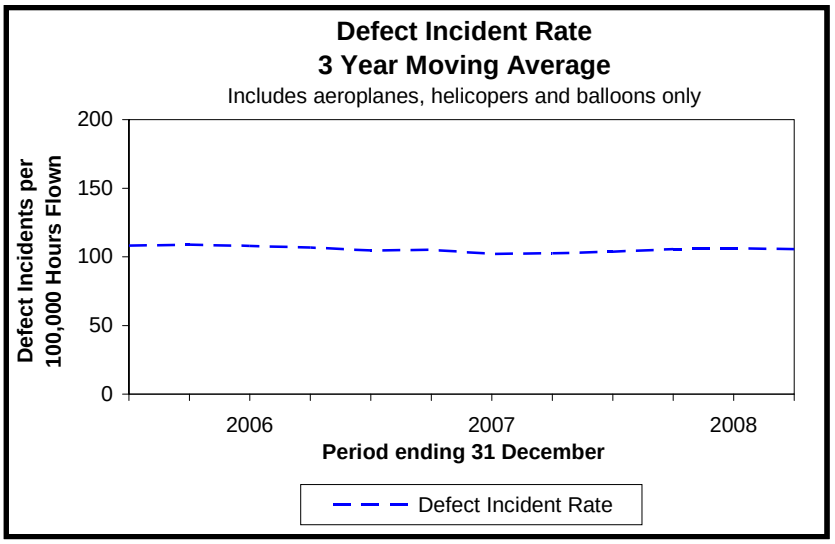
CIVIL AVIATION AUTHORITY
OF NEW ZEALAND

Aviation Safety Summary Report

1 January to 31 March 2009



Introduction

The purpose of this report is to provide readers with a quarterly snapshot of the aviation industry in terms of its size, shape, activity and safety performance. This complements the more detailed six-monthly "Aviation Industry Safety Update", which is available only on the CAA website.

This report uses calendar years; the first quarter is 1 January to 31 March.

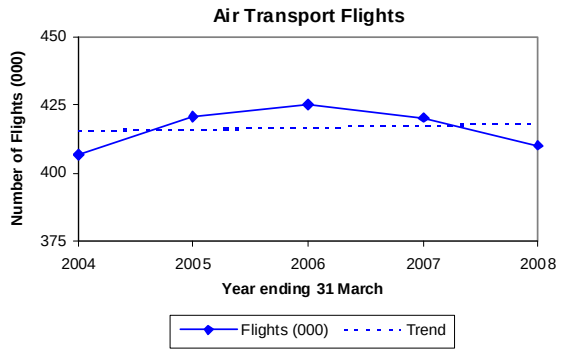
Overview

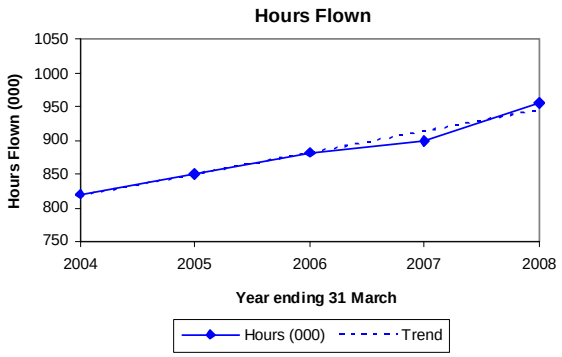
Activity

Air Transport Flights, Total Hours

Trends

The following graphs show the number of air transport flights and the total number of hours flown (annual data) for the five-year period 1 April 2003 to 31 March 2008 (includes the aircraft classes aeroplane, helicopter and balloon only).





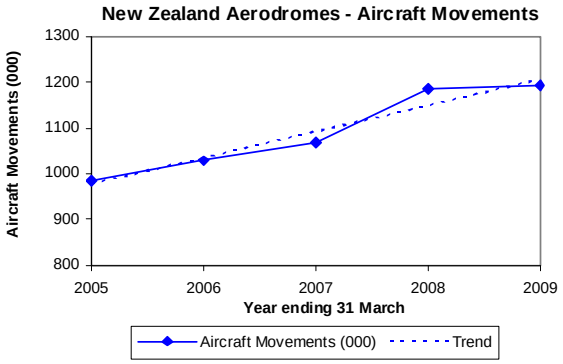
Note that the scales on these graphs do not start at zero.

Note that these assessments include the aircraft classes aeroplane, helicopter and balloon only and exclude other aircraft classes such as hang gliders and parachutes, and foreign registered aircraft that are operated in New Zealand. These assessments are based on Aircraft Operating Statistics for periods up to the quarter ended 31 March 2008 (the most recent quarter for which these data are available).

Aircraft Movements

Trends

The following graph shows the number of aircraft movements at certificated aerodromes (annual data) for the five-year period 1 April 2004 to 31 March 2009.



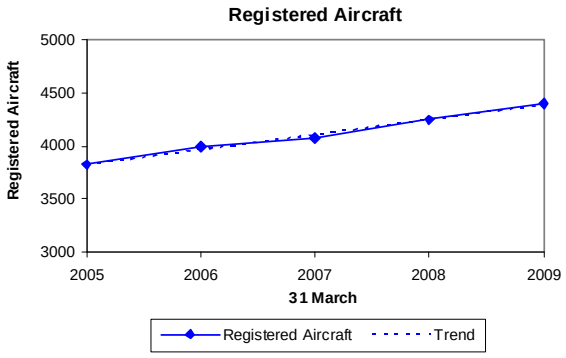
Note that the scale on this graph does not start at zero.

Note that this covers certificated aerodromes only. Includes Auckland, Christchurch, Dunedin, Gisborne (from December 2004), Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.

Registered Aircraft

Trends

The following graph shows the number of registered aircraft at 31 March for each of the five-years 2005 to 2009.



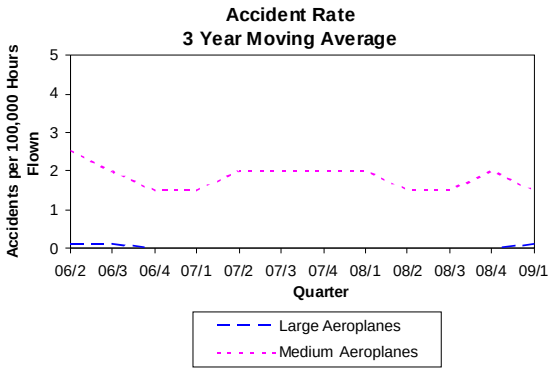
Note that the scale on this graph does not start at zero.

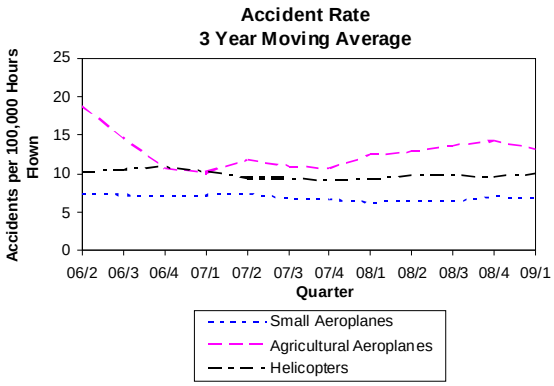
Note that these figures include the sport aircraft statistics category and exclude hang gliders and parachutes.

