

1998 E & P FORUM WORLD-WIDE OIL INDUSTRY HELICOPTER OPERATIONS AND SAFETY REVIEW

1998 WORLD-WIDE HELICOPTER OPERATIONAL DATA SUMMARY

1998 YEAR	TYPE HELICOPTER					PASSENGERS CARRIED	HOURS FLOWN	NUMBER OF FLIGHTS
	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET			
OFFSHORE	465.3	117.6	444.4	181.6	1208.9	9,764,538	1,029,503	3,029,243
SEISMIC	101.1	2.6	9.7	1.0	114.4	212,733	78,533	440,682
GEOPHYSICAL	28.5	0.0	0.0	0.0	28.5	1,000	11,262	7,896
PIPELINE	17.7	0.3	5.7	2.3	26.0	23,320	11,442	35,015
OTHER SUPPORT	29.1	2.6	21.7	8.8	62.2	282,672	43,736	124,040
1998 WORLD-WIDE	641.7	123.1	477.5	193.7	1436.0	10,284,263	1,174,476	3,699,876

1998 WORLD-WIDE HELICOPTER OPERATIONAL DATA DETAILS

1998 YEAR	HOURS PER TYPE HELICOPTER					PASSENGERS (PAX) PER TYPE HELICOPTER					NUMBER OF FLIGHTS PER TYPE HELICOPTER				
	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET
OFFSHORE	372,688	68,152	404,058	184,605	1,029,503	2,442,448	361,797	4,598,209	2,362,044	9,764,538	1,404,852	213,711	1,204,177	269,503	3,029,243
SEISMIC	63,943	1,517	11,197	1,876	78,533	145,609	7,705	55,219	4,200	212,733	404,479	828	28,410	6,965	440,682
GEOPHYS.	11,262	0	0	0	11,262	1,000	0	0	0	1,000	7,896	0	0	0	7,896
PIPELINE	7,186	113	3,891	252	11,442	10,011	212	12,852	245	23,320	11,919	204	21,704	1,188	35,015
OTHER SPT	21,348	1,245	14,007	7,136	43,736	72,448	7,804	194,700	7,720	282,672	63,334	2,864	41,606	16,236	124,040
1998	476,427	71,027	433,153	193,869	1,174,476	2,671,556	377,518	4,860,980	2,374,209	10,284,263	1,892,480	217,607	1,295,897	293,892	3,699,876

1998 WORLD-WIDE HELICOPTER FLEET OPERATIONAL DATA

Averages Per Helicopter	Offshore	Seismic	Geo Physical	Pipe- line	Other Support	World- Wide	Averages Per Helicopter	Offshore	Seismic	Geo Physical	Pipe- line	Other Support	World- Wide
Pax per Day per 5 Day Week	37,556	818	4	90	1,087	39,555	Annual Hours Per Aircraft	852	686	395	440	703	818
Flights Per Day	8,299	1,207	22	96	340	10,137	Flights Per Aircraft	2,506	3,852	277	1,347	1994	2,577
Avg. Flight Duration in Min.	20	11	86	20	21	19	Pax Flown Per Year	8,077	1,860	35	897	4545	7,162

Data Extracted from the Following Sources:

1. Helicopter Safety Advisory Conf (HSAC) and Int'l Airborne Geophysics Safety Assoc. (IAGSA) Annual Helicopter Activity Reports
2. Annual activity for helicopter operations generated by members of the Exploration and Production (E & P) Forum and from 136 helicopter operators world-wide.

As a service to E & P Forum membership, this World-Wide Helicopter Statistical Report is compiled annually from information submitted voluntarily by the membership and helicopter operators. The information is neither verified nor reviewed for accuracy and should be treated as unofficial. The data is believed to be representative; however, the E & P Forum assumes no liability for accuracy or completeness.

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1998 WORLD-WIDE HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft Category				Injuries			Severity		Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	11*	2	4	6	6	3	1	8	0	4	7	2.31	0.42	0.18	0.58
Light Twin	3*	2*	1	7	3	0	0	10	0	0	3	4.22	2.82	0.60	1.38
Med Twin	8*	5*	0	24	12	1	8	27	0	0	8	1.85	7.04	0.36	0.62
Heavy Twin	2	1	0	0	2	0	0	2	0	1	1	1.03	0.52	0.07	0.68
1998 Totals	22*	9*	5	37	23	4	9	47	0	5	19*	1.87	0.77	0.30	0.62

* 2 Mid Airs destroyed 4 aircraft, counted as 2 accidents, total of 23 fatalities on 3 aircraft.

