Noise Monitor Data Diggers Rest

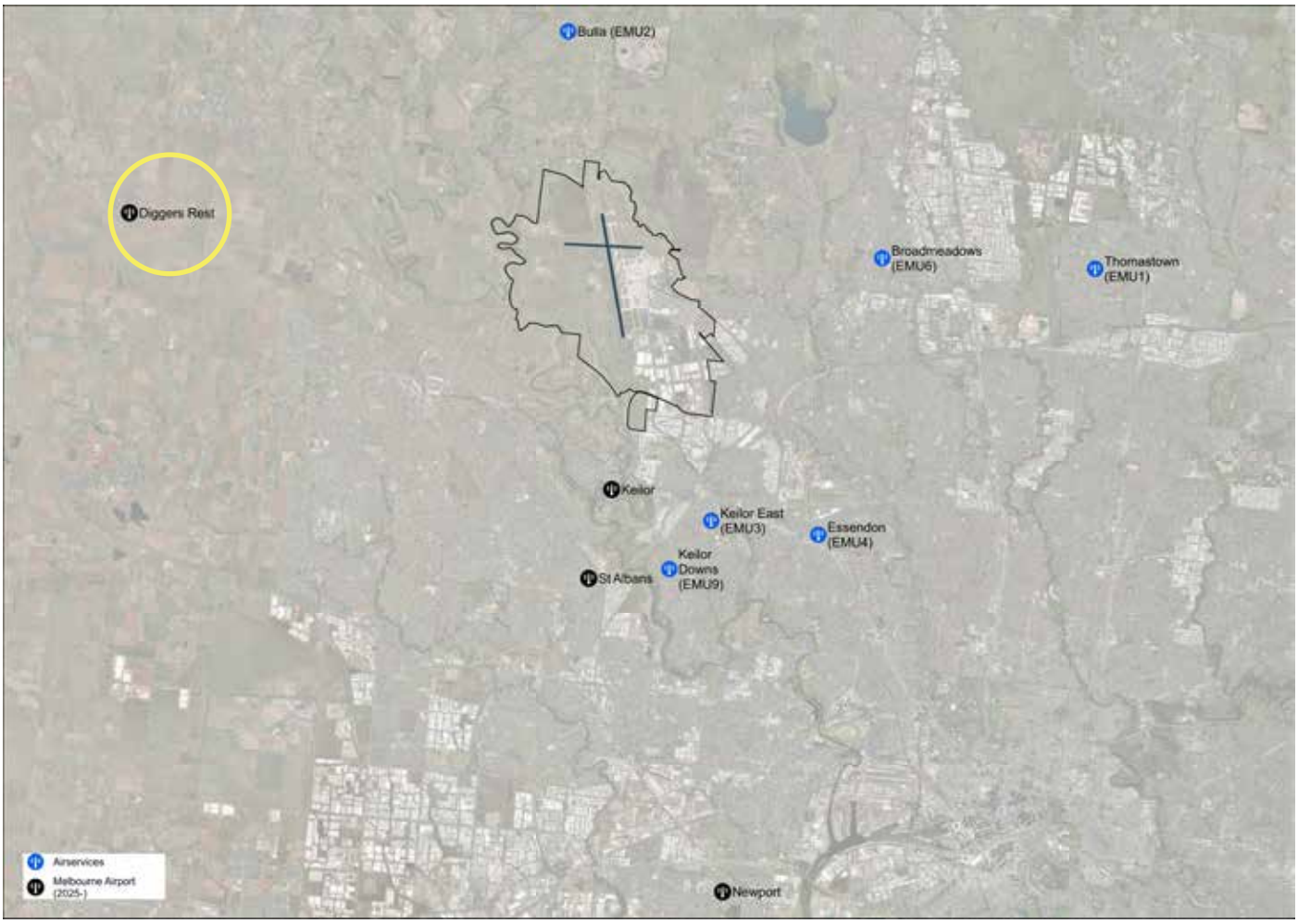
This report provides a summary of the aircraft noise data collected between 24 April, 2025 and 30 June, 2025 inclusive.

