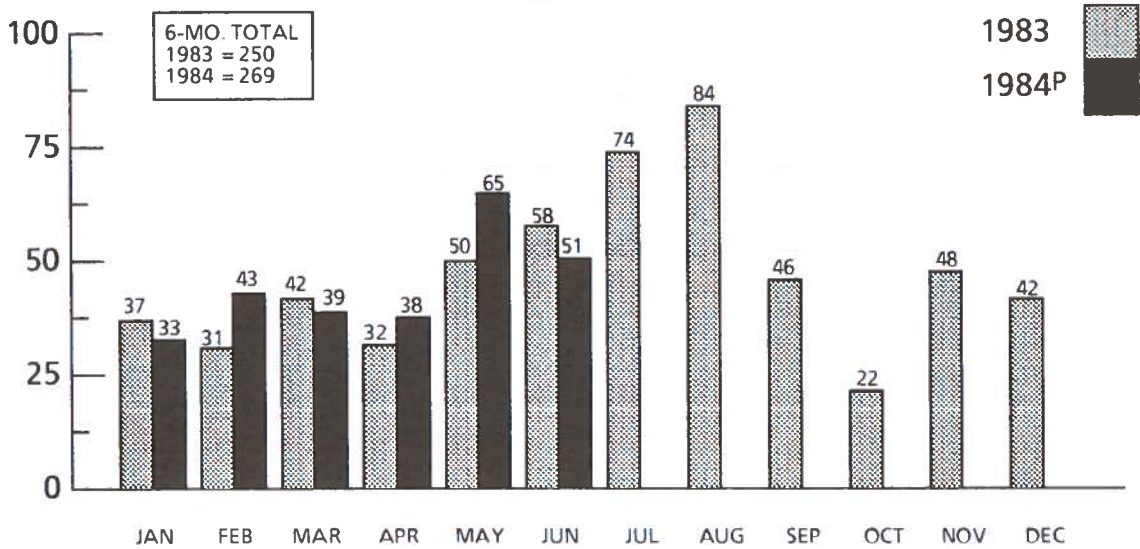
^P = Preliminary.

* All operations other than those operations under 14 CFR 121 and 14 CFR 135

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

CHART 16.

U.S. GENERAL AVIATION* SERIOUS INJURIES, 1983 - 1984



^P = Preliminary.

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

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

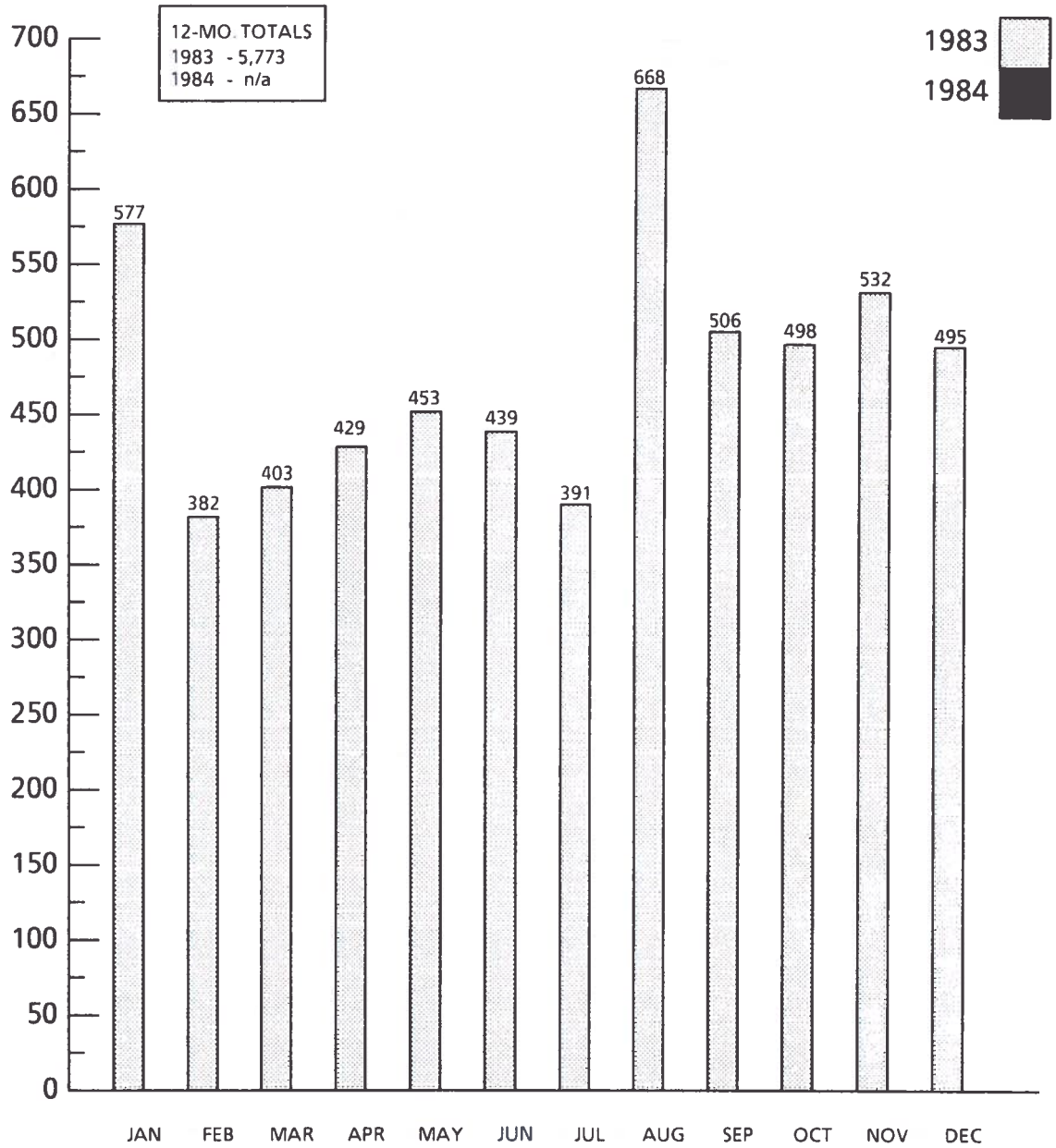
MARINE

WATERBORNE

The Commercial Marine Division of the Coast Guard does not have 1984 information available at this time since many of the marine casualties are still being investigated or are in various stages of completion. However, there have been substantial increases in the 1983 statistics published in the 1983 Annual Summary of this report. These changes are recorded in the following charts for Waterborne accidents, fatalities and injuries.