1998 WORLD-WIDE HELICOPTER ACCIDENT DATA BY ACTIVITY

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT				Industry Fatal Rates per 100M Exposure Hrs Passengers & Crew	
Aircraft Category				Injuries			Severity		Classification			Rates				Accidents (IFAR)	Incidents (IFAIR)
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages		
Offshore	11*	6	2	25	16	2	4	35	0	2*	11*	1.07	0.58	0.24	0.36	709	122
Seismic	7	0	3	3	4	2	5	0	0	3	4	8.91	0.00	0.00	1.59	0	0
GeoPhysical	1	1	0	1	1	0	0	2	0	0	1	8.88	8.88	22.48	12.66	15,783	7,881
Pipeline	2	1	0	3	1	0	0	4	0	0	2	17.48	8.74	4.92	2.86	17,237	4,308
Other Spt	1	1	0	5	1	0	0	6	0	0	1	2.29	2.29	1.29	0.81	3,646	608
1998 Totals	22*	9	5	37	23	4	9	47	0	5	19	1.87	0.77	0.30	0.62	928 **	197

* 2 Mid Airs destroyed 4 aircraft, counted as 2 accidents, total of 23 fatalities on 3 aircraft.

** IFAR = Industry Fatal Accident Rate per 100M exposure Hours (Note: 1997 Industry IFAR for ALL Oil Industry Activity = 8.4)

1998 WORLD-WIDE HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Lightning	Flight Into Terrain, Weather, or Obstacle	Tie Down Proced.	External Load Proced.	Control Malf.	Mid Air	Refuel Proced.	Acft Over Load	Hard Ldg	Helideck Design or Size Issues	Injuries Due To Engine Malf.
Single Eng	4	0	2	1	1	0	1*	1	0	1	0	2**
Light Twin	1	0	0	0	0	0	2*	0	0	0	0	0

Medium Twin	0	0	3 (Night)	0	0	3	1*	0	1	0	0	0
Heavy Twin	0	1	0	0	1	0	0	0	0	0	0	0
1998 Totals	5	1	5	1	2	3	2*	1	1	1	0	2**

* 2 Mid Airl destroyed 4 aircraft, counted as 2 accidents, total of 23 fatalities on 3 aircraft.

** Seismic

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1998 WORLD-WIDE OFFSHORE HELICOPTER OPERATIONAL DATA SUMMARY

1998 YEAR	NUMBERS of HELICOPTERS by TYPE					PASSENGERS CARRIED	HOURS FLOWN	NUMBER OF FLIGHTS
	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET			
N SEA	0.0	0.0	51.0	99.6	150.6	1,909,323	164,105	253,269
GOM	392.0	89.0	94.0	13.0	588.0	2,725,682	454,280	1,390,773
1998 WORLD-WIDE	465.3	117.6	444.4	181.6	1208.9	9,764,538	1,029,503	3,029,243
1997 WORLD-WIDE	479.0	165.0	398.0	164.0	1206.0	9,771,259	950,343	3,184,797

1998 WORLD-WIDE OFFSHORE HELICOPTER OPERATIONAL DATA DETAILS

1998 YEAR	HOURS PER TYPE HELICOPTER					PASSENGERS (PAX) PER TYPE HELICOPTER					NUMBER OF FLIGHTS PER TYPE HELICOPTER				
	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET	SINGLE ENGINE (SE)	LIGHT TWIN (LT)	MEDIUM TWIN (MT)	HEAVY TWIN (HT)	TOTAL FLEET
N SEA	0	0	46,031	118,074	164,105	0	0	449,959	1,459,364	1,909,323	NR	NR	211,931	41,338	253,269
GOM	303,434	54,509	88,470	7,867	454,280	1,547,726	287,777	770,418	119,761	2,725,682	1,025,105	183,133	167,255	15,280	1,390,773
World Wide	372,688	68,152	404,058	184,605	1,029,503	2,442,448	361,797	4,598,209	2,362,044	9,764,538	1,404,852	213,711	1,204,177	269,503	3,029,243
1997	359,341	96,270	301,671	193,061	950,343	2,753,768	686,145	4,159,934	2,171,412	9,771,259	1,561,146	330,917	1,050,120	242,614	3,184,797