Melbourne Airport installed four new portable noise monitors in 2025 to increase and improve the data available for residents about aircraft noise around the airport. The installation of these monitors is a direct response to community feedback received during the 2022 public exhibition of Melbourne Airport's Third Runway Major Development Plan. The monitors provide the public with accurate measurements of overhead flight noise.

The relocatable noise monitors were positioned in Keilor, St Albans, Diggers Rest and Newport and supplement the six permanent noise monitors already located in nearby suburbs (see below).

The portable noise monitors linked directly to Airservices Australia's Webtrak system allowing anyone to access the data online in almost real time.

Data presented in this report covers the maximum noise level detected for an aircraft event.



NOTE: The noise levels presented in this report may include aircraft noise events contaminated by neighbourhood noise events, such as birds or vehicles.

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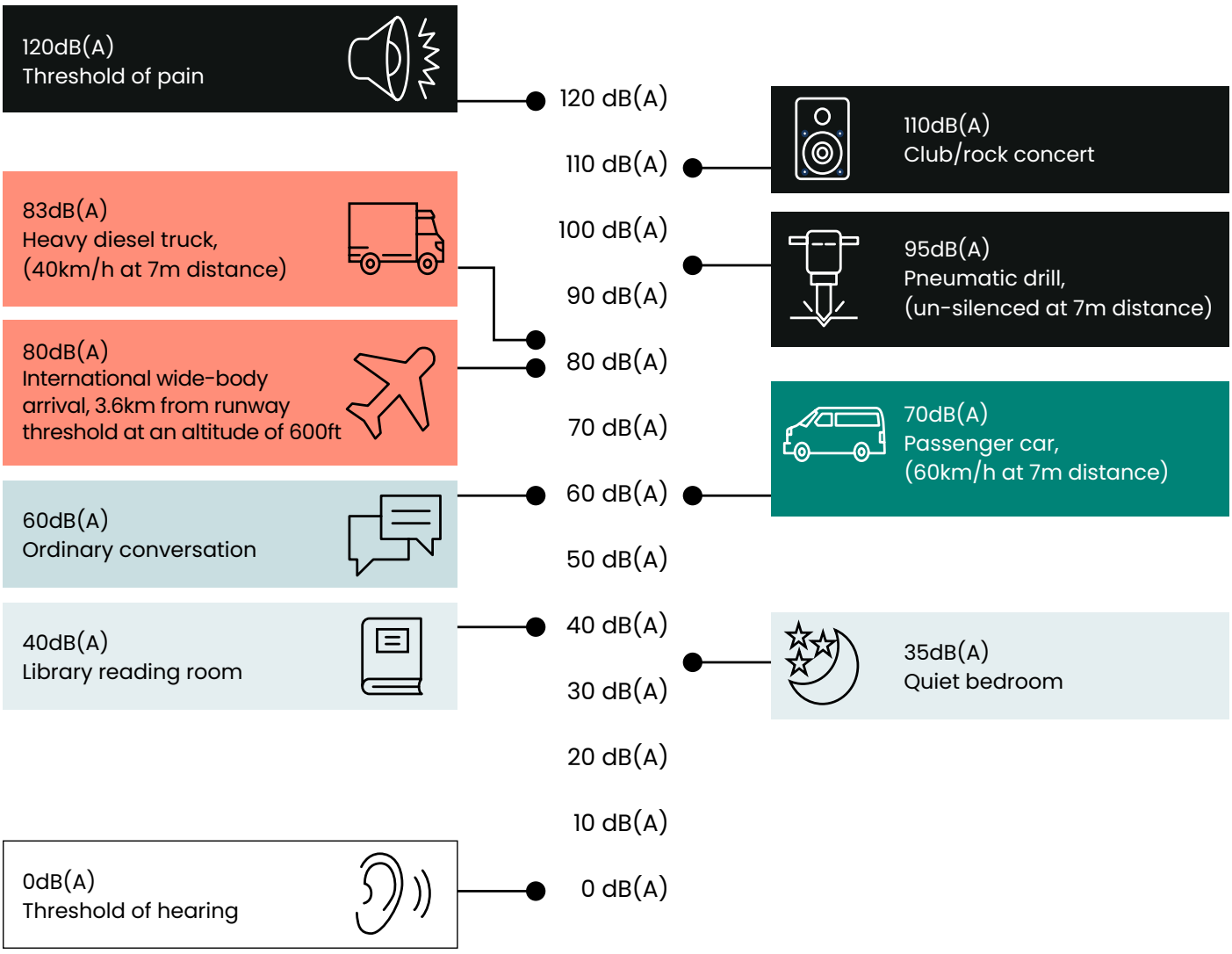
Noise scale