Accidents

Trends

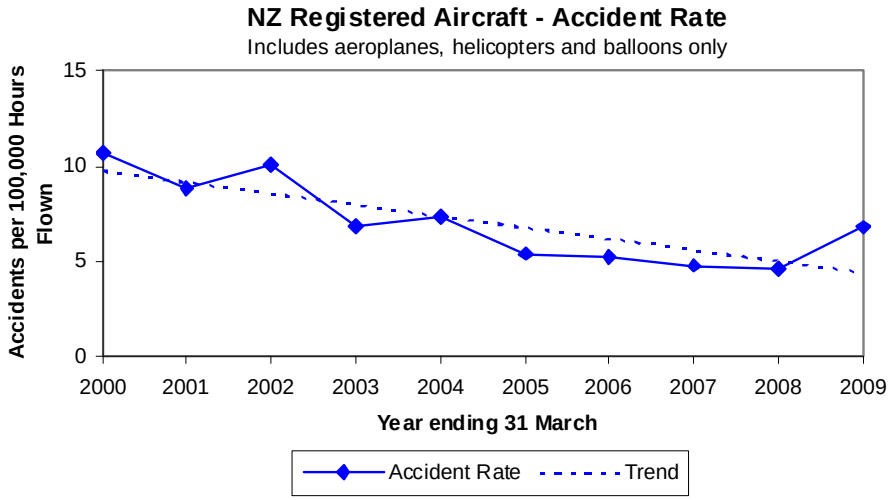
The following graphs show the aircraft accident rates (3 year moving average) for the three-year period 1 April 2006 to 31 March 2009 (excluding the aircraft statistics categories Sport Aircraft, Hang Gliders and Parachutes).





Overall Accident Rate

The following graph shows the overall accident rate per 100,000 hours flown (includes the aircraft classes aeroplane, helicopter and balloon only; excludes other aircraft classes, hang gliders and parachutes) for the 10-year period 1 April 1999 to 31 March 2009.



Note that this graph does not show a moving average.

Safety Outcome Targets for 2010

Safety Target Structure

The 2010 Safety Targets have all New Zealand aviation classified under three broad group headings: Public Air Transport, Other Commercial Operations, and Non-Commercial Operations.

Thirteen further sub-groups enable differentiation between aeroplanes, helicopters, and sport aircraft, and also allow for different weight groups. A diagram of the grouping is shown in the Definitions section.

The following table displays the social cost for each Safety Target Group for the quarters 1 January to 31 March 2008 and 2009. Social cost is the cost of fatal, serious and minor injuries, and aircraft destroyed, expressed in 2008 dollars.

Safety Target Group	1 Jan to 31 Mar 2008 $m	1 Jan to 31 Mar 2009 $m	Change $m
Airline Operations - Large Aeroplanes	0.35	0.05	- 0.31
Airline Operations - Medium Aeroplanes	-	-	-
Airline Operations - Small Aeroplanes	-	-	-
Airline Operations - Helicopter	-	-	-
Sport Transport	0.02	18.42	+ 18.41
Other Commercial Operations - Aeroplane	10.41	-	- 10.41
Other Commercial Operations - Helicopter	7.02	0.64	- 6.39
Agricultural Operations - Aeroplane	1.13	-	- 1.13
Agricultural Operations - Helicopter	1.13	-	- 1.13
Agricultural Operations - Sport Aircraft	-	-	-
Private Operations - Aeroplane	-	-	-
Private Operations - Helicopter	0.28	-	- 0.28
Private Operations - Sport	6.90	4.19	- 2.71
Total	**27.25**	**23.29**	**- 3.96**

Note that the individual values in the table may not sum exactly to the total shown due to rounding.

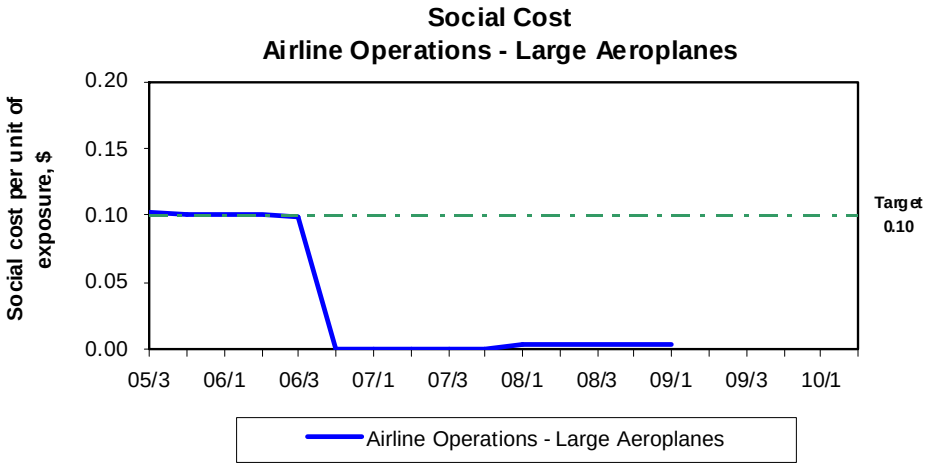
Note that the Sport groups include hang gliders and parachutes.

Safety Target Graphs

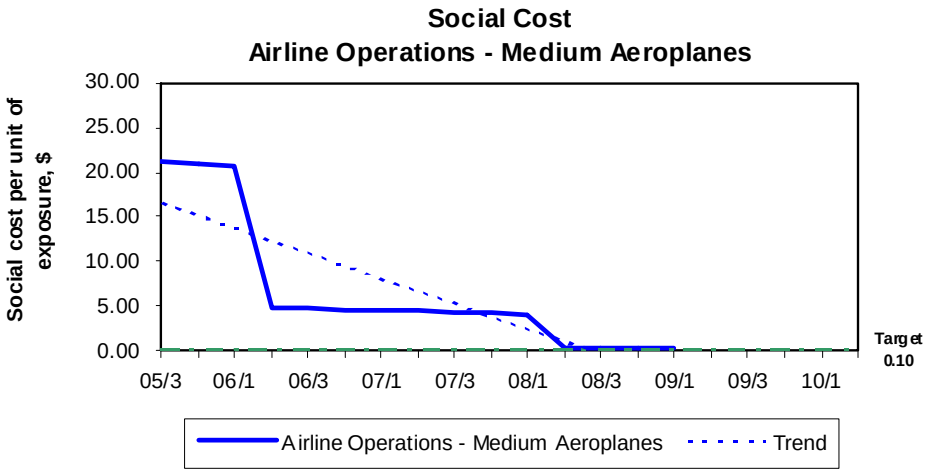
Each Safety Target Group has its own target level expressed as social cost per unit of person exposure, the unit being “one seat hour”. For Safety Target Groups that are not predominantly passenger carrying a surrogate of 500 kg of aircraft weight is used instead of person exposure. These outcomes represent the maximum level of social cost considered acceptable for each group.

The results for all groups are derived using 3 year averages.