CHART 17.

VESSELS* INVOLVED IN WATERBORNE ACCIDENTS, 1983-1984**



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

** Data for 1984 are not yet available.

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

CHART 18.

WATERBORNE FATALITIES RESULTING FROM VESSEL CASUALTIES*, 1983 - 1984**

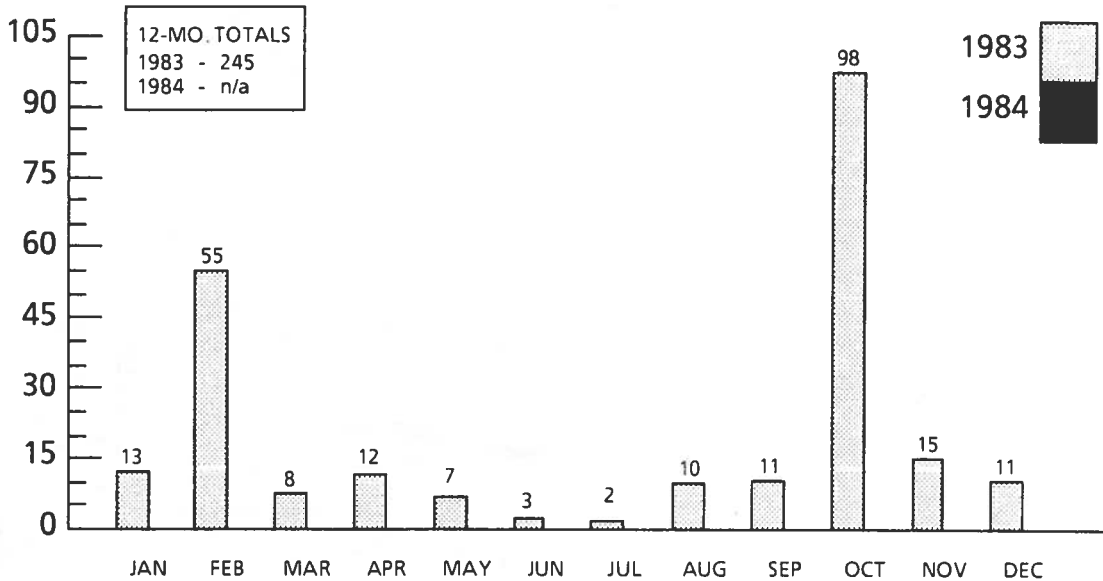
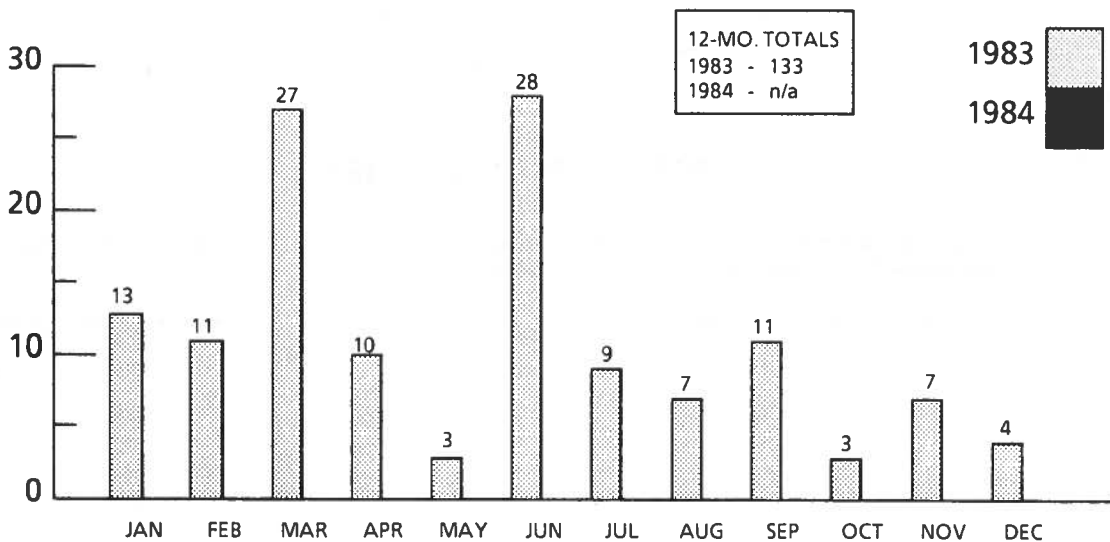


CHART 19.

WATERBORNE INJURIES RESULTING FROM VESSEL CASUALTIES*, 1983 - 1984**



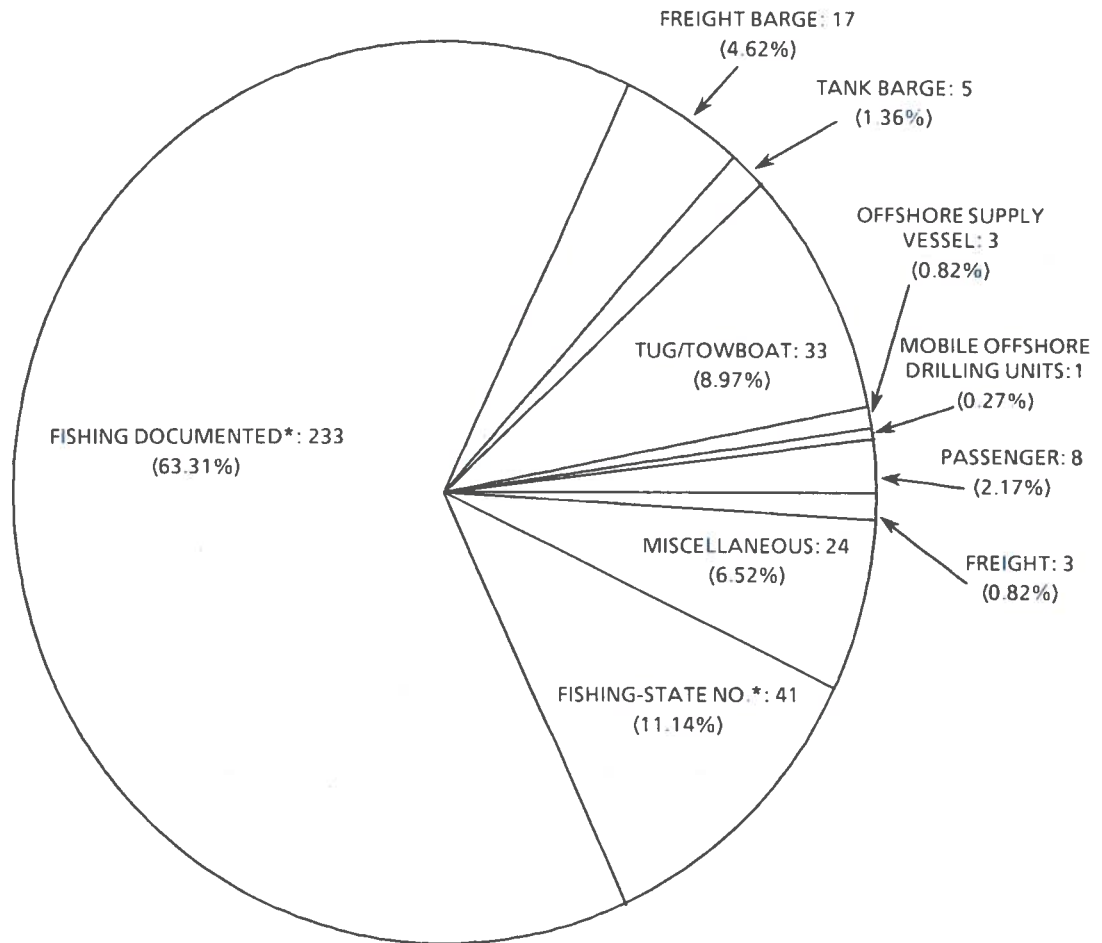
* Includes foreign vessels having casualties in U.S. navigable waters.