1998 WORLD-WIDE OFFSHORE HELICOPTER FLEET OPERATIONAL DATA

Averages Per Helicopter	N SEA	GOM	World	Averages Per Helicopter	N SEA	GOM	World
Passengers per Day per 5 Day Week	7,344	10,483	37,556	Annual Hours Per Aircraft	1,090	773	852
Flights Per Day	694	3,810	8,299	Flights Per Aircraft	1,682	2,365	2,506
Average Flight Duration in Min.	39	20	20	Passengers Flown Per Year	12,678	4,636	8,077

NR = None Reported

E = Estimated

N SEA = NORTH SEA

GOM = Gulf of Mexico

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1998 WORLD-WIDE OFFSHORE HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft Category				Injuries		Severity			Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	3*	0	1	0	1	1	0	0	0	1	2	0.80	0.00	0.00	0.21
Light Twin	3*	2	1	7	3	0	0	10	0	0	3	4.40	2.93	0.64	1.40
Med Twin	5*	4	0	18	10	1	4	23	0	0	5	1.24	5.87	0.33	0.42
Heavy Twin	2	1	0	0	2	0	0	2	0	1	1	1.08	0.54	0.07	0.74
1998 Totals	11*	6*	2	25	16	2	4	35	0	2*	11*	1.07	0.58	0.24	0.36
1997 Totals	11	5	2	41	13	7	5	42	1	3	8	1.16	0.53	0.29	0.35

* 2 Mid Airls, resulted in 23 fatalities, damages to 4 aircraft, recorded as 2 accidents

1998 GOM OFFSHORE HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft Category				Injuries		Severity			Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	2	0	1	0	1	1	0	0	0	1	2	0.99	0.00	0.00	0.29
Light Twin	1	1	0	0	1	0	0	1	0	0	1	1.83	1.83	0.22	0.55
Med Twin	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Heavy Twin	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
1998 Totals	3*	1*	1	0	2	1	0	1	0	1	3*	0.66	0.22	0.02	0.14
1997 Totals	6	1*	1	6	6	7	4	1	1	2	4	1.27	0.21	0.02	0.35

* One mid-air collision resulted in damages to two aircraft, one fatality, reported as one accident.

1998 NORTH SEA OFFSHORE HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft		Category		Injuries		Severity			Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	0	0	0	0	0	0	0	0	0	0	0	No Activity			
Light Twin	0	0	0	0	0	0	0	0	0	0	0	No Activity			
Med Twin	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Heavy Twin	1	0	0	0	0	0	0	0	0	1	0	0.85	0.00	0.00	2.42
1998 Totals	1	0	0	0	0	0	0	0	0	1	0	0.61	0.00	0.00	0.39
1997 Totals	3	2	1	11	2	0	0	13	0	1	2	1.78	1.19	0.49	1.08

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FIVE YEAR GOM OFFSHORE HELICOPTER ACCIDENT DATA

Number Of Accidents				Injury Classification					Aircraft Damages			Aviation Accident			
Aircraft		Category		Injuries		Severity			Classification			Rates			
Year	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hrs	# Fatal Acc 100k Hrs	# Fatal 100k Occupants	# Acc 100k Flt Stages
1994	3	3	NR	9	2	0	1	10	0	0	3	0.76	0.76	0.21 E	0.21
1995	5	3	NR	7	3	1	1	8	1	1	3	1.21	0.73	0.14 E	0.33
1996	7	4	NR	7	4	0	0	11	1	2	4	1.58	0.91	0.19 E	0.42
1997	6	1	1	6	6	7	4	1	1	2	4	1.27	0.21	0.02	0.35
1998	3	1	1	0	2	1	0	1	0	1	3	0.66	0.22	0.02	0.14
5 Yr Avg	4.8	2.4	0.4	5.8	3.4	1.8	1.2	6.2	0.6	1.2	3.4	1.10	0.57	0.12	0.29