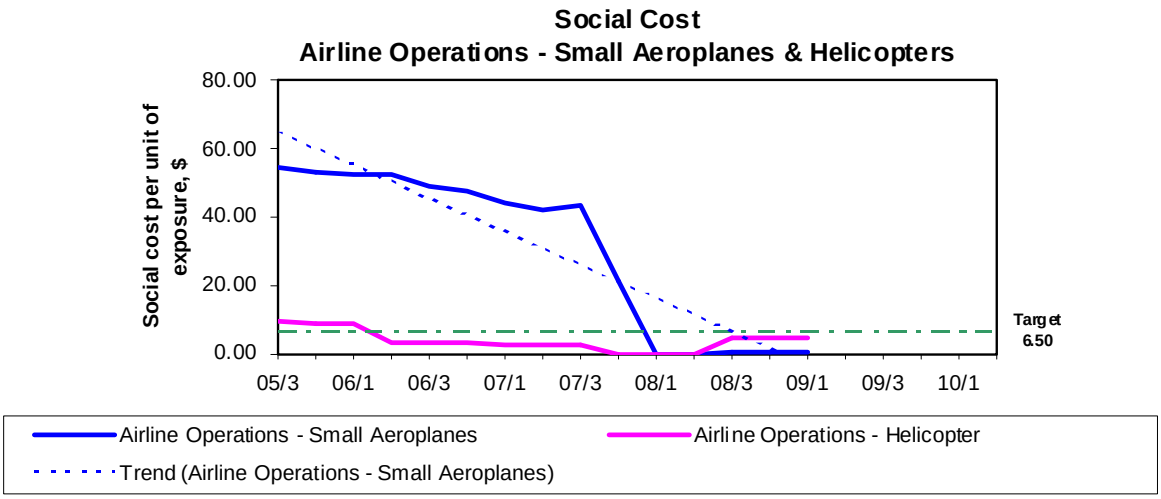
Graphs displaying the Safety Outcome Targets and the progress over each quarter are shown on the following pages.



The outcome for Airline Operations – Large Aeroplanes (95.3% of total seat hours) has remained at or below the target level of $0.10 per hour of exposure since the target regime was established in 2005.

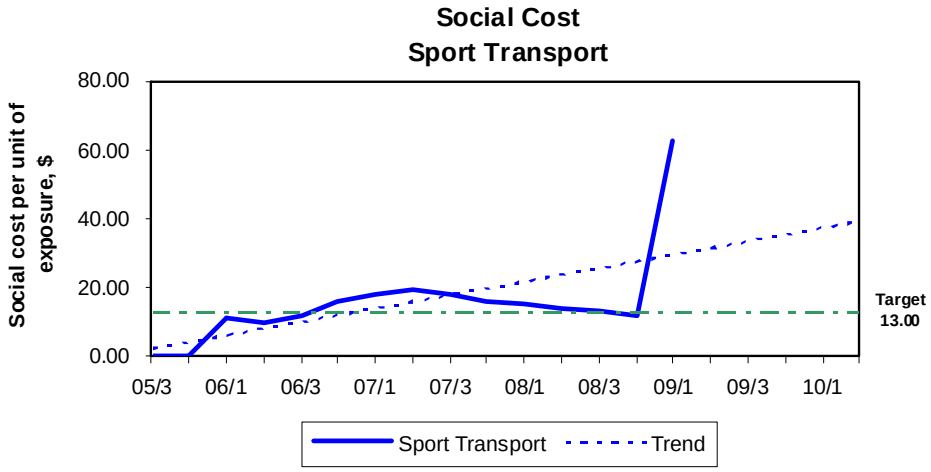


The outcome for Airline Operations – Medium Aeroplanes exceeds the target but is trending down and it is possible that the target may be achieved in 2010 (the data point at 09/1 is $0.25 per hour of exposure). The exposure (1.8% of total seat hours) associated with this sector is relatively small. There have been no injuries in this group during the period Jul 06 to Mar 09.



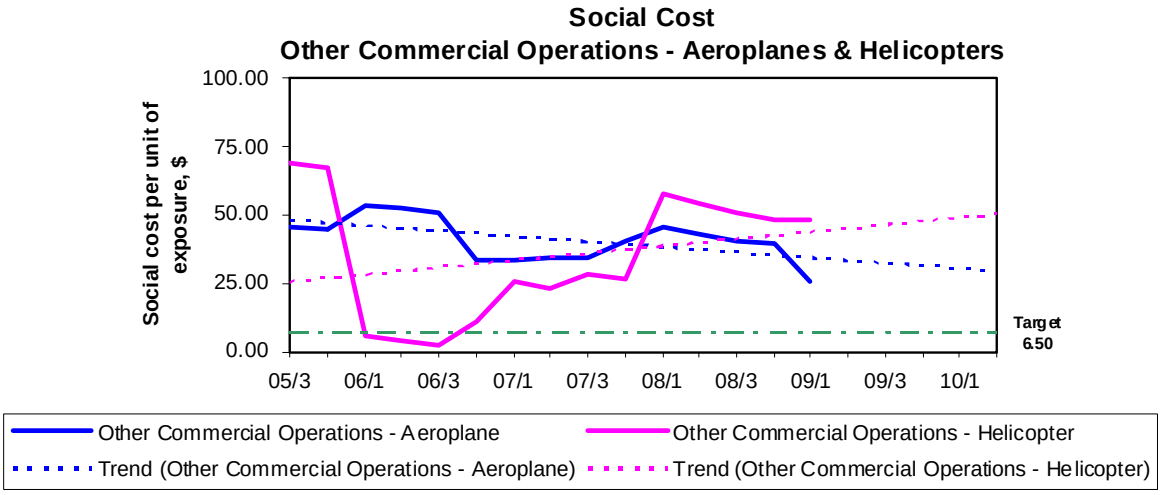
The outcome for Airline Operations – Small Aeroplanes (0.4% of total seat hours) shows a significant long term downward trend from the high starting point of $54.08 per hour of exposure generated by 6 fatal and 2 serious injuries and 1 minor injury in the three years Oct 02 to Sep 05. There have been no fatal or serious injuries during the period Apr 05 to Mar 09. The safety outcome for this group has been below the target level since the quarter Jan to Mar 08.

The outcome for Airline Operations – Helicopter has been below the target level since the quarter Apr to Jun 06. There have been 2 serious and 2 minor injuries in this group in the three years Apr 06 to Mar 09.



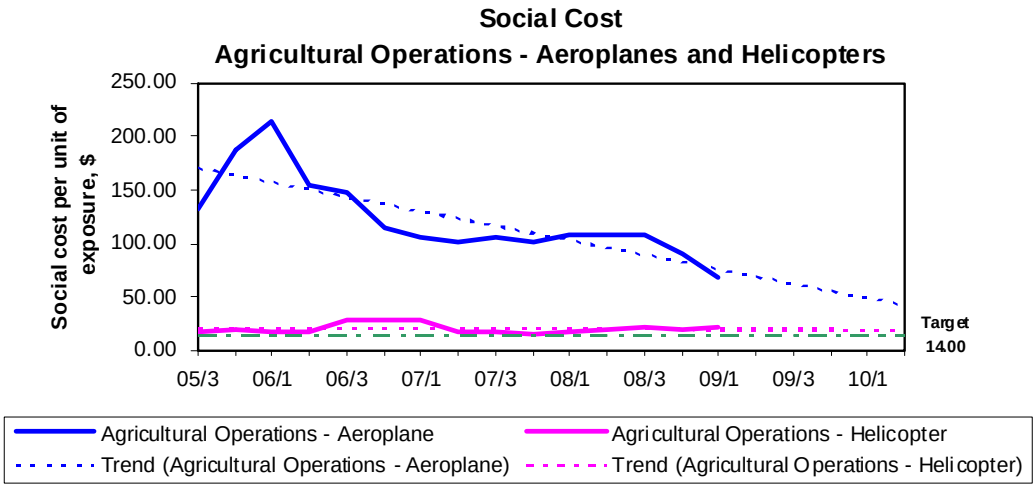
Three fatal accidents that occurred in the quarter Jan to Mar 09 have resulted in the highest outcome for Sport Transport since the target regime was established in 2005. The previous peak in the second quarter of 2007 included 11 serious and 2 minor injuries in the three years Jul 04 to Jun 07 (a social cost of $4.0 million including destroyed aircraft). The fatal accidents in 2009 are the first since the target regime was established; there have now been 5 fatal, 11 serious and 4 minor injuries in the three years Apr 06 to Mar 09 (a social cost of $21.0 million including destroyed aircraft).

