



Airbus A320neo

Amit Kumar Tyagi

ISTAT Certified Senior Appraiser
 Chief Intelligence Officer
 Acumen Aviation

amit.tyagi@acumen.aero
 acumen.aero

Photo Courtesy of Pablo José Velásquez López.

The Airbus A320neo family is a significant advancement in narrowbody aircraft, emphasizing fuel efficiency and performance.

Derived from the A319, A320 and A321 models, the A320neo family introduced key innovations. Launched on 1 December 2010, with its maiden flight on 25 September 2014, it was first introduced into service by Lufthansa on 25 January 2016.

The transition from the Airbus A320ceo to Airbus A320neo is a key aspect of the industry’s drive for heightened fuel efficiency, diminished carbon footprint and improved

aircraft performance. The A320neo presents two cutting-edge engine choices: Pratt & Whitney’s (PW) PurePower PW1100G-JM geared turbofan and CFM International’s LEAP-1A, both surpassing previous models in operational, economic and environmental performance.

Additionally, it includes sharklets, previously offered as a retrofit for the A320ceo. These wingtip devices on neo aircraft enhance aviation sustainability, reducing fuel consumption by up to 4% on longer flights of around 2,000 to 2,500 nautical miles, equivalent to about 900 tonnes of CO₂ emissions per aircraft annually based on OEM data. In addition, A320neo achieves up to 20% fuel savings and CO₂

reduction compared with older Airbus models per Airbus, a significant step toward greener aviation. Maintaining operational consistency with the ceo, the neo family employs the same fly-by-wire digital flight controls and cabin management systems, helping reduce training, scheduling, operational and maintenance costs. In a high-density configuration, the A320neo accommodates up to 194 passengers, while in a typical dual-class configuration, the aircraft seats 150 to 180 passengers.

The Airbus A320neo has a global presence and is favored by both lessors and airlines. According to CAPA Fleets, as of March 2024, over 85 lessors have A320neos in their portfolios,

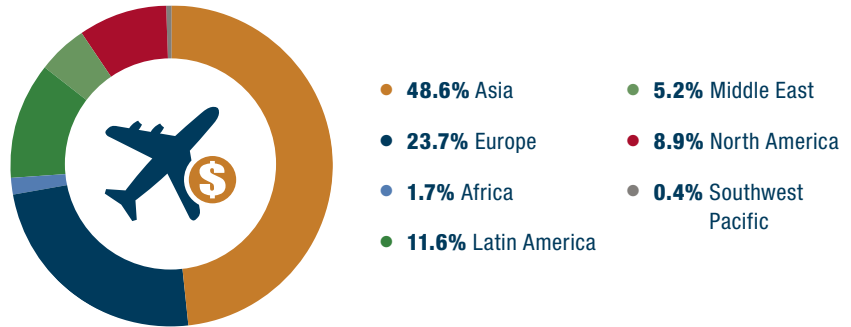
A320 Neo-Acumen Values as of 1 January 2024

Year of build	Current Market Value	Current Base Value	Future Base Values at 1.5 % inflation											
			2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
2024	54.08	53.02	50.11	47.77	45.53	43.38	41.33	39.36	37.47	35.64	33.88	32.17	30.54	29
2023	50.61	49.62	47.29	45.08	42.95	40.92	38.97	37.09	35.29	33.54	31.85	30.24	28.71	27.27
2022	48.61	47.65	45.42	43.28	41.23	39.26	37.37	35.56	33.8	32.09	30.47	28.93	27.47	26.02
2021	47.08	45.94	43.77	41.7	39.71	37.8	35.96	34.18	32.46	30.82	29.26	27.78	26.31	24.91
2020	45.5	44.39	42.29	40.27	38.34	36.47	34.67	32.92	31.25	29.67	28.18	26.69	25.27	23.86
2019	43.56	42.5	40.47	38.52	36.65	34.84	33.08	31.41	29.82	28.32	26.82	25.39	23.98	22.55
2018	41.14	39.94	38.02	36.17	34.38	32.65	30.99	29.43	27.94	26.47	25.06	23.66	22.26	20.86
2017	38.84	37.35	35.53	33.78	32.07	30.45	28.91	27.45	26	24.62	23.25	21.87	20.5	19.19
2016	36.4	35	33.27	31.59	29.99	28.48	27.04	25.61	24.25	22.9	21.54	20.19	18.9	17.66
2015	34.65	33.32	31.64	30.04	28.52	27.08	25.65	24.29	22.93	21.57	20.22	18.93	17.69	16.52