FIVE YEAR NORTH SEA OFFSHORE HELICOPTER ACCIDENT DATA

Number Of Accidents				Injury Classification					Aircraft Damages			Aviation Accident			
Aircraft		Category		Injuries		Severity			Classification			Rates			
Year	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hrs	# Fatal Acc 100k Hrs	# Fatal 100k Occupants	# Acc 100k Flt Stages
1994	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
1995	2	0	0	0	0	0	0	0	0	2	0	1.65 E	0.00	0.00	0.85 E
1996	2	0	0	0	0	0	0	0	0	1	1	1.26 E	0.00	0.00	1.20 E
1997	3	2	1	11	2	0	0	13	0	1	2	1.78	1.19	0.49	1.08
1998	1	0	0	0	0	0	0	0	0	1	0	0.61	0.00	0.00	0.39

5 Yr Avg	2	0.4	0.2	2.2	0.4	0	0	2.6	0	1	0.6	1.06	0.24	0.10	0.70
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FIVE YEAR WORLD-WIDE OFFSHORE HELICOPTER ACCIDENT DATA

Number Of Accidents				Injury Classification					Aircraft Damages			Aviation Accident				Industry Fatal Rates Per	
Aircraft		Category		Injuries		Severity			Classification			Rates				100M Exposure Hrs Passengers & Crew	
Year	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hrs	# Fatal Acc 100k Hrs	# Fatal 100k Occupants	# Acc 100k Flt s	Accidents (IFAR)	Incidents (IFAIR)
1995	10	6	NR	35	8	19	0	24	0	2	5	1.36	0.82	0.21 E	0.41	671	168
1996	15	7	NR	8	8	0	0	16	1	3	11	1.82	0.85	0.12 E	0.59	432	189
1997	11	5	2	41	13	7	5	42	1	3	8	1.16	0.53	0.29	0.35	963	115
1998	11	6	2	25	16	2	4	35	0	2	11	1.07	0.58	0.24	0.36	709	122
4 Yr Avg	11.8	6.0	0.5	27.3	11.3	7.0	2.3	29.3	0.5	2.5	8.8	1.35	0.70	0.22	0.43	694	149

Note: First Report in 1995 IFAR = Industry Fatal Accident Rate per 100M exposure Hours (Note: 1997 Industry IFAR for ALL Oil Industry Activity = 8.4)

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1998 WORLD-WIDE OFFSHORE HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Bird Strike	Lightning	Flight Into Terrain Or Water Or Obstacle	Tie Down Procedure	External Load Procedure	Tail Rotor	Control Malfunction	Mid Air	Helideck Design or Size Issues	Injuries Due To Engine Malfunction
Single Eng	1	0	0	0	1	0	0	0	1	0	0
Light Twin	1	0	0	0	0	0	0	0	2	0	0
Medium Twin	0	0	0	3 (Night)	0	0	0	1	1	0	0
Heavy Twin	0	0	1	0	0	1	0	0	0	0	0
1998 Totals	2	0	1	3	1	1	0	1	2*	0	0
1997 Totals	2	1	1	4	0	0	1	1	1	0	12

1998 GOM OFFSHORE HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Bird Strike	Flight Into Terrain Or Weather	Tie Down Procedure	Mid Air	Helideck Design or Size Issues	Injuries Due To Engine Malfunction
Single Eng	1	0	0	1	1*	0	0
Light Twin	0	0	0	0	1*	0	0

* Mid Air recorded as one accident. There was six single engine ditchings due to engine malfunction, not recorded as an accident by the FAA, with no injuries.