Note that this group includes hang gliders and parachutes used on transport operations.



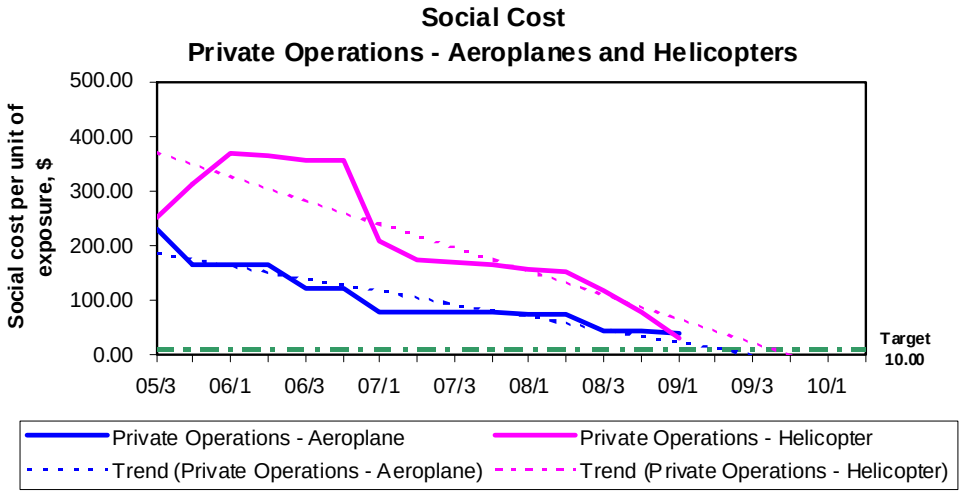
The outcome for Other Commercial Operations – Aeroplane is well above the target of $6.50. During the three years Apr 06 to Mar 09 there have been 4 fatal, 3 serious and 3 minor injuries in this group.

The outcome for Other Commercial Operations – Helicopter turned sharply upwards during the fourth quarter of 2006 and is now well above the target level. There have been 2 fatal, 2 serious and 10 minor injuries in this group in the three years Apr 06 to Mar 09.



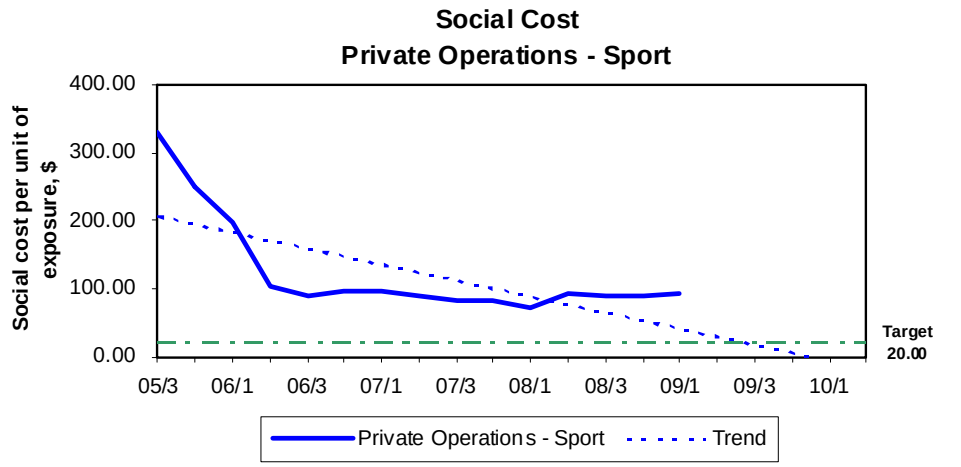
The outcome for Agricultural Operations – Aeroplanes is well above the target level of $14.00. During the three years Apr 06 to Mar 09 there have been 2 fatal injuries and 1 serious injury in this group.

The outcome for Agricultural Operations – Helicopter is above the target level. There have been 4 injuries (1 fatal, 1 serious and 2 minor) in the three years Apr 06 to Mar 09.



The outcome for Private Operations – Aeroplanes has been trending down since late 2005. There have been 2 fatal, 3 serious and 3 minor injuries in the three years Apr 06 to Mar 09. The long term trend line for the group is below the target line in late 2009.

The outcome for Private Operations – Helicopters has been trending down since early 2006. There have been 1 fatal and 8 minor injuries in the three years Apr 06 to Mar 09.



The outcome for Private Operations – Sport is well above the target of $20.00. There have been 14 fatal, 23 serious and 19 minor injuries in the three years Apr 06 to Mar 09.

Note that this group includes hang gliders and parachutes used on private operations.

Activity

Air Transport Flights, Total Hours

Quarterly Comparison

Activity	1 Jan to 31 Mar 2007	1 Jan to 31 Mar 2008	Change Number	Change Percentage
Air Transport Flights	115,226	119,796	+ 4,570	+ 4.0
Total Hours	250,670	266,321	+ 15,651	+ 6.2

Note that these assessments include the aircraft classes aeroplane, helicopter and balloon only and exclude other aircraft classes such as hang gliders and parachutes, and foreign registered aircraft that are operated in New Zealand. These assessments are based on Aircraft Operating Statistics for periods up to the quarter ended 31 March 2008 (the most recent quarter for which these data are available).

Aircraft Movements

Quarterly Comparison

Activity	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change Number	Change Percentage
Aircraft Movements	321,583	299,289	- 22,294	- 6.9

Note that this covers certificated aerodromes only. Includes Auckland, Christchurch, Dunedin, Gisborne (from December 2004), Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.

Registered Aircraft

Quarterly Comparison

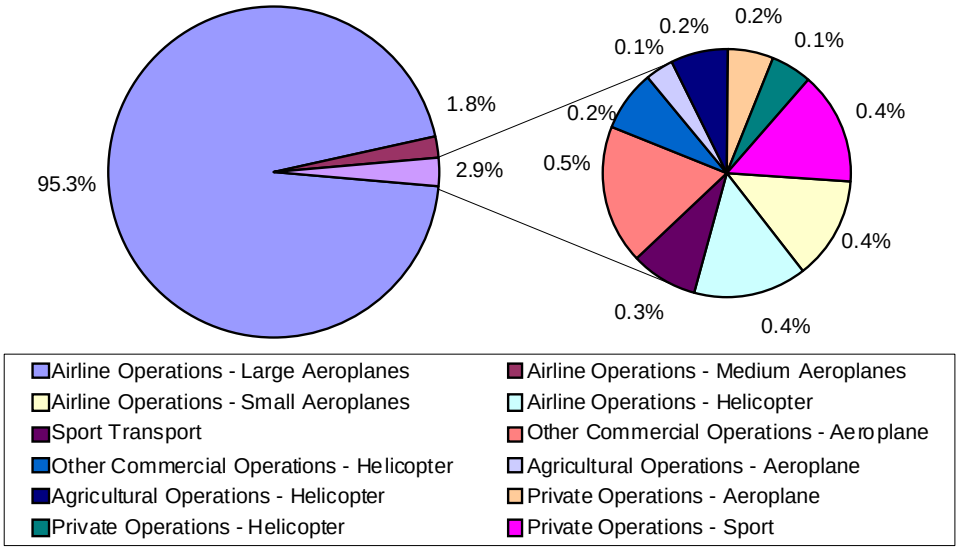
Aircraft Statistics Category	31 March 2008	31 March 2009	Change Number	Change Percentage
Large Aeroplanes	116	122	+ 6	+ 5.2
Medium Aeroplanes	81	81	0	0.0
Small Aeroplanes	1,453	1,500	+ 47	+ 3.2
Agricultural Aeroplanes	124	118	- 6	- 4.8
Helicopters	713	758	+ 45	+ 6.3
Sport Aircraft	1,763	1,826	+ 63	+ 3.6
Total	**4,250**	**4,405**	**+ 155**	**+ 3.6**

Note that these figures include the sport aircraft statistics category and exclude hang gliders and parachutes.