** Data for 1984 are not yet available.

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

CHART 20.

U.S. VESSELS TOTALLY LOST IN 1983



TOTAL VESSELS LOST: 368

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

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

Data supplied as of 08/28/84

CHART 21.

FATALITIES RESULTING FROM TOTAL LOSS OF U.S. VESSELS, 1983

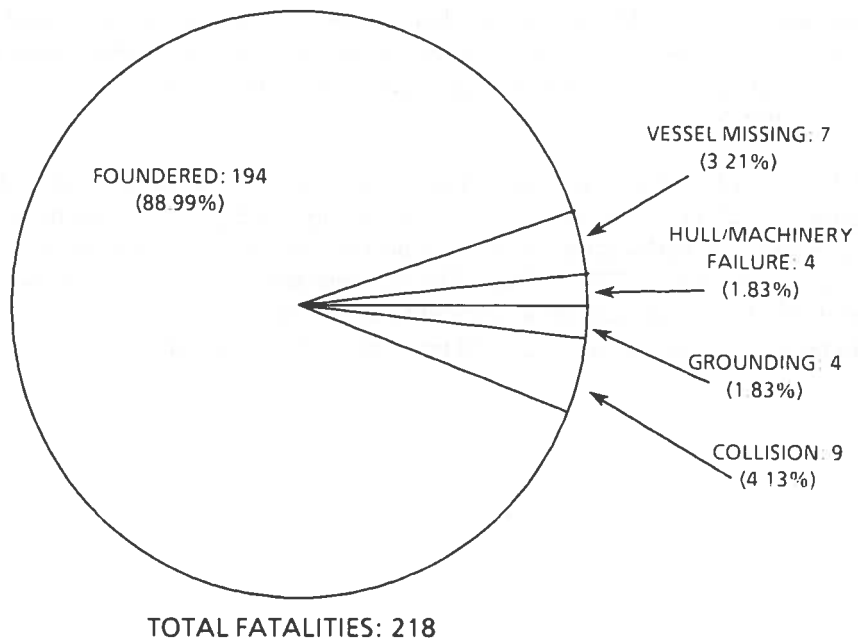
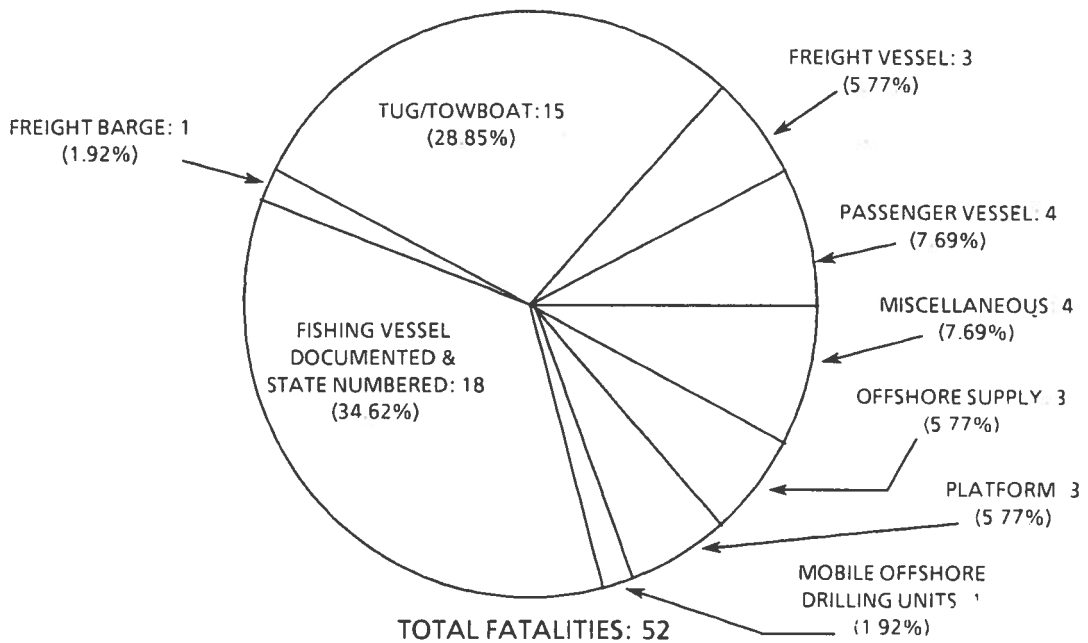


CHART 22.

ACCIDENTAL DEATHS RESULTING FROM FALLS OVERBOARD (NO VESSEL CASUALTY), 1983



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

Data supplied as of 08/28/84

RECREATIONAL BOATING

The second quarter 1984 Recreational Boating accident statistics are not complete at this time. Since they are not an accurate portrayal of this quarter's accident experience, they are subject to misinterpretation. Valid boating accident statistics can only be developed annually under present or reasonable reporting system conditions. Factors involved in this include the seasonal nature of boating and enforcement activity, State and Federal resource constraints, and various investigatory and processing delays.