1998 NORTH SEA OFFSHORE HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Lightning	Flight Into Terrain Or Weather	Helideck Design or Size Issues	Injuries Due To Engine Malfunction
Heavy Twin	0	1	0	0	0

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1998 SEISMIC HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft		Category		Injuries		Severity			Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	6	0	3	0	3	2	1	0	0	3	3	9.38	0.00	0.00	1.48
Light Twin	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Med Twin	1	0	0	3	1	0	4	0	0	0	1	8.93	0.00	0.00	3.52
Heavy Twin	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
1998 Totals	7	0	3	3	4	2	5	0	0	3	4	8.91	0.00	0.00	1.59

1998 SEISMIC HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Injuries Due To Engine Malf.	Snagged Load	Rapid Refuel Procedure	Hard Landing	Over Loaded Aircraft
Single Eng	3	2	1	1	1	0
Medium Twin	0	0	0	0	0	1

1998 GEOPHYSICAL HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft Category				Injuries		Severity			Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	1	1	0	1	1	0	0	2	0	0	1	8.88	8.88	12.66	22.48
Light Twin	0	0	0	0	0	0	0	0	0	0	0	No Activity			
Med Twin	0	0	0	0	0	0	0	0	0	0	0	No Activity			
Heavy Twin	0	0	0	0	0	0	0	0	0	0	0	No Activity			
1998 Totals	1	1	0	1	1	0	0	2	0	0	1	8.88	8.88	22.48	12.66

1998 GEOPHYSICAL HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Injuries Due To Engine Malfunction	Flight Into Terrain Or Weather Or Obstacles
Single Eng	0	0	1

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1998 PIPELINE HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft Category				Injuries		Severity			Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Light Twin	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Med Twin	2	1	Unknown	3	1	0	0	4	0	0	2	51.40	884.96	7.11	9.22
Heavy Twin	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
1998 Totals	2	1	0	3	1	0	0	4	0	0	2	17.48	8.74	4.92	2.86

1998 PIPELINE HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Injuries Due To Engine Malfunction	Flight Into Terrain Or Weather Or Obstacles	Control Problems
Medium Twin	0	0	0	2

1998 OTHER INDUSTRY HELICOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				INJURY CLASSIFICATION					AIRCRAFT DAMAGES			AVIATION ACCIDENT			
Aircraft		Category		Injuries		Severity			Classification			Rates			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Minor	Serious	Fatal	Minor	Major	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 100k Occupants	# Acc 100k Flt Stages
Single Eng	1	1	0	5	1	0	0	6	0	0	1	4.68	4.68	4.42	1.58
Light Twin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Med Twin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Twin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1998 Totals	1	1	0	5	1	0	0	6	0	0	1	2.29	2.29	1.29	0.81

1998 OTHER INDUSTRY SUPPORT HELICOPTER ACCIDENT CAUSES/INFO

	Engine Related	Injuries Due To Engine Malfunction	Flight Into Terrain Or Weather Or Obstacles
Single Eng	0	0	1

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WORLD-WIDE OIL INDUSTRY HELICOPTER ACCIDENTS

Activ	Country	Injury Classification							Aircraft Damages							Date	Description	Night	Ditched		
		Min Inj	Ser Inj	Ttl Inj	# Fatal	Fat Acc	Pax	Crew	Maj	Ser	Ttl Loss	Ttl Acc	Acft	SE	LT					MT	HT
Geophys	Indonesia				2	1	1	1			1	1	AS315B	1				2 Feb	Hit Power Lines		
Offshore	UK									1		1	AS332L				1	28 Jan	Lightening Strike		
Offshore	Taiwan				3	1		3			1	1	B412			1		2 March	Hit Rig at nite, Trng	1	1
Offshore	Indonesia				2	1		2			1	1	AS332J				1	14 March	Sling Tangled in TR		
Offshore	China				2	1		2			1	1	S76A			1		18 March	CFIT on Approach	1	
Offshore	GOM									1		1	B206L1	1				17 April	Decel, Hard Landing		
Offshore	Angola	1		1				1			1	1	S76			1		24 June	Flew Into water, nite trng	1	1
Offshore	Nigeria		4	4	5	1	7	2			1	1	B212			1		30 June	Tech Prob., loss of control		1
Offshore	GOM	1		1				1			1	1	B407	1				5 Oct	Mid Air		1
Offshore	GOM				1	1		1			1	1	AS355		1			5 Oct	Mid Air		1
Offshore	Brazil										1	1	BO 105		1			21 Oct	Engine Failure and Ditching		1
Offshore	GOM										1	1	B206L1	1				15 Nov	Tried to depart Tied down		
Offshore	Mexico				13	1	11	2			1	1	AS365N			1		18 Nov	Midair Gulf of Campeche		1
Offshore	Mexico				9	1	7	2			1	1	BK117		1			18 Nov	Midair Gulf of Campeche		1
Other Support	Bolivia				6	1	5	1			1	1	AS 316	1				31 Oct	AS 316 Flown into Terrain		
Pipeline	Russia										1	1	Mil 2			1		11 July	Tech Prob., loss of control		
Pipeline	Russia				4	1	3	1			1	1	Mil2			1		31 July	Loss of control on approach		
Seismic	Canada									1		1	AS350B	1				2 May	Engine Failure		
Seismic	Indonesia		4	4				3	1		1	1	B212			1		2 Aug	Pilot procedure, overgross		
Seismic	US		1	1				1			1	1	AS350B	1				22 Aug	Eng Failure, long line		
Seismic	Ecuador	1		1				1			1	1	B206L1	1				4 Sept	Snagged Load, Dynamic Rollover		
Seismic	Yemen									1		1	AS315B	1				8 Sept	Hard Ldg		
Seismic	Bolivia									1		1	AS316	1				6 Oct	Rapid Refueling Fire		
Seismic	Albania	1		1				1			1	1	AS350B	1				11 Nov	Engine Failure		
	World	4	9	13	47	9*	37	23	0	5	19	22*		11	3	8	2			3	8