Industry Size and Shape

The following graph and table show the size and shape of the aviation industry as determined from Aircraft Operating Statistics in the relevant 2010 Safety Target Group categories for the period 1 January to 31 March 2008 (the most recent quarter for which Aircraft Operating Statistics data are available). For each Safety Target Group the total number of hours flown is multiplied by the average number of seats and the appropriate load factor, to give the number of seat hours utilised by the group (person exposure). For Safety Target Groups that are not predominantly passenger carrying a surrogate of 500 kg of aircraft weight is used instead of person exposure. For the Sport Safety Target Groups a standard estimate of seat hours offered is used as well as reported data for such aircraft in these groups, as most sport aircraft do not report hours or seats.

Percentage Sector Seat Hours



Safety Target Group	Percentage Sector Seat Hours
Airline Operations - Large Aeroplanes	95.3
Airline Operations - Medium Aeroplanes	1.8
Airline Operations - Small Aeroplanes	0.4
Airline Operations - Helicopter	0.4
Sport Transport	0.3
Other Commercial Operations - Aeroplane	0.5
Other Commercial Operations - Helicopter	0.2
Agricultural Operations - Aeroplane	0.1
Agricultural Operations - Helicopter	0.2
Agricultural Operations - Sport Aircraft	-
Private Operations - Aeroplane	0.2
Private Operations - Helicopter	0.1
Private Operations - Sport	0.4

Note that the percentages may not sum exactly to 100.0% due to rounding.

Accidents

Quarterly Comparison

Number of Accidents

Aircraft Statistics Category	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Large Aeroplanes	0	1	+ 1
Medium Aeroplanes	0	0	0
Small Aeroplanes	8	7	- 1
Agricultural Aeroplanes	6	0	- 6
Helicopters	5	6	+ 1
Sport Aircraft	13	11	- 2
Hang Gliders	1	12	+ 11
Parachutes	0	1	+ 1
Total	**33**	**38**	**+ 5**

Severity of Accidents

Severity	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Critical	5	12	+ 7
Major	10	22	+ 12
Minor	18	4	- 14

No accidents in the ‘Large Aeroplanes’ statistics category were classified as Critical in the 1 January to 31 March 2008 or 2009 quarters.

No accidents in the ‘Medium Aeroplanes’ statistics category were classified as Critical in the 1 January to 31 March 2008 or 2009 quarters.

Significant Accidents and Other Injury Accidents

Significant Injury Accidents

This section describes significant injury accidents that occurred during the period 1 January to 31 March 2009.

Sport aircraft

Sport Transport

- A Class 2 Microlight on a passenger A to A flight did not return. The wreckage of the destroyed aircraft was later found with the two occupants deceased.
- A Hang Glider on a passenger A to B flight was observed to descend at high speed into the ground. Both the pilot and passenger were fatally injured, and the aircraft was destroyed.
- A Glider on a dual training flight crashed into a mountain. One occupant was killed, the other seriously injured.
- A Glider on a dual training flight hit power lines on approach and cart wheeled into the ground. The two occupants suffered minor injuries, and the aircraft was destroyed.

Private Operations - Sport

- A Class 2 Microlight crashed into a paddock. The pilot was killed and the aircraft was destroyed.

Significant Non-Injury Accidents

This section describes significant non-injury accidents that occurred during the period 1 January to 31 March 2009.

Small Aeroplanes

Other Commercial Operations - Aeroplane

- A Piper PA-28 on a dual training flight struck a wire causing the aeroplane to crash and burn.
- A Cessna 172 on a solo training flight landed with the wheels up.

Helicopters

Other Commercial Operations - Helicopter

- An AS 350 on an aerial work flight was badly damaged in an accident on a mountain.

Sport aircraft

Private Operations - Sport

- An Aeroplane suffered an undercarriage collapse on landing.
- An Aeroplane on a test flight departed the runway and collapsed the nose gear after passing through a fence, crossing a public road and coming to rest on a private driveway.
- A Class 2 Microlight struck a fence after overrunning the runway on landing.
- A Glider made a forced landing after failure of the rudder cable. The aircraft was destroyed.

Other Injury Accidents

This section describes other injury accidents that occurred during the period 1 January to 31 March 2009.

Helicopters

Other Commercial Operations - Helicopter

- A Scwheizer 269 on a dual training flight collided with the ground during low flying. The student suffered serious injuries and the aircraft was destroyed.

Sport aircraft

Sport Transport

- The passenger on a Hang Glider suffered serious injuries when he fell to the ground during takeoff for a passenger A to B flight.
- A passenger on a Hang Glider conducting a passenger A to B flight tripped on takeoff and received serious injuries.
- A passenger in a tandem skydive Parachute failed to lift their legs when instructed to on landing and suffered serious injuries.
- The pilot of a Hang Glider on a passenger A to B flight suffered minor injuries when it stalled on takeoff.

Private Operations - Sport

- A Glider crashed on landing. The pilot suffered serious injuries.
- A Hang Glider pilot who had been on a private flight was found in a disoriented state and unable to remember his landing. He had serious injuries.

Injuries

Number of Fatal Accidents (and Number of Fatal Injuries)

Aircraft Statistics Category	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Large Aeroplanes	0	0	0
Medium Aeroplanes	0	0	0
Small Aeroplanes	2 (3)	0	- 2 (- 3)
Agricultural Aeroplanes	0	0	0
Helicopters	1 (2)	0	- 1 (- 2)
Sport Aircraft	2 (2)	3 (4)	+ 1 (+ 2)
Hang Gliders	0	1 (2)	+ 1 (+ 2)
Parachutes	0	0	0
Total	**5 (7)**	**4 (6)**	**- 1 (- 1)**

Number of Serious Injuries

Aircraft Statistics Category	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Large Aeroplanes	0	0	0
Medium Aeroplanes	0	0	0
Small Aeroplanes	0	0	0
Agricultural Aeroplanes	0	0	0
Helicopters	0	1	+ 1
Sport Aircraft	0	2	+ 2
Hang Gliders	0	3	+ 3
Parachutes	0	1	+ 1
Total	**0**	**7**	**+ 7**