As of August 14, 1984, the Coast Guard had received reports of only 1,611 vessels involved in accidents. In 1983 there were 2,913 vessels reported to be in accidents in the first six months. Fatalities are especially slow in being reported because of investigations. A total of 299 have been reported so far, versus 672 in 1983. The comparison of injuries is: 1984 - 582; 1983 - 1,158. If it is assumed that the same number of accidents occurred in the first half of 1984 as occurred in 1983, then only 44 percent of the fatalities and 55 percent of reports of all accidents have been reported.

MATERIALS TRANSPORT

PIPELINES

- Second quarter 1984 data are not yet available for Gas Pipelines. However, the number of gas pipeline fatalities in the first quarter of 1983 compared to the first quarter of 1984 increased from one to 12.
- In the first six months of 1983, Liquid Pipeline fatalities decreased from six to two for the comparable 1984 period, while the number of leaks/failures increased from 79 to 92 for the same periods.

HAZARDOUS MATERIALS

- There was a slight increase in the number of Hazardous Materials fatalities -- from one to two -- for the first quarter 1983 and 1984, respectively. Hazardous Materials incidents increased from 1,256 to 1,315 for the same three-month period.

CHART 23A.
GAS PIPELINE FATALITIES, 1983*-1984

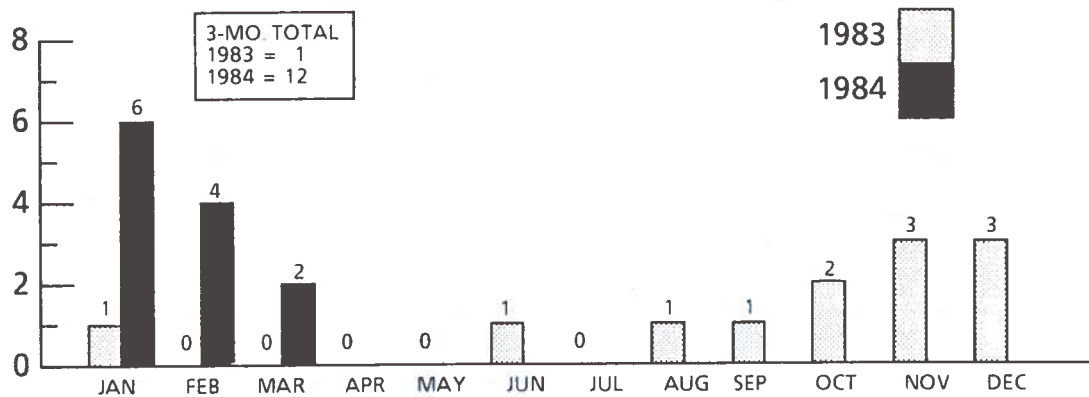


CHART 23B.
GAS PIPELINE INJURIES, 1983*-1984

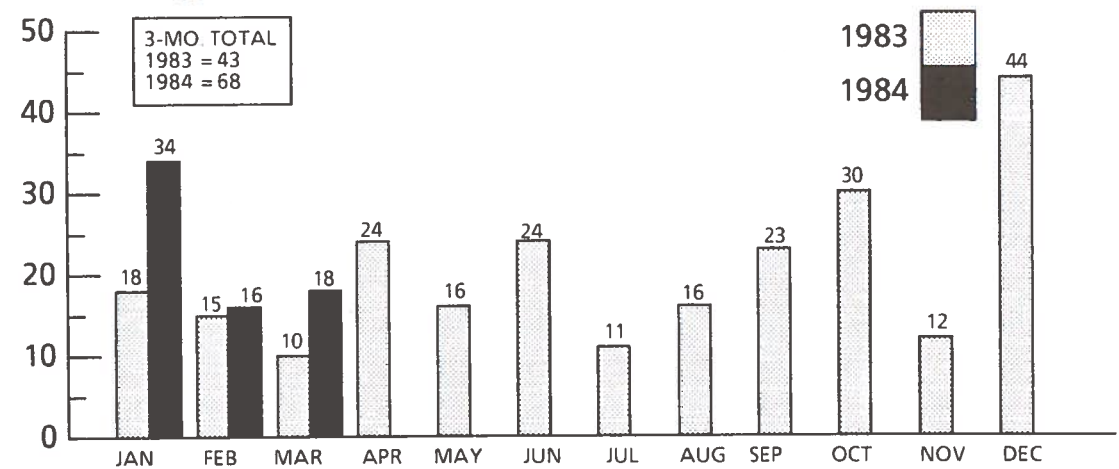
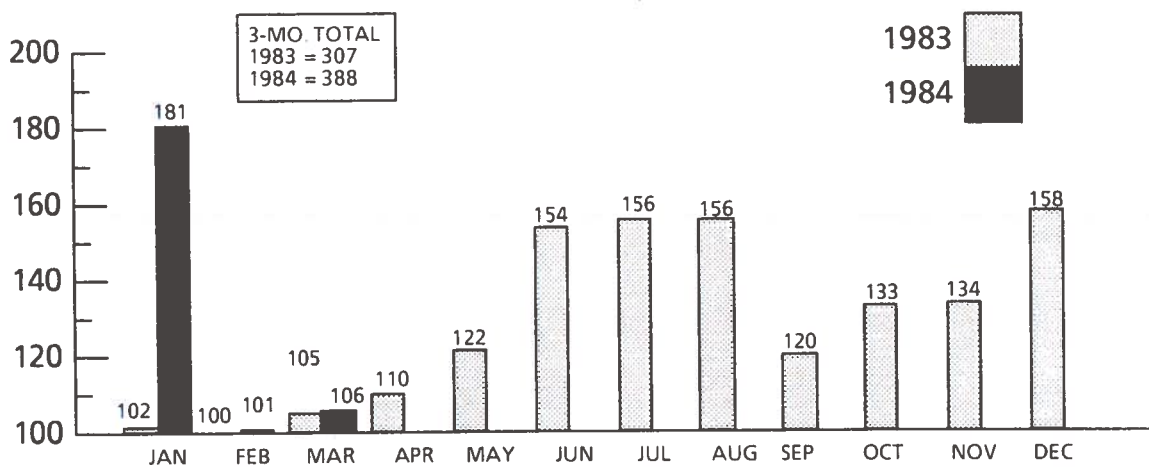


CHART 23C.
GAS PIPELINE LEAKS/FAILURES, 1983*-1984



* Beginning with 1983 data, Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

NOTE: 1984 Data are preliminary.