Sound is usually measured in decibels (dB). Aircraft noise is measured in decibels adjusted, which is A-weighted decibels or dB(A). This means decibels have been adjusted to reflect our ear's response to different frequencies of sound.

The scale below explains noise in the context of common experiences. It describes the noise modelled 3,600 metres south of Melbourne Airport's third runway, at the intersection of the Calder Freeway and Green Gully Rd, for:

- narrow-body[1] jet arrivals and departures (typically serving domestic routes)
- wide-body[2] jet arrivals and departures (typically serving international routes)

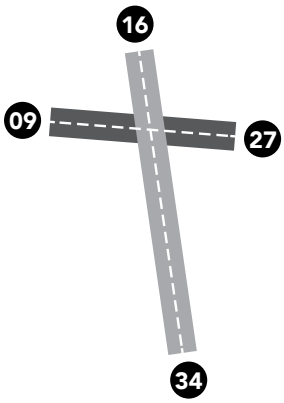


< 60 dB(A)	60-65 dB(A)	65-70 dB(A)	70-75 dB(A)	75-80 dB(A)	80-85 dB(A)	85-90 dB(A)	> 90 dB(A)

Source: APAM and NASF Guideline A: Attachment 1
*3.6km is approximately the distance from Runway 34R threshold to the Calder Freeway. Aircraft noise values are based on modelling used in Melbourne Airport's Third Runway Major Development Plan.
1 'Narrow-body' refers to aircraft that have one passenger aisle. Examples include Boeing 737 and Airbus A320 fleets.
2 'Wide-body' refers to aircraft that have two passenger aisles. Examples include Boeing 787 and Airbus A380 fleets.

Aircraft movements

Below are the number of aircraft movements captured by the Diggers Rest monitor by operation (arrivals/departures) and runway between 24 April 2025 to 30 June 2025.



Arrivals	
Runway 16	1
Runway 34	16
Runway 09	218
Runway 27	1
Runway 16/34	**17**
Runway 09/27	**219**

Departures	
Runway 16	11
Runway 34	439
Runway 09	-
Runway 27	7,716
Runway 16/34	**450**
Runway 09/27	**7,716**

N-above noise events

One way to describe aircraft-noise impacts is by the number of noise events that exceed a certain level. These metrics are referred to as 'N-above' (as in, number above) contour levels.

It aims to provide information in a form that is better understood by the public. It does this by providing a description of aircraft noise exposure at a given location and time period. The National Airports Safeguarding Framework (NASF) Guideline A: Measure for Managing Impacts of Aircraft Noise, recommends the use of N-contours for strategic planning purposes.

The data collected from the Diggers Rest noise monitor is presented in the N-above format below, indicating the average number of events during the recorded period.

For example, on average there were
45 daily departure events above 70dB and
3 daily arrival events above 60dB.

		Arrival Events	Departure Events	Total Events
N60 24hr	N60 24 hours provides the number of events at or above 60dB(A) over a 24-hour period	**3**	**119**	**123**
N70 24hr	N70 24 hours provides the number of events at or above 70dB(A) over a 24-hour period	**1**	**45**	**47**
N60 night	N60 night provides the number of events at or above 60dB(A) over the night period (11pm to 6am)	**-**	**7**	**8**

Aircraft noise can be different for arrivals and departures. The following pages provide information broken down by operation (arrival and departures).