* Less Mid Air Double Counts

SE = Single Engine

LT = Light Twin MT = Medium Twin

HT = Heavy Twin

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WORLD-WIDE OIL INDUSTRY HELICOPTER ACTIVITY DATA by COUNTRY

Country	Type Helicopter					Passengers Carried					Hours Flown				
	SE	LT	MT	HT	TOTAL	SE	LT	MT	HT	TOTAL	SE	LT	MT	HT	Ttl Hrs
Albania	3.0				3.0	1,500				1,500	1,500				1,500
Angola			8.0		8.0			77,734		77,374			6,479		6,479
Argentina	5.0		4.0		9.0	13,877		28,064		41,941	3,969		3,143		7,112
Australia	3.5		14.0		24.5	1,130		232,291	59,328	292,749	2,264		17,829	10,943	31,036
Bangladesh	2.0		1.5		3.5	11,576		2,765		14,341	2,409		778		3,187
Bolivia	15.1	1.0	2.0		18.1	14,645	2,961	10,167		27,773	9,253	600	1,609		11,462
Brazil	1.0	3.0	59.0	6.0	69.0	5,026	9188	679,324	78,906	831,975	910	2,444	74,119	7,551	85,024
Brunei			1.0	5.0	6.0			4,000	84,360	88,360			290	3,725	4,015
Cabinda	10.0		4.0		14.0	381,037		144,354		525,391	16,941		4,954		21,895
Cameroon			4.0		4.0			4,044		4,044			1,879		1,879
Canada	31.6		1.1	6.0	38.7	18,128		1,600	24,931	44,659	16,312		289	3,934	30,535
China			20.1	12.0	32.1			86,714	178,446	265,160			10,746	13,603	24,349
Colombia	1.0	1.3	6.2	4.0	12.5	11,000	5347	70,393	127	86,867	530	916	4,727	4,300	10,473
Congo	2.0		0.9		2.9	81,304		5,773		87,077	2,157		567		2,724
Denmark			2.0	3.0	5.0			50,000	50,000	100,000			2,229	4,520	6,749
Ecuador	4.7		1.0		5.7	7,649		2,142		9,791	5,303		761		6,064
Emirates	3.2	3.0	20.0		26.2	2,055	3,060	327,058		332,173	725	1,027	21,776		23,528
Equat Guinea			2.0		2.0			9,000		9,000			861		861
Eqypt	8.0		15.0		23.0	51,029		283,404		334,433	6,397		14,167		20,564
Eritrea				1.0	1.0				1,680	1,680				360	360
Gabon	2.0		6.5		8.5	25,078		29,873		54,951	1,580		2,734		4,314
Germany			0.2		0.2			936		936			100		100
India			1.0		1.0			3,000		3,000			1,200		1,200
Indonesia	11.0	6.4	24.0	6.2	47.6	13,978	9,952	193,228	9,264	226,422	3,180	1,772	17,818	854	23,624
Ireland			1.0	1.0	2.0			3,633	3,000	6,633			330	300	630
Italy			5.0	1.0	6.0			52,110	12,946	65,056			4,590	1,014	5,604
Libya				2.0	2.0				16,651	16,651				889	889
Malaysia	0.2		9.0	11.0	20.2			68,784	151,558	220,342	88		6,243	10,360	16,691
Mexico			1.0		1.0			10,422		10,422		500	918		1,418