SOURCE: Gas Pipeline: DOT F 7100.1 and F7100.2.
 RSPA, Hazardous Materials Information Systems, DMT-63

CHART 24A.

LIQUID PIPELINE FATALITIES, 1983*-1984

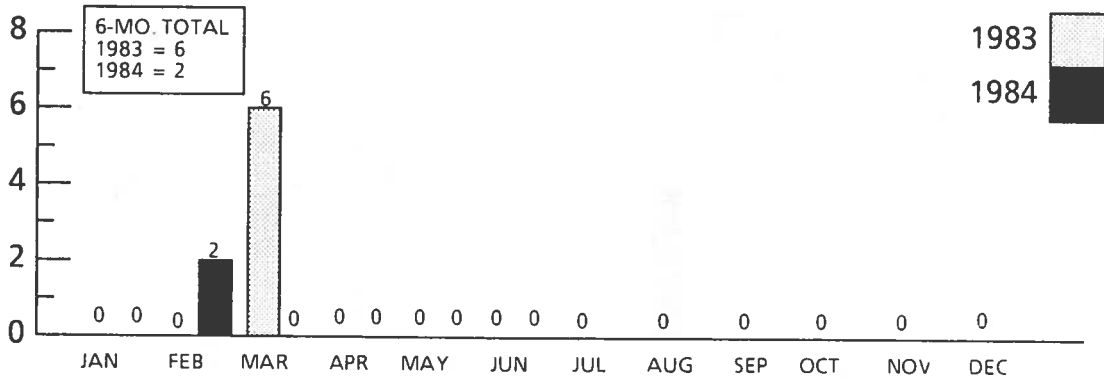


CHART 24B.

LIQUID PIPELINE INJURIES, 1983*-1984

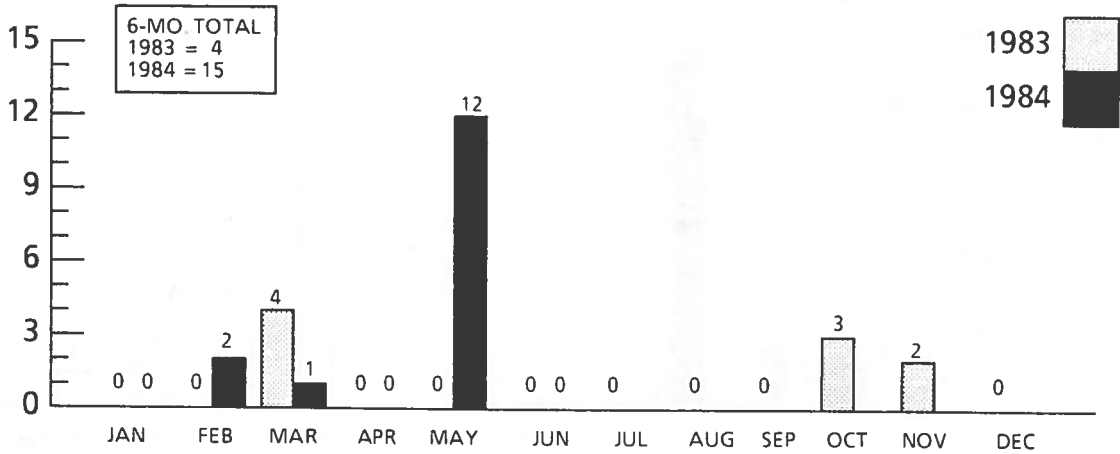
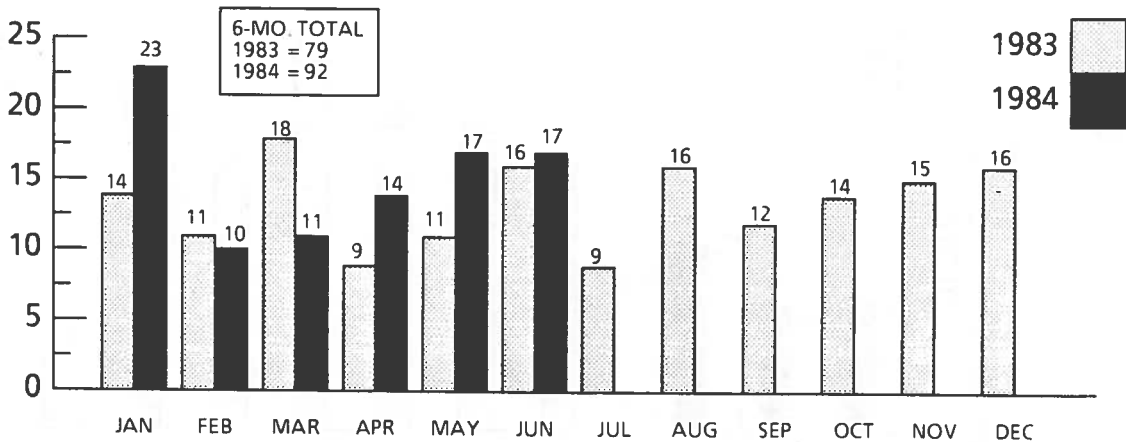


CHART 24C.

LIQUID PIPELINE LEAKS/FAILURES, 1983*-1984



* Beginning with 1983 data, Pipeline Incidents are credited to the year in which they occurred, not the year in which the report was received.

NOTE: 1984 Data are preliminary.

SOURCE: Liquid Pipeline: DOT F 7000.0.
RSPA, Hazardous Materials Information Systems, DMT-63