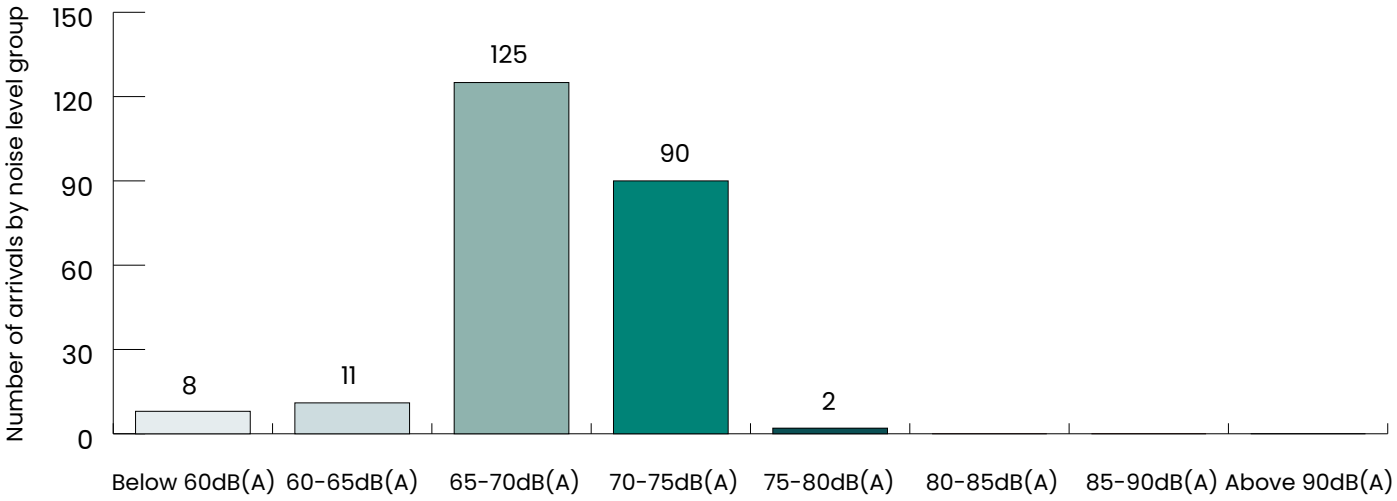
Arrivals

Noise results from the 236 arrivals collected during the recorded dates have been allocated into noise level 'groups' and by periods of the day.

Graph below highlights the number of arrivals d by noise level group.

For example, there were:

- **11 arrivals** detected between **60-65dB(A)**
- **2 arrivals** detected between **75-80dB(A)**



The number of arrivals by noise level group and time of day are highlighted below.

For example, there were:

- **3 arrivals** detected between **60-65dB(A)** in the **Morning (6am-1pm)**
- **1 arrival** detected between **75-80dB(A)** in the **Night (11pm-6am)**