Mexico	3.0	5.0	12.0		20.0	2,000	28,860	175,701		206,381	1,299	3,758	9,839		14,896
Myanmar			4.0		4.0			20,000		20,000			1,963		1,963

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WORLD-WIDE OIL INDUSTRY HELICOPTER ACTIVITY DATA by COUNTRY

Landings and Takeoffs						Injury Classification						Aircraft Damages				
Country	SE LTO	LT LTO	MT LTO	HT LTO	Ttl LTO	Min Inj	Ser Inj	Ttl Inj	# Fatal	Fat Acc	Pax	Crew	Min	Ser	Ttl Loss	Ttl Acc
Albania	2,000				2,000	1		1				1			1	1
Angola			17,405		17,405	1		1				1			1	1
Argentina	95,713		18,589		114,302											
Australia	2,628		39,913	4,571	47,112											
Bangladesh	6,104		4,368		10,472											
Bolivia	51,840		4,975		55,915			6	1	5	1		1		1	2
Brazil	2,769	6,300	97,175	13,329	119,573										1	1
Brunei			500	17,163	17,663											
Cabinda	171,508		25,338		196,846											
Cameroon			2,532		2,532											
Canada	48,122		529	2,240	50,691									1		1
China			20,995	18,577	39,552			2	1		2				1	1
Colombia	1,500	2,099	13,841	7,943	25,343											
Congo	31,295		1,382		32,677											
Denmark			20,000	12,000	32,000											
Ecuador	16,904		3,799		20,703	1		1				1			1	1
Emirates	2,095	1,430	135,316		138,841											
Equat Guinea			1,200		1,200											
Eqypt	32,480		53,565		86,045											
Eritrea				240	240											
Gabon	10,572		9,103		19,675											
Germany			114		114											
India			1,450		1,450											
Indonesia	6,016	3,687	31,523	4,408	41,644		4	4	4	2	4	4			3	3
Ireland			1,223	400	1,623											
Italy			13,325	1,408	14,733											
Libya				1,570	1,570											
Malaysia	30		13,307	14,392	27,699											
Mexico			2,633		2,633			13	1	11					1	1

Mexico	1,833	13,508	51,005		66,346				22	2	18	2			2	2
Myanmar			2,000		2,000											

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WORLD-WIDE OIL INDUSTRY HELICOPTER ACTIVITY DATA by COUNTRY

Country	Type Helicopter					Passengers Carried					Hours Flown				
	SE	LT	MT	HT	TOTAL	SE	LT	MT	HT	TOTAL	SE	LT	MT	HT	Ttl Hrs
Namibia			3.5		3.5			8,198		8,198			944		944
Netherlands			12.0	2.1	14.1			53,389	27,187	80,576			9,136	1,655	10,791
New Zealand			1.0		1.0			10,881		10,881			649		649
Nigeria	10.0	5.0	29.0		44.0	258,692	7,879	497,979		764,550	15,721	1,552	27,183		44,456
Norway			3.0	27.0	30.0			115,116	657,237	772,353			5,800	42,441	48,241
Peru	7.1		5.0	3.3	15.4	14,502		26,322	6,320	47,144	3,540		3,805	2,475	9,920
Phillipines			1.0		1.0			1,920		1,920			300		300
PNG	1.0		1.0		13.0	35,894		9,800		45,784	7242		1,460		8,702
Qatar	1.0		19.0		20.0			119,555		119,555	500		18,994		19,494
Russia/CIS			3.1	8.5	11.6			13,320	25,706	39,026			1,081	1,909	2,990
Saudi	7.0		9.0	3.0	19.0	26,634		97,622	76,809	201,065	5,178		7,430	2,064	14,672
South Africa	3.0		1.0	3.0	7.0			2,910	20,015	22,925	966		406	1,472	2,844
Spain			2.0		2.0			4,873		4,873			468		468
Taiwan		1.0	2.0		3.0		810	1,032		1,842		127	235		362
Thailand			9.0	2.0	11.0			59,700	48,000	107,700			8,242	2,427	10,669
Trinidad		5.0	7.0		12.0		16,447	16,868		33,315		2,937	2,013		4,950
UK	3.0		34.0	66.5	103.5	2		231,454	721,940	953,396	354		28,866	69,158	98,388
US - Other	61.3	3.4	7.9	0.1	72.7	80,075	5,417	72,346	37	157,875	40,892	1,385	8,714	48	51,039
US-GOM	392.0	89.0	94.0	13.0	588.0	1,547,726	287,777	770,418	119,761	2,725,682	303,434	54,509	88,470	7,867	454,280
Venezuela	37.0		2.5		39.5	36,520		22,986		59,506	21,678		660		22,338
Yemen	3.0				3.0	30,409				30,409	1,995				1,995