CHART 25A. HAZARDOUS MATERIALS FATALITIES, 1983-1984

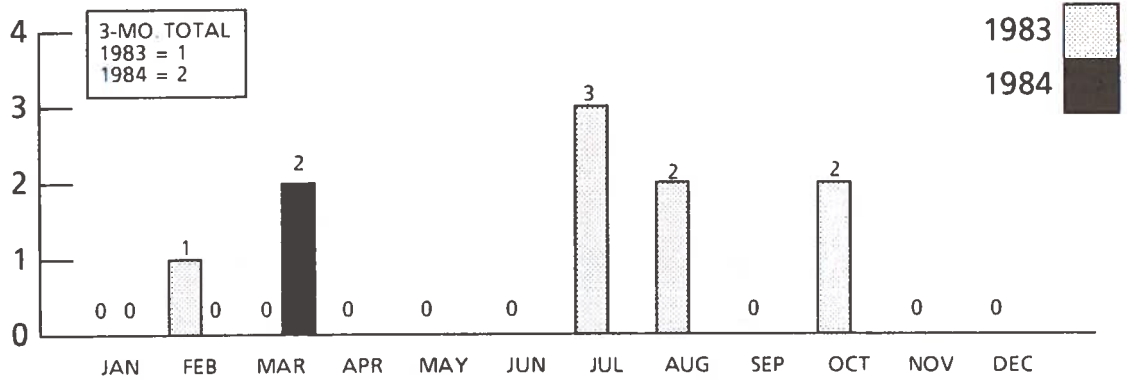


CHART 25B. HAZARDOUS MATERIALS INJURIES, 1983-1984

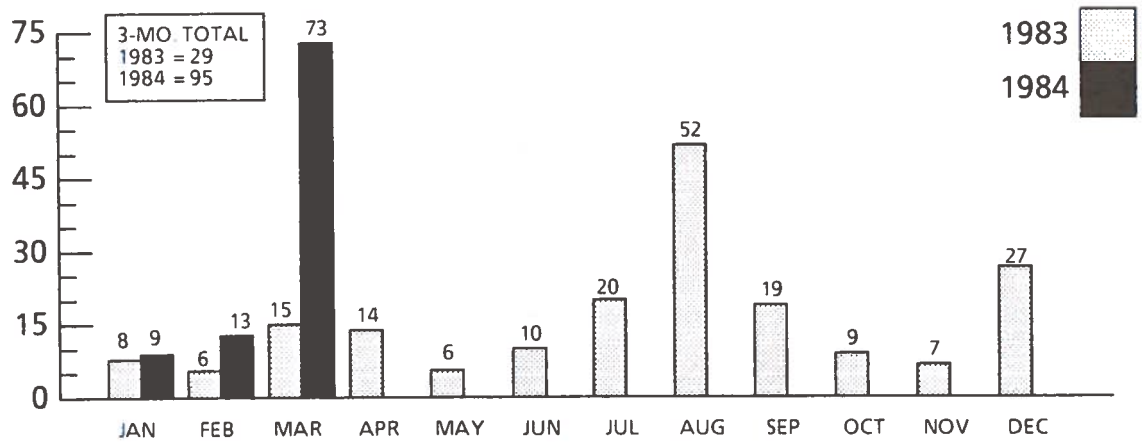
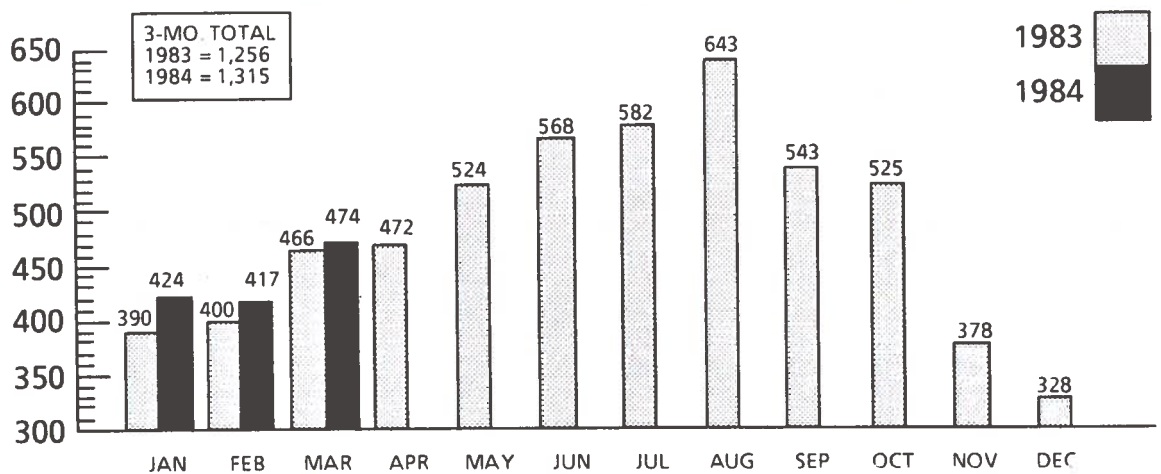


CHART 25C. HAZARDOUS MATERIALS INCIDENTS*, 1983-1984



* Hazardous Materials incidents are reported in the year in which they occurred.
NOTE: 1984 Data are preliminary.
SOURCE: RSPA, Hazardous Materials Information Systems, DMT-63.

MAJOR DOT SAFETY REGULATIONS

APRIL 1, 1984 - JUNE 30, 1984

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 1 and 156 -- Special Requirements for Cargo Lightering Operations

This final rule establishes regulations for the lightering of oil and hazardous material cargoes in bulk from one vessel to another in the marine environment surrounding the United States. The rule requires vessels engaged in lightering to hold a Certificate of Inspection, or for foreign vessels a Certificate of Compliance (or Tank Vessel Examination Letter); and to comply with MARPOL 73/78 (The International Convention of the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto). The rule also requires lightering vessels to give pre-arrival notices and report certain incidents; and delegates the authority to establish lightering zones to the Coast Guard District Commander. Effective date April 26, 1984. (49 FR 11170, March 26, 1984.)

49 CFR Parts 450, 451, 452, and 453 -- Requirements for Safety Approval of Cargo Containers

The Coast Guard is amending certain requirements of the Safety Approval of Cargo Container regulations. These final rules make the following amendments to the existing regulations: (1) Require all gross weight markings on the container to be consistent. (2) Modify the time period between subsequent examinations. (3) Provide for containers to be examined under a continuous examination program. These changes make the regulations consistent with amendments to the International Convention for Safe Containers. These changes require all gross weight markings on the container to be consistent with the safety approval plate, increase the time period between subsequent examination and allow the owners flexibility in carrying out subsequent examination by allowing a continuous examination program. Effective date May 21, 1984. (49 FR 15560, April 19, 1984.)

46 CFR Part 148 -- Dangerous Cargoes; Carriage of Solid Hazardous Materials in Bulk

The purpose of this final rule is to repromulgate 46 CFR Part 148 under the Hazardous Materials Transportation Act of 1974 (Public Law 93-633). Effective date April 20, 1984. (49 FR 16794, April 20, 1984.)