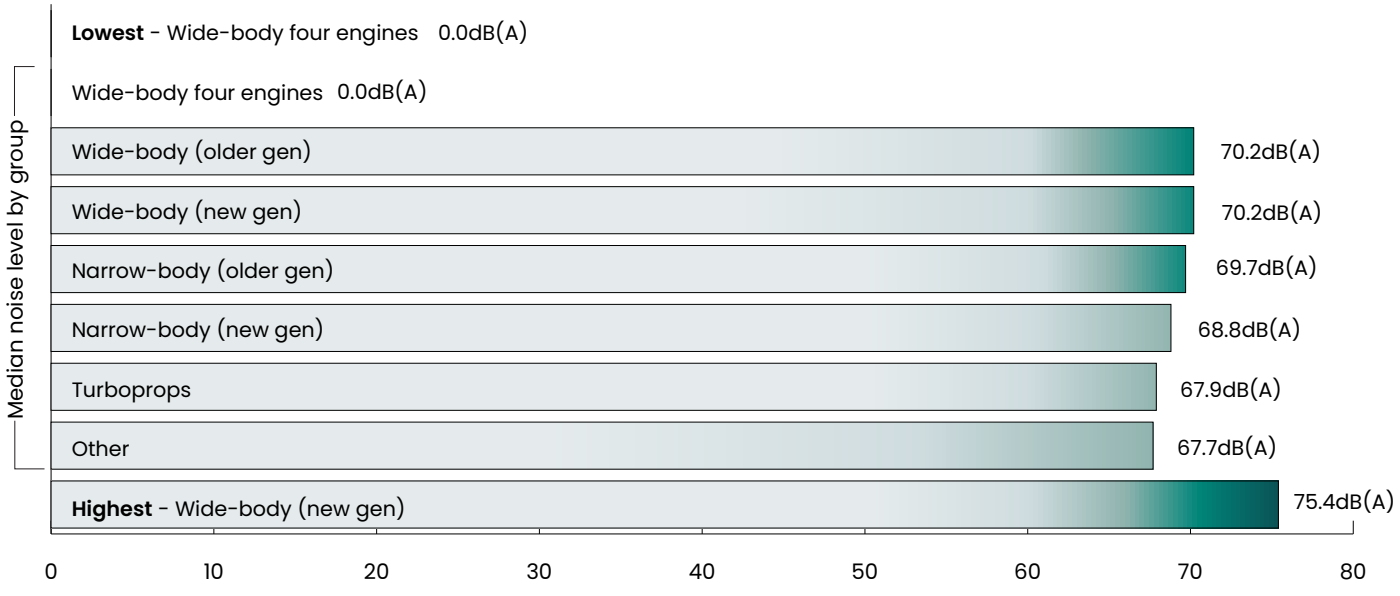
	< 60 dB(A)	60-65 dB(A)	65-70 dB(A)	70-75 dB(A)	75-80 dB(A)	80-85 dB(A)	85-90 dB(A)	> 90 dB(A)
Morning 6am-1pm	4	3	10	4	-	-	-	-
Afternoon 1pm-5pm	-	3	71	38	1	-	-	-
Evening 5pm-11pm	3	4	40	38	-	-	-	-
Night 11pm-6am	1	1	4	10	1	-	-	-
TOTAL	8	11	125	90	2	-	-	-

Below highlights the number of arrivals during the recored dates by aircraft type groups along with the highest, lowest and median noise level events.

For example, there was:

- **158 narrow-body (older gen) arrival** with a **median** noise level of **69.7dB(A)**
- **34 narrow-body (new gen) arrivals** with a **median** noise level of **68.8dB(A)**

Grouping	Example Aircraft Type	Number of arrivals captured	Maxium Noise Level dB(A)		
			Highest	Median	Lowest
Wide-body four engines	Airbus A380, Boeing 747	-	-	-	-
Wide-body (older gen)	Boeing 777, Airbus A330	12	74.4	70.2	58.6
Wide-body (new gen)	Airbus A350, Boeing 787, Airbus A330neo	11	75.4	70.2	60.8
Narrow-body (older gen)	Airbus A321/A320, Boeing 737, Boeing 717, Embraer 190, BAe-146	158	75.3	69.7	54.8
Narrow-body (new gen)	Airbus A321neo/A320neo, Boeing 737 MAX, Airbus A220	34	73.0	68.8	56.1
Turboprops	Dash-8 Q400, Saab 340, Metroliner	19	70.6	67.9	64.3
Other	Global Express, Cessna 172 etc.	2	68.7	67.7	66.7