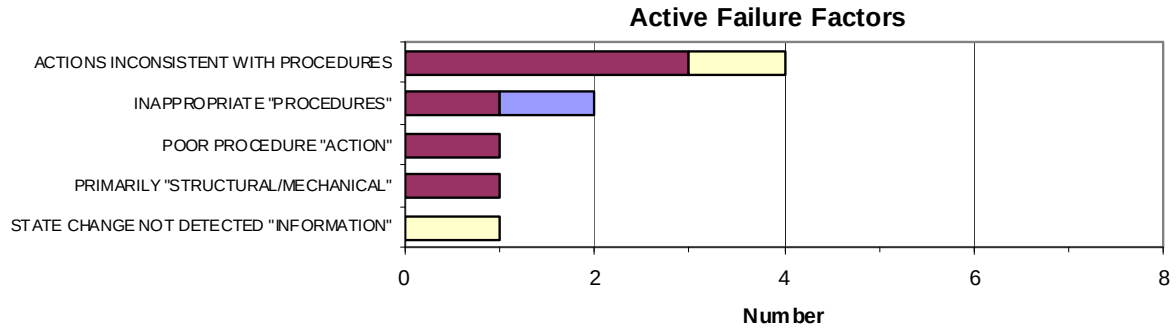
Number of Minor Injuries

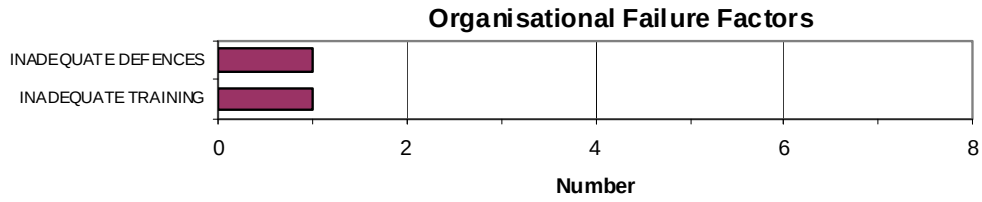
Aircraft Statistics Category	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Large Aeroplanes	0	0	0
Medium Aeroplanes	0	0	0
Small Aeroplanes	0	0	0
Agricultural Aeroplanes	0	0	0
Helicopters	0	0	0
Sport Aircraft	1	2	+ 1
Hang Gliders	1	1	0
Parachutes	0	0	0
Total	**2**	**3**	**+ 1**

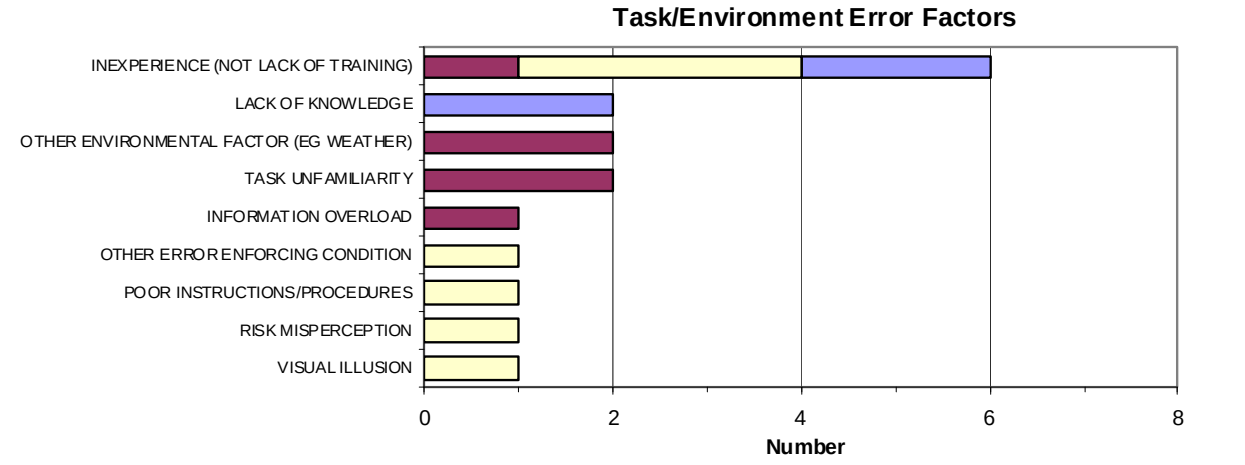
Accident Causal Factors by Aircraft Statistics Category

The following graphs show the number of causal factors recorded for accidents that occurred during the 12-month period 1 January to 31 December 2008 for the various aircraft statistics categories.
Causal factors have been assigned to 18 (16%) of the 112 accidents.

Note that causes are not yet available for all accidents that occurred in the 1 January to 31 March 2009 period.





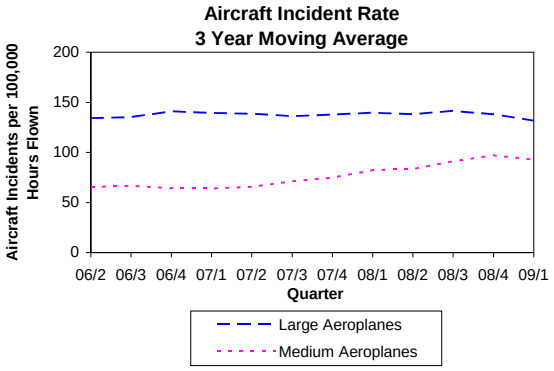


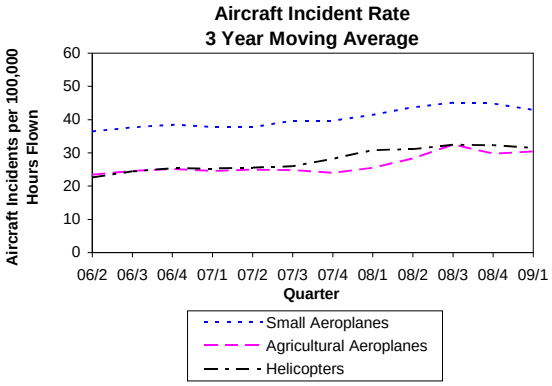
Note that Task/Environment Violation Factors have not been recorded for any accidents that occurred during the period 1 January to 31 December 2008.

Aircraft Incidents

Trends

The following graphs show the aircraft incident rates (3 year moving average) for the three-year period 1 April 2006 to 31 March 2009 (excluding the Sport Aircraft statistics category).





Quarterly Comparison

Number of Aircraft Incidents

Aircraft Statistics Category	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Large Aeroplanes	86	49	- 37
Medium Aeroplanes	27	10	- 17
Small Aeroplanes	52	28	- 24
Agricultural Aeroplanes	7	2	- 5
Helicopters	26	12	- 14
Sport Aircraft	20	5	- 15
Unknown Aircraft	25	3	- 22
Total	**243**	**109**	**- 134**

Severity of Aircraft Incidents

Severity	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Critical	1	1	0
Major	19	22	+ 3
Minor	223	86	- 137

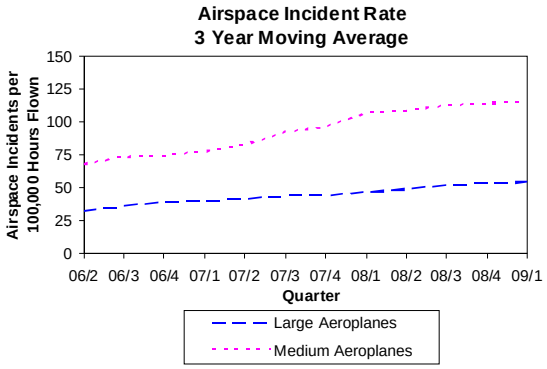
One aircraft incident in the ‘Large Aeroplanes’ statistics category was classified as Critical in the 1 January to 31 March 2008 quarter. No aircraft incidents in the ‘Large Aeroplanes’ statistics category were classified as Critical in the 1 January to 31 March 2009 quarter.

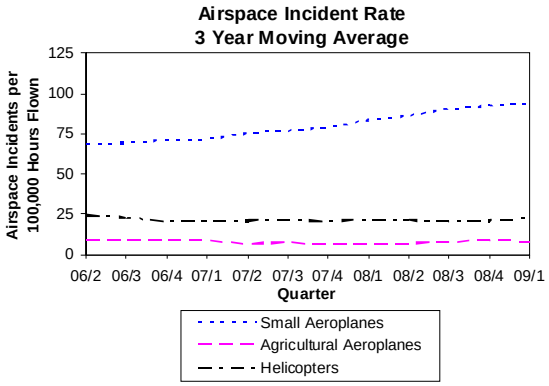
No aircraft incidents in the ‘Medium Aeroplanes’ statistics category were classified as Critical in the 1 January to 31 March 2008 or 2009 quarters.