led by AerCap with 253, followed by SMBC Aviation (111), BOC Aviation (90), Avolon (72) and Jackson Square Aviation (71). Additionally, more than 100 operators currently fly A320neo aircraft. The aircraft's global triumph stems from its adaptability in meeting diverse market demands. With various configurations catering to different passenger numbers and route lengths, airlines can tailor their fleets to specific regional requirements.

According to Airbus' February Order and Delivery report, the A320neo has garnered 4,124 orders, with 1,929 aircraft delivered and a backlog of 2,195 aircraft. This high demand and the lengthy waiting period of seven to eight years underscore the market's strong appetite for advanced technology. Several factors have contributed to the increased demand for these newer variants. Enhanced fuel efficiency and environmental performance drive this demand, aligning with the industry's focus on sustainability. The A320neo offers operational flexibility and fleet commonality, enhancing versatility and cost-effectiveness for airlines.

A320-200N – REGIONAL DISTRIBUTION BY IN-SERVICE



Source: CAPA Database – March 2024

A320-200N - Top 10 Operators by Current in Operation		
Operator	Region	# of Aircraft
Indigo	Asia	192
China Eastern Airlines	Asia	105
Spirit Airlines [USA]	North America	87
Frontier Airlines	North America	82
Vistara Airlines	Asia	53
Air China	Asia	53
Azul Linhas Aereas Brasileiras	Latin America	49
China Southern Airlines	Asia	49
Flynas	Middle East	49
Goair	Asia	49

Source: CAPA Database – March 2024

Market Outlook

Beginning in March 2020, the global COVID-19 pandemic caused a sudden halt to air travel worldwide. Despite this, the air passenger industry has shown resilience since mid- to late-2022, experiencing substantial recovery as travel restrictions eased and passengers demonstrated a strong willingness to fly again. The A320neo is now experiencing a notable surge in demand, driven by the resurgence in passenger travel as well as delivery delays experienced by Boeing for its major competitor aircraft the 737 MAX. This increased demand signals that the market values of the A320neo have not only rebounded effectively from the pandemic's impact but have surpassed Base Values. However, PW has identified a concern regarding

contaminated powdered metal used in manufacturing, which could potentially lead to cracking in the high-pressure turbine stage 1 and 2 disks. As per the latest assessment, RTX, PW's parent company, anticipates the need for inspecting between 600 and 700 PW1100G engines from 2023 to 2026. Consequently, PW projects a notable increase in the grounded PW1100G-powered A320neo fleet throughout 2024-2026. Currently, it is estimated about 40% of the A320neo fleet utilizes the PW1100G engine. As a result, over 11% of this fleet is presently grounded.

Due to the ongoing engine issues, there has been a surge in demand for spare PW1100G engines to keep A320neos in operation. This heightened

demand suggests the engine issue has not negatively impacted A320neo values.

However, investors and operators have become more cautious when choosing engine options for future deliveries. If the existing PW engine issues are not efficiently and promptly addressed, there is a risk of a further decline in market share of this engine type compared with the competing CFMI LEAP engine. Nonetheless, with continued high A320neo demand, the gap between Base Value (BV) and Current Market Value (CMV) has shrunk since Q4 2022. Moreover, in Q1 2024, CMVs have exceeded BVs, signaling a notable surge in A320neo demand and aligning with the overall market improvement. 