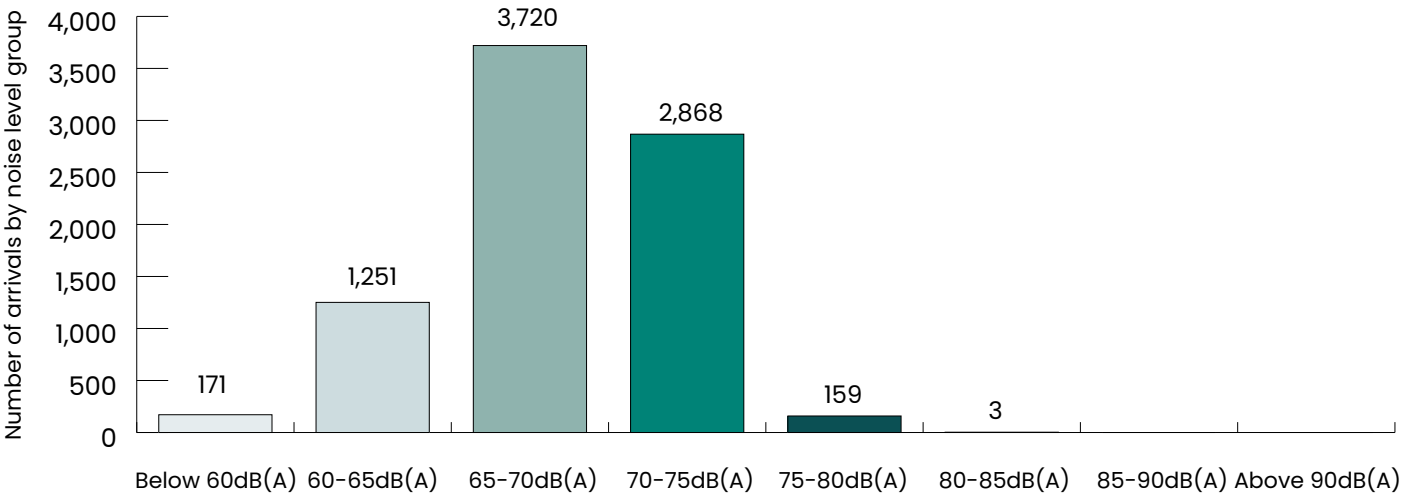
Departures

Noise results from the 8,172 departures collected during the recorded dates have been allocated into noise level 'groups' and by periods of the day.

Graph below highlights the number of departures by noise level group.

For example, there were:

- **1,251 departures** detected between **60-65 dB(A)**
- **159 departures** detected between **75-80 dB(A)**



The number of departures by noise level group and time of day are highlighted below.

For example, there were:

- **480 departures** detected between **60-65dB(A)** in the **Morning (6am-1pm)**
- **19 departures** detected between **75-80dB(A)** in the **Night (11pm-6am)**

	< 60 dB(A)	60-65 dB(A)	65-70 dB(A)	70-75 dB(A)	75-80 dB(A)	80-85 dB(A)	85-90 dB(A)	> 90 dB(A)
Morning 6am-1pm	51	480	1,545	1,448	85	3	-	-
Afternoon 1pm-5pm	40	249	716	461	33	-	-	-
Evening 5pm-11pm	73	424	1,197	845	22	-	-	-
Night 11pm-6am	7	98	262	114	19	-	-	-
TOTAL	171	1,251	3,720	2,868	159	3	-	-

Below highlights the number of departures during the recorded dates by aircraft type groups along with the highest, lowest and median noise level events.

For example, there was:

- **468 wide-body (older gen) departures** with a **median** noise level of **77.8dB(A)**
- **944 narrow-body (new gen) departure** with a **median** noise level of **64.2dB(A)**

Grouping	Example Aircraft Type	Number of arrivals captured	Maxium Noise Level dB(A)		
			Highest	Median	Lowest
Wide-body four engines	Airbus A380, Boeing 747	27	74.6	72.1	63.2
Wide-body (older gen)	Boeing 777, Airbus A330	468	81.6	72.8	58.4
Wide-body (new gen)	Airbus A350, Boeing 787, Airbus A330neo	278	79.3	67.7	59.3
Narrow-body (older gen)	Airbus A321/A320, Boeing 737, Boeing 717, Embraer 190, BAe-146	6,302	82.2	69.5	56.9
Narrow-body (new gen)	Airbus A321neo/A320neo, Boeing 737 MAX, Airbus A220	944	73.6	64.2	55.4
Turboprops	Dash-8 Q400, Saab 340, Metroliner	119	67.4	61.3	54.6
Other	Global Express, Cessna 172 etc.	34	73.0	63.1	56.8