Airspace Incidents

Trends

The following graphs show the airspace incident rates (3 year moving average) for the three-year period 1 April 2006 to 31 March 2009 (excluding the Sport Aircraft statistics category).





Quarterly Comparison

Number of Airspace Incidents

Aircraft Statistics Category	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Large Aeroplanes	38	42	+ 4
Medium Aeroplanes	30	23	- 7
Small Aeroplanes	106	88	- 18
Agricultural Aeroplanes	2	0	- 2
Helicopters	14	19	+ 5
Sport Aircraft	11	13	+ 2
Unknown Aircraft	67	75	+ 8
Total	**268**	**260**	**- 8**

Severity of Airspace Incidents

Severity	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Critical	0	2	+ 2
Major	13	53	+ 40
Minor	255	205	- 50

No airspace incidents in the 'Large Aeroplanes' statistics category were classified as Critical in the 1 January to 31 March 2008 or 2009 quarters.

No airspace incidents in the 'Medium Aeroplanes' statistics category were classified as Critical in the 1 January to 31 March 2008 or 2009 quarters.

Attributability

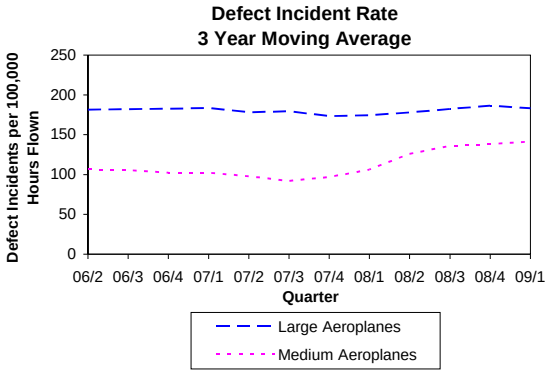
Of the 260 airspace incidents in the 1 January to 31 March 2009 quarter, 17% are Air Traffic Service (ATS) attributable, 68% are pilot attributable, 0% are ATS and pilot attributable, and 15% are unknown attributable. (Note that the percentages may not sum exactly to 100% due to rounding.)

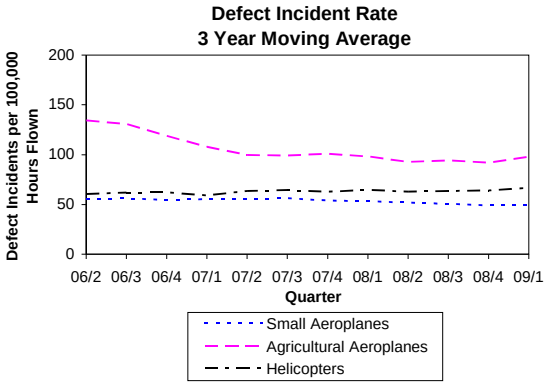
Since April 2006 the long-term trend of the ATS attributable airspace occurrence rate is constant (the slope of the trend line is zero) and the long-term trend of the pilot attributable rate is upward.

Defect Incidents

Trends

The following graphs show the defect incident rates (3 year moving average) for the three-year period 1 April 2006 to 31 March 2009 (excluding the Sport Aircraft statistics category).





Quarterly Comparison

Number of Defect Incidents

Aircraft Statistics Category	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Large Aeroplanes	108	135	+ 27
Medium Aeroplanes	32	21	- 11
Small Aeroplanes	46	53	+ 7
Agricultural Aeroplanes	20	20	0
Helicopters	42	43	+ 1
Sport Aircraft	4	3	- 1
Unknown Aircraft	10	10	0
Total	**262**	**285**	**+ 23**

Severity of Defect Incidents

Severity	1 Jan to 31 Mar 2008	1 Jan to 31 Mar 2009	Change
Critical	1	0	- 1
Major	44	83	+ 39
Minor	217	202	- 15

No defect incidents in the ‘Large Aeroplanes’ statistics category were classified as Critical in the 1 January to 31 March 2008 or 2009 quarters.

No defect incidents in the ‘Medium Aeroplanes’ statistics category were classified as Critical in the 1 January to 31 March 2008 or 2009 quarters.

Rate Monitoring

Defect incident rate monitoring of individual types of large and medium air transport aircraft has been carried out against the CAA standard for the period ended 31 December 2008. Analysis shows that four of the 14 monitored aircraft types have defect rates above the “trigger level” for CAA action.

Bird Incident Rates

Bird hazard monitoring has been carried out against the CAA standard for the period ended 31 March 2009. Analysis shows that five of the 18 monitored aerodromes have bird strike rates above the "trigger level" for CAA action.

One aerodrome had a strike rate in the high risk category of the CAA standard (above 10.0 bird strikes per 10,000 aircraft movements) and its long-term trend is constant. Four aerodromes had strike rates in the medium risk category (5.0 to 10.0 per 10,000 movements), one having a long-term upward trend, one having a long-term constant trend and two having long-term downward trends. Thirteen aerodromes had strike rates in the low risk category (below 5.0 per 10,000 movements) two of which have a long-term upward trend.

Quarterly Statistics

Quarter	2006/2	2006/3	2006/4	2007/1	2007/2	2007/3
Number of Air Transport Flights[1]	102,086	98,282	104,799	115,226	100,420	85,937
Number of Hours Flown[1]	210,867	211,067	226,271	250,670	227,923	218,463
Number of Aircraft Movements[2]	258,378	263,142	255,765	290,284	272,719	289,005
Number of Aircraft on the Register[3]	3,991	3,995	4,033	4,075	4,105	4,127
Number of Licences						
Recreational Pilot Licence	0	0	0	0	0	0
Private Pilot Licence	3,483	3,616	3,465	3,500	3,742	3,788
Commercial Pilot Licence	3,593	3,645	3,620	3,603	3,726	3,779
Airline Transport Pilot Licence	1,789	1,810	1,818	1,804	1,893	1,927
Aircraft Maintenance Engineer Licence	2,114	2,135	2,151	2,161	2,181	2,203
Air Traffic Controller Licence	296	308	294	299	326	330
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	11	11	11	11	11	11
Air Operator – Medium Aeroplanes	13	13	14	14	13	15
Air Operator – Helicopters and Small Aeroplanes	158	160	163	161	159	161
Air Operator – Pacific	3	3	3	2	3	4
Number of Aircraft Accidents[4]						
Large Aeroplanes	0	0	0	0	0	0
Medium Aeroplanes	1	0	0	0	1	0
Small Aeroplanes	1	2	8	8	4	1
Agricultural Aeroplanes	0	0	0	1	3	1
Helicopters	5	5	6	5	1	2
Sport Aircraft	7	4	4	8	10	3
Unknown Aircraft	0	0	2	0	0	0
Hang Gliders	2	3	4	4	1	4
Parachutes	0	1	1	4	1	0
Number of Fatal Accidents[4]	0	1	3	1	0	0
Number of Fatal Injuries[4]	0	1	6	1	0	0
Number of Serious + Minor Injuries[4]	6	4	15	9	8	5
Social Cost $ million[5]	1.39	4.10	25.09	7.46	1.81	3.85
Number of Incidents[6]	1,164	994	1,089	1,068	1,079	1,022
Number of Aviation Related Concerns	85	109	89	77	75	76

[1] New Zealand registered aircraft. Includes the aircraft classes aeroplane, helicopter and balloon only; excludes other aircraft classes, hang gliders and parachutes. Estimated for 2008/2, 2008/3, 2008/4 and 2009/1.
[2] Certificated aerodromes. Includes Auckland, Christchurch, Dunedin, Gisborne (from December 2004), Hamilton, Invercargill, Napier, Nelson, New Plymouth, Ohakea, Palmerston North, Queenstown, Rotorua, Taupo, Tauranga, Wellington and Woodbourne. Excludes Chatham Islands/Tuuta Airport, Kerikeri/Bay of Islands, Manapouri, Mount Cook, Timaru, Wanganui, Westport, Whangarei and Wigram.
[3] As at the last day of the quarter. Includes the sport aircraft statistics category. Excludes hang gliders and parachutes.
[4] All accidents. All aircraft statistics categories. Includes hang gliders and parachutes.
[5] All aircraft statistics categories. Includes hang gliders and parachutes. Cost of fatal, serious and minor injuries, and aircraft destroyed, in June 2008 dollars.
[6] All incident sub-types.