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WORLD-WIDE OIL INDUSTRY HELICOPTER ACTIVITY DATA by COUNTRY

Landings and Takeoffs					Injury Classification							Aircraft Damages				
Country	SE LTO	LT LTO	MT LTO	HT LTO	Ttl LTO	Min Inj	Ser Inj	Ttl Inj	# Fatal	Fat Acc	Pax	Crew	Min	Ser	Ttl Loss	Ttl Acc
Namibia			2,973		2,973											
Netherlands			40,390	3,640	44,030											
New Zealand			2,893		2,893											
Nigeria	29,580	3,221	87,696		120,497		4	4	5	1	7	2			1	1
Norway			47,348	73,214	120,562											
Peru	27,638		11,856	7,118	46,612											
Phillipines			160		160											
PNG	23915		3,500		27,415											
Qatar	1,000		38,744		39,744											
Russia/CIS			1,918	5,317	7,235				4	1	3	1			2	2
Saudi	20,706		131,347	4,224	156,277											
South Africa	380		1,916	2,100	4,396											
Spain			944		944											
Taiwan		205	310		515				3	1		3			1	1
Thailand			5,222	2,400	7,622											
Trinidad		2,350	1,610		3,960											
UK	262		104,193	86,314	190,769									1		1
US - Other	146,018	1,664	140,723	94	288,452		1	1				1			1	1
US-GOM	1,025,105	183,133	167,255	15,280	1,390,773	1		1	1	1		2		1	3	3
Venezuela	104,762		6,632		111,394											
Yemen	29,705				29,705									1		1

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World-Wide Airplane Accidents

DATE	Activity	MODEL	Type	LOCATION	MIN	SER.	FAT.	PAX	Crew	Airplane Damages			CAUSES OF ACCIDENTS			NARRATIVE
					INJ.	INJ.	INJ.	INJ.	INJ.	Min.	Major	Lost	FITW	Tech		
8 Apr	Mgmt	BE 200	MT	Nigeria						1				Ldg Gear		Ldg Gear Collapsed
12 Oct	Crew Chg	C402	MP	Norway			9	8	1			1	1			
16 Nov	Crew Chg	C206	SP	Garoka		2	1	1	2			1	1			Failed Go around
25 Nov	Crew Chg	C208	ST	Nigeria	2			1	1			1		Eng		Engine Failure
17 Dec	Mgmt	BE 200	MT	Gabon			2		2			1		Unk		3 additional fatal on ground, cause unknown
TTL 1998	5 Accidents				2	2	12	10	6	1		4	2	3		

Statistics by Activity

Crew Change	3		2	2	10	10	4			3	2	1		
Management	2				2		2	1		1		2		

Statistics by Type Aircraft

Single Piston	1			2	1	1	2			1	1			
Multi Piston	1				9	8	1			1	1			
Single Turbine	1			2			1	1		1		1		
Multi Turbine	2				2		2	1		1		2		

Note: This data gathered informally. No other AIRPLANE flying data or other statistics are available. Geophysical mineral survey statistics are available through IAGSA.

ENG = Engine

FITW = Flight into Terrain or Water or Obstacle

SP = Single Piston

MP = Multi Piston

ST = Single Turbine

MT = Multi Turbine