FEDERAL AVIATION ADMINISTRATION

14 CFR Part 39 -- Airworthiness Directives; Beech 33, 35, 36, 50, 55, 56, 58, 58TC and 95 Series Airplanes

This amendment adopts a new Airworthiness Directive (AD), applicable to Beech Models 33, 35, 36, 50, 55, 56, 58 (except 58P), 58TC and 95 series airplanes seating more than five occupants. This AD supersedes AD 76-04-07 and requires replacement of the emergency exit placard, minor trimming of the window latch and re-location of the window curtain rod to facilitate exit opening and passenger egress during an emergency. The FAA has determined that AD 76-04-07 does not assure proper operation of the emergency egress. This action eliminates conditions which may prevent occupants from immediately opening and exiting through this egress following an aircraft accident. Effective date May 25, 1984. (49 FR 16763, April 20 1984.)

14 CFR Part 39 -- Airworthiness Directives; McDonnell Douglas Model DC-8-70 Series Airplanes

This amendment adds a new airworthiness directive (AD) that requires replacement of certain thrust reverser hydraulic control units (HCU's) installed on the inboard thrust reversers of certain McDonnell Douglas Model DC-8-70 series airplanes. This action is necessary to correct a design deficiency in certain HCU's and prevent a situation where the thrust reversers cannot be stowed following an in-flight deployment. This action supersedes an existing AD applicable to the same components. Effective date June 1, 1984. (49 FR 18283, April 30, 1984.)

14 CFR Part 39 -- Airworthiness Directives; Airbus Industrie Model A300 B2 and B4 Series

This amendment adds a new airworthiness directive (AD) applicable to Airbus Industrie Model A300 B2 and B4 series airplanes which requires replacement of all clamps and most of the support brackets for fuel and hydraulic system lines in the engine pylons. This is prompted by reports of fuel and hydraulic line attaching clamps breaking in service. This could result in line breakage and a consequent fire hazard. Effective date June 1, 1984. (49 FR 18285, April 30, 1984.)

14 CFR Part 39 -- Airworthiness Directives; Boeing Model 737 Series Airplanes

The amendment adopts a new airworthiness directive (AD) which requires inspection of the auxiliary power unit (APU) feeder cable on certain Boeing 737 aircraft. This action is necessary to detect interference with the elevator control cable which could result in a severed primary control cable. A severed elevator control cable combined with another elevator system failure could result in loss of the airplane. Effective date June 4, 1984. (49 FR 21919, May 24, 1984.)

14 CFR Part 39 -- Airworthiness Directives; McDonnell Douglas Model DC-9 and Military C-9 Series Airplanes

On January 27, 1984, the FAA issued a telegraphic airworthiness directive (AD), effective upon receipt, to all known operators of McDonnell Douglas DC-9-10 through -50, -80 (if installed), and Military C-9 series airplanes certificated in all categories. This AD required the safety wiring of lateral control mixer shields to adjacent structure and verification of the safety wire installation. This action was prompted by several reports of engine power losses and failure of the main landing gear (MLG) to retract or extend normally as a result of lateral control mixer shields being damaged and jammed against the fuel control valve cables and mixer assembly during gear retraction. The AD is hereby published in the Federal Register to make it effective to all persons. Effective date June 4, 1984. (49 FR 21921, May 24, 1984.)

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

This amendment adds a new airworthiness directive (AD) which requires an inspection and torque check of the six bolts which attach the forward and aft cylinders to the trunnion block assemblies on the inboard aileron actuator control assemblies on McDonnell Douglas Model DC-10 series airplanes. Actuators have been found having loose and broken bolts which, if not corrected, could result in fluid leakage and rapid loss of pressure in two hydraulic systems. This action is necessary to minimize the potential of dual hydraulic system failure which would reduce the capability of the flight control system. Effective date July 16, 1984. (49 FR 24710, June 15, 1984.)

14 CFR Part 39 -- Airworthiness Directives; McDonnell Douglas Model DC-8-11 Through -61 Series Airplanes

This amendment adopts a new airworthiness directive (AD) applicable to McDonnell Douglas Model DC-8-11 through -61 series airplanes which requires an initial and repetitive inspection of the left and right wing front spar lower caps in the region of the inboard pylon for cracks, and a rework modification if necessary. This AD is prompted by five reports of cracks in the wing front spar lower cap in the inboard pylon area. If left unattended, these cracks may cause spar cap failure and a reduction of load carrying capacity of the wing. Effective date June 27, 1984. (49 FR 25423, June 21, 1984.)

14 CFR Part 39 -- Airworthiness Directives; DeHavilland DHC-6 Models 1, 100, 200 and 300 Airplanes

This amendment adopts a new Airworthiness Directive (AD), applicable to DeHavilland DHC-6 Models 1, 100, 200 and 300 airplanes. It requires initial and repetitive inspections or modifications to ensure security of the seat to the rail. Reports and inspection findings indicate that the seat legs may be dislodged from the mounting rails during normal usage. The inspections and modifications will eliminate hazards to seat occupants resulting from a loss or inadequately restrained seat during a crash. Effective date April 13, 1984. (49 FR 14499, April 12, 1984.)

14 CFR Part 39 -- Airworthiness Directives: Short Brothers Limited Model SD3-30 Series Airplanes

This amendment adds a new airworthiness directive (AD) that requires inspections of structural and system components on certain Shorts SD3-30 series airplanes and modification or repair, as necessary, to correct unsafe conditions which may exist. This action is necessary to preserve the structural integrity of the wing and horizontal stabilizer, to prevent fuel leaks into the cabin, to insure adequate fire protection for the aft baggage compartment, and to prevent operation with the control surfaces locked. Effective date May 14, 1984. (49 FR 14500, April 12, 1984.)

FEDERAL RAILROAD ADMINISTRATION

Special Safety Inquiry: Rail-Highway Grade Crossing Safety

FRA is initiating a Special Safety Inquiry to obtain information from the public to assist in evaluating possible future courses of action to enhance public safety at railroad-highway grade crossings. This information will be used by FRA in assessing the need for additional regulatory or other initiatives to reduce the number of fatalities and serious injuries that result from rail-highway grade crossing accidents. Effective dates: A public hearing will begin at 10:00 a.m. on July 16, 1984. (49 FR 24968, June 18, 1984.)

49 CFR Part 23 -- Safety Appliance Standards

This rule eliminates the requirement that railroads and other freight car owners remove the roof running boards from box and other house cars by June 30, 1984. It responds to a petition from the Association of American Railroads (AAR) that FRA eliminate this requirement. Effective date July 30, 1984. (49 FR 26744. June 29, 1984.)

