



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

October 3, 2018

Attachment 4 – Delta Air Lines A319/320/321 Operations Manual Limitations [Excerpt]

OPERATIONAL FACTORS

DCA17LA145



A319/320/321
Operations Manual
Volume 1
Delta Air Lines, Inc.

Revision Number: 19
Revision Date: November 18, 2016
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Maximum Takeoff and Landing Altitude	8,000 feet pressure altitude (A320) 9,200 feet pressure altitude (A319/321)
# Delta A319/320/321 crosswind limit for takeoff or landing Note: The crosswind component may be further limited by low visibility approaches, contamination, or runway width. Note: Refer to SP.16, Guidelines for Takeoff on Contaminated Runways or Landing with Braking Action Less than Good.	38 kts (including gusts)
# Maximum Takeoff and Landing Tailwind Component	10 knots, or as permitted by the Company Pages.
Maximum wind for passenger door operation	65 kts
Maximum wind for cargo door operation	40 kts
Maximum wind with passenger or cargo door open	65 kts

Maneuver Limit Load Factors

Clean configurations (flaps and slats retracted): -1.0 g to +2.5 g

Slats extended and flaps retracted: -1.0 g to +2.5 g

Slats extended and flaps extended: 0.0 to +2.0 g

Weight Limitations

A319

Weight Variant (WV)	WV 01 *	WV 02*
Weights	Pounds	Pounds
Maximum Taxi Weight	155,205	167,330
Maximum Takeoff Weight	154,323	166,448
Note: Maximum taxi and takeoff weights may be less if limited by CG.		
Maximum Landing Weight	134,481	137,788
Maximum Zero Fuel Weights:	125,663	128,970
* Select A319 aircraft will receive an increase in weight limitations. Adhere to flight deck placarded weights.		

A320

Weights	Pounds
Maximum Taxi Weight	167,330
Maximum Takeoff Weight	166,448
Maximum Landing Weight	142,198
Maximum Zero Fuel Weights:	
• Ships 3209-3250	133,379
• Ships 3251-3278	134,481

A321

Weights	Pounds
Maximum Taxi Weight	197,093
Maximum Takeoff Weight	196,211
Maximum Landing Weight	171,519
Maximum Zero Fuel Weights:	162,701

Note: Under emergency or non-normal conditions where the flight cannot continue to its destination, an immediate landing is permitted provided the Overweight Landing procedure (QRH Miscellaneous section) is followed.