Quarter	2007/4	2008/1	2008/2	2008/3	2008/4	2009/1
Number of Air Transport Flights[1]	104,008	119,796	104,687	89,860	108,432	124,610
Number of Hours Flown[1]	243,975	266,321	239,642	227,553	249,192	269,419
Number of Aircraft Movements[2]	300,512	321,583	306,863	291,661	295,075	299,289
Number of Aircraft on the Register[3]	4,193	4,250	4,301	4,315	4,354	4,405
Number of Licences						
Recreational Pilot Licence	0	0	0	32	68	80
Private Pilot Licence	3,819	3,873	3,856	3,849	3,733	3,787
Commercial Pilot Licence	3,817	3,876	3,925	3,991	4,056	4,116
Airline Transport Pilot Licence	1,968	1,978	1,999	2,020	2,039	2,033
Aircraft Maintenance Engineer Licence	2,227	2,241	2,276	2,311	2,342	2,352
Air Traffic Controller Licence	325	325	332	340	342	342
Number of Part 119 Certificated Operators						
Air Operator – Large Aeroplanes	11	11	11	10	9	10
Air Operator – Medium Aeroplanes	16	16	16	15	15	15
Air Operator – Helicopters and Small Aeroplanes	164	163	161	163	163	166
Air Operator – Pacific	3	2	3	3	2	2
Number of Aircraft Accidents[4]						
Large Aeroplanes	0	0	0	0	0	1
Medium Aeroplanes	0	0	0	0	1	0
Small Aeroplanes	7	8	6	7	9	7
Agricultural Aeroplanes	1	6	3	2	3	0
Helicopters	4	5	6	5	7	6
Sport Aircraft	5	13	5	4	14	11
Unknown Aircraft	1	0	0	0	1	0
Hang Gliders	2	1	2	1	2	12
Parachutes	1	0	0	0	1	1
Number of Fatal Accidents[4]	3	5	2	0	3	4
Number of Fatal Injuries[4]	3	7	4	0	3	6
Number of Serious + Minor Injuries[4]	8	2	4	12	10	10
Social Cost $ million[5]	11.96	27.25	14.61	4.81	13.22	23.29
Number of Incidents[6]	1,026	1,230	1,269	1,293	1,145	1,157
Number of Aviation Related Concerns	86	106	81	67	56	84

Definitions

Accident

Means an occurrence that is associated with the operation of an aircraft and takes place between the time any person boards the aircraft with the intention of flight and such time as all such persons have disembarked and the engine or any propellers or rotors come to rest, being an occurrence in which–

(1) a person is fatally or seriously injured as a result of–

(i) being in the aircraft; or

(ii) direct contact with any part of the aircraft, including any part that has become detached from the aircraft; or

(iii) direct exposure to jet blast–

except when the injuries are self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to passengers and crew; or

(2) the aircraft sustains damage or structural failure that–

(i) adversely affects the structural strength, performance, or flight characteristics of the aircraft; and

(ii) would normally require major repair or replacement of the affected component–

except engine failure or damage that is limited to the engine, its cowlings, or accessories, or damage limited to propellers, wing tips, rotors, antennas, tyres, brakes, fairings, small dents, or puncture holes in the aircraft skin; or

(3) the aircraft is missing or is completely inaccessible.

Aircraft Incident

Means any incident, not otherwise classified, associated with the operation of an aircraft.

Aircraft Statistics Category

The following table shows the definition of each aircraft statistics category and the aircraft classes included.

Aircraft Statistics Category	Definition	Aircraft Class
Large Aeroplanes	Aeroplanes that must be operated under Part 121 when used for air transport	Aeroplane
Medium Aeroplanes	Aeroplanes that must be operated under Part 125 when used for air transport, except for those required to operate under Part 125 solely due to operating SEIFR	Aeroplane
Small Aeroplanes	Other Aeroplanes with Standard Category Certificates of Airworthiness	Aeroplane
Agricultural Aeroplanes	Aeroplanes with Restricted Category Certificates of Airworthiness limited to agricultural operations	Aeroplane
Helicopters	Helicopters with Standard or Restricted Category Certificates of Airworthiness	Helicopter
Sport Aircraft	All aircraft not included in the groups above	Aeroplane, Amateur Built Aeroplane, Amateur Built Glider, Amateur Built Helicopter, Balloon, Glider, Gyroplane, Helicopter, Microlight Class 1, Microlight Class 2, Power Glider

Other Aircraft Types (not included on the NZ Aircraft Register)

Hang Glider
Means a glider, including a powered glider, that is capable of being launched and landed solely by the use of the pilot's legs, and includes paragliders. **Paraglider** means a hang glider with no rigid primary structure.

Parachute
Means any device, without a motor in operation, comprising a flexible drag, or lift/drag, surface from which a load is suspended by shroud lines capable of controlled deployment from a packed condition.

Airspace Incident

Means an incident involving deviation from, or shortcomings of, the procedures or rules for–

(1) avoiding a collision between aircraft; or

(2) avoiding a collision between aircraft and other obstacles when an aircraft is being provided with an Air Traffic Service.

Bird Incident

Means an incident where–

(1) there is a collision between an aircraft and one or more birds; or

(2) when one or more birds pass sufficiently close to an aircraft in flight to cause alarm to the pilot.

Defect Incident

Means an incident that involves failure or malfunction of an aircraft or aircraft component, whether found in flight or on the ground.

Fatal Injury

Means any injury which results in death within 30 days of the accident.

Incident

Means any occurrence, other than an accident, that is associated with the operation of an aircraft and affects or could affect the safety of operation.

Occurrence

Means an accident or incident.

Serious Injury

Means any injury that is sustained by a person in an accident and that–

(1) requires hospitalisation for more than 48 hours, commencing within 7 days from the date the injury was received; or

(2) results in a fracture of any bone, except simple fractures of fingers, toes, or nose; or

(3) involves lacerations which cause severe haemorrhage, nerve, muscle, or tendon damage; or

(4) involves injury to an internal organ; or

(5) involves second or third degree burns, or any burns affecting more than 5% of the body surface; or

(6) involves verified exposure to infectious substances or injurious radiation.

Severity

The following definitions apply to the severity accorded to accidents and incidents as the result of investigation of occurrences:

Severity	Definition
Critical	An occurrence or deficiency that caused, or on its own had the potential to cause, loss of life or limb;
Major	An occurrence or deficiency involving a major system that caused, or had the potential to cause, significant problems to the function or effectiveness of that system;
Minor	An isolated occurrence or deficiency not indicative of a significant system problem.

Safety Target Structure