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Federal Motor Vehicle Safety Standards; Tire Selection and Rims for Motor Vehicles Other Than Passenger Cars

This rule makes several minor interpretive and editorial changes to Federal Motor Vehicle Safety Standard No. 120, *Tire Selection and Rims for Motor Vehicles Other Than Passenger Cars*. With respect to the tire and rim selection information required to appear on a placard in new vehicles, the rule requires that the lettering be of specified dimensions and that the information be written in the English language. The rule also incorporates the substance of an existing interpretation of this standard permitting the purchaser of a new vehicle to request the vehicle manufacturer to install purchaser's retreaded tires on the vehicle; changes one of the rim labeling examples listed in the standard; and corrects the names of two tire standardization organizations listed in the standard. Effective date December 1, 1984. (49 FR 20822, May 17, 1984.)

RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION

MATERIALS TRANSPORTATION BUREAU

49 CFR Part 191 -- Transportation of Natural and Other Gas by Pipeline; Annual Reports and Incident Reports

This amendment changes the present requirements and reduces the burden for the reporting of gas pipeline leaks by operators of gas distribution and transmission systems and by operators of gas gathering systems in nonrural areas. It revokes certain of the present regulations for gas pipeline and liquefied natural gas (LNG) facility operators relative to telephonic, written incident and annual reports dealing with gas incidents and leaks. It also rescinds the present requirements for reporting test failures, and the reporting of an incident for the sole reason that a segment of transmission line is taken out of service or that the incident resulted in gas igniting. Effective date June 4, 1984 (49 FR 18956, May 3, 1984.)

49 CFR Part 192 -- Transportation of Natural and Other Gas by Pipeline; Design of Pipeline Components, General Requirements

This rule revises existing requirements for design of components to allow designs based upon a pressure rating which is established by the manufacturer as a result of pressure testing. The current rule, which requires that components be designed on the basis of unit stresses, is technically inappropriate for many components. Effective date June 11, 1984. (49 FR 19823, May 10, 1984)

49 CFR Parts 171, 172, 173, 176, 178, and 179 -- Cryogenic Liquids Revisions

This document makes additional revisions to a final rule published under Docket HM-115 (48 FR 27674; June 16, 1983), which amended the Hazardous Materials Regulation (HMR) (49 CFR Parts 171-179) by establishing requirements for the transportation of certain cryogenic liquids. These revisions are made in response to 18 petitions for reconsideration to the final rule.

Some significant changes to the rule are provisions -

1. To allow the installation of rubbing or abrading, anodized aluminum parts in cylinders and cargo tanks in cryogenic oxygen service;
2. To allow the installation of an aluminum valve, pipe or fitting external to the jacket of a cargo tank provided that no lading is retained in these parts during transportation;
3. To exclude cargo tanks in atmospheric gas (except oxygen) service and helium service from the requirement of a primary and a secondary pressure relief device system of equal capacities;
4. To allow a secondary system of frangible discs or pressure relief valves on cargo tanks in other than carbon monoxide service;
5. To authorize additional pressure control valve settings for DOT-4L cylinders;
6. To authorize construction of a 22 gauge stainless steel non-evacuated jacket on MC-338 cargo tanks;
7. To authorize evacuated jackets constructed of materials meeting ASME or ASTM specifications on MC-338 cargo tanks;
8. To authorize a minimum steel thickness of 0.110-inch for the tank of vacuum insulated MC-338 cargo tanks; and
9. To authorize alternate procedures for determining the heat transfer rate and holding time of MC-338 cargo tanks used in nonflammable cryogenic liquid service. Effective date October 1, 1984 (49 FR 24306, June 12, 1984.)

49 CFR Parts 173 and 178 -- Standards for Polyethylene Packagings

MTB is revising the Hazardous Material Regulations (HMR) applicable to polyethylene packagings used for hazardous materials. These amendments are in response to both industry petitions for rulemaking and MTB's initiative in converting exemptions into regulations of general applicability. Major changes are as follows:

1. Section 173.24 is revised to establish permeation limits for hazardous materials in polyethylene packagings and receptacles and to require permanent marking of polyethylene packagings which are used for poisonous materials;

2. In Part 173, the 30 gallon capacity limitation for Specification 34 drums is removed and the use of Specification 34 drums is authorized for a number of materials previously authorized in polyethylene drums only under exemption;

3. Section 178.19 is revised to increase emphasis on performance requirements rather than detailed construction requirements and to authorize a maximum capacity of 55-gallons for Specification 34 polyethylene drums;

4. In Part 178, specifications for polyethylene packagings and receptacles are revised to eliminate detailed criteria pertaining to polyethylene resins and to clarify performance requirements.

The purpose of these amendments is to increase safety with regard to use of polyethylene packagings for hazardous materials, to clarify certain aspects of the HMR and to reduce the burden of regulatory compliance imposed under the terms of exemptions on manufacturers of polyethylene packagings and shippers who use these packagings. Effective date October 1, 1984. (49 FR 24684, June 14, 1984.)

GLOSSARY

HIGHWAY

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.

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.

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.

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.

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.

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 \$4,500 in damages to railroad on-track equipment, signals, track, track structures, or roadbed. Prior to 1983, this threshold stood 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

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 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 \$4,500 in damages to railroad on-track equipment, signals, track, track structures, or roadbed. Prior to 1983, this threshold stood 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.

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.

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.

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
- (3) Occupational illness of a railroad employee, as diagnosed by a physician.

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.

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.

RAIL RAPID TRANSIT (RRT)

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

A. Train Collisions

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

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

B. Train Derailments

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

C. Fires/Explosions

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

D. Exclusions

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

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

A. Employee Casualties

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

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

B. Passenger and Other Casualties

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

A. Fatalities, or

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

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

C. Exclusions

Assaults, attempted suicides, and suicides are excluded.

WATERBORNE TRANSPORTATION

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

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.

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.

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.

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.

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.

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 **Commuter operator** - any operator who performs, pursuant to published schedule, at least five round trips per week between two or more points, or carries mail on contract.
- 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 **Air Taxi** - any use of an aircraft by the holder of an air taxi operating certificate which is authorized by the certificate.
- 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

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

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.

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

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.

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.

PIPELINES

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

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

- o Injury - refers to an injury involving lost time or other than on site medical treatment
- o Fatality - is a death resulting from the failure or escape of gas.
- o Accident - is a leak requiring immediate repair or other emergency action.

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

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

HAZARDOUS MATERIALS

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

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

Injury - the information received indicated that the injury required professional medical treatment and was due to the hazardous material involved.