



U.S. Department
of Transportation

**Federal Aviation
Administration**

March 11, 2021

ALOFT AeroArchitects

Dear ALOFT AeroArchitects:

The Aircraft Evaluation Group (AEG) has reviewed your request for Supplemental Type Certificate (STC) relief that may be included in an operator's FAA approved MEL. The AEG finds your relief submission allowable as documented in the relief section of this letter. This relief is valid when an operator installs the listed STC on an aircraft that is listed in the Aircraft Model List (AML) below. No other application of this relief is allowed. The STC holder must contact the AEG when the STC is amended, revised or revoked.

Operators may use this relief letter to incorporate the relief listed below into their Minimum Equipment List (MEL) upon publication of this letter and in accordance with the MEL approval process in FAA Order 8900.1. The relief granted remains valid indefinitely with possession of this letter unless the relief is specifically revoked or revised by the Administrator.

STC Applicant	ALOFT AeroArchitects
STC Number	ST03738NY
STC Description	Installation of the ALOFT AeroArchitects Auxiliary Fuel System in a Boeing Company 737-8 aircraft per ALOFT AeroArchitects documents: Configuration Matrix No. 9000-28-CFGX-001, Rev E, December 20, 2018, and Installation Master Data List No. 9000-0001-MDL, Rev J, November 11, 2019; or later FAA-Approved revisions. Multiple configurations are approved.
Aircraft Model List	B737-8

Sincerely,

Aaron Perkins
FOEB Chair,
Aircraft Evaluation Group

Approved STC Relief

System	Item	Category	Installed	Required	Remarks-Exceptions
28	FWD Auxiliary Fuel System Transfer Valves				
28	FWD Auxiliary Fuel System Transfer Valves Fuel Usable	B	2	1	(M)(O) One may be inoperative provided: a. Inoperative Fwd Auxiliary Fuel System Transfer Valve is verified CLOSED and remains CLOSED. b. Remaining Fwd Auxiliary Fuel System Transfer Valve operates normally. c. Fuel quantity in main tanks is adequate to reach an alternate destination if remaining Fwd Auxiliary Transfer Valve fails inflight. d. Fuel in Fwd Tank Group is included as part of Zero Fuel Weight.
28	FWD Auxiliary Fuel System Transfer Valves Tank Empty	C	2	0	(M) May be inoperative provided Fwd Tank Group remains empty. Deactivate AFS per AMMS Task 28-14-00-040-801.
28	FWD Auxiliary Fuel System Transfer Valves Fuel Unusable	C	2	0	(M)(O) May be inoperative provided fuel in the Fwd Tank Group is included as part of Zero Fuel Weight.
28	FWD Auxiliary Fuel System Vent Valves				

28	FWD Auxiliary Fuel System Vent Valves Fuel Usable	B	2	1	(M)(O) One may be inoperative provided: a. Remaining Fwd Auxiliary Fuel System Vent Valve operates normally. b. Fuel quantity in main tanks must be adequate to reach an alternate destination if remaining Fwd Auxiliary Fuel System Vent Valve fails in flight. c. Fuel in tank is included as part of Zero Fuel Weight.
28	FWD Auxiliary Fuel System Vent Valves Tank Empty	C	2	0	(M) May be inoperative provided Fwd Auxiliary Tank Group remains empty. Deactivate AFS per AMMS Task 28-14-00-040-801.
28	FWD Auxiliary Fuel System Vent Valves Fuel Unusable	C	2	0	(M)(O) May be inoperative provided fuel in Fwd Auxiliary Tank Group is included as part of Zero Fuel Weight.
28	FWD Auxiliary Fuel System Bleed Air Valve				
28	FWD Auxiliary Fuel System Bleed Air Valve Fuel Usable	C	1	0	(M)(O) May be inoperative provided: a. Both air conditioning packs operate normally. b. Both cabin pressure control systems operates normally. c. Fwd Auxiliary Fuel Quantity Indicator operates normally. d. Fuel in the Fwd Tank Group is included as part of Zero Fuel Weight.
28	FWD Auxiliary Fuel System Bleed Air Valve Tank Empty	C	1	0	May be inoperative provided Fwd Auxiliary Fuel System Tank Group remains empty.
28	FWD Auxiliary Fuel System Bleed Air Valve Fuel Unusable	C	1	0	(O) May be inoperative provided fuel in Fwd Auxiliary Fuel System Tank Group is included as part of Zero Fuel Weight.

28	AFT Auxiliary Fuel System Transfer Valves				
28	AFT Auxiliary Fuel System Transfer Valves Fuel Usable	B	2	1	(M)(O) One may be inoperative provided: a. Inoperative Aft Auxiliary Fuel System Transfer Valve is closed and remains closed. b. Remaining Aft Auxiliary Fuel System Transfer Valve operates normally. c. Fuel quantity in main tanks must be adequate to reach an alternate destination if remaining Aft Auxiliary Fuel System Transfer Valve fails in flight. d. Fuel in the Aft Tank Group is included as part of Zero Fuel Weight.
28	AFT Auxiliary Fuel System Transfer Valves Tank Empty	C	2	0	(M) May be inoperative provided Aft Tank Group remains empty.
28	AFT Auxiliary Fuel System Transfer Valves Fuel Unusable	C	2	0	(M)(O) May be inoperative provided fuel in Aft Tank Group is included as part of Zero Fuel Weight.
28	AFT Auxiliary Fuel System Vent Valves				
28	AFT Auxiliary Fuel System Vent Valves Fuel Usable	B	2	1	(M)(O) One may be inoperative provided: a. Remaining Aft Auxiliary Fuel System Vent Valve operates normally. b. Fuel quantity in main tanks must be adequate to reach an alternate destination if remaining Vent Valve fails in flight. c. Fuel in the Aft Tank Group is included as part of Zero Fuel Weight.
28	AFT Auxiliary Fuel System Vent Valves Tank Empty	C	2	0	(M) May be inoperative provided Aft Tank Group remains empty.

28	AFT Auxiliary Fuel System Vent Valves Fuel Unusable	C	2	0	(M)(O) May be inoperative provided fuel in Aft Tank Group is included as part of Zero Fuel Weight.
28	AFT Auxiliary Fuel System Bleed Air Valve				
28	AFT Auxiliary Fuel System Bleed Air Valve Fuel Usable	C	1	0	(M) May be inoperative provided: a. Both air conditioning packs operate normally. b. Both cabin pressure control systems operates normally. c. Aft Auxiliary Fuel Quantity operates normally.
28	AFT Auxiliary Fuel System Bleed Air Valve Tank Empty	C	1	0	(M) May be inoperative provided auxiliary tank(s) remains empty.
28	AFT Auxiliary Fuel System Bleed Air Valve Fuel Unusable	C	1	0	(M)(O) May be inoperative provided fuel in the tank is included as part of Zero Fuel Weight.
28	Auxiliary Fuel System Isolation Valve Open Light Inoperative				
28	Auxiliary Fuel System Isolation Valve Open Light Inoperative	C	1	0	(M) Auxiliary Fuel Isolation Valve Open Light (position indicator) may be inoperative provided the Isolation Valve is verified operational prior to flight.
28	Auxiliary Fuel System Isolation Valve Closed Light Inoperative	C	1	0	(M) The Auxiliary Fuel Isolation Valve Closed Light may be inoperative provided the Isolation Valve is verified operational prior to flight.
28	Auxiliary Fuel System Isolation Valve	C	1	0	(M) May be inoperative provided the Auxiliary Fuel System Isolation Valve is safety wired in the OPEN position prior to flight.

28	FWD Auxiliary Fuel System Refueling Valve	C	1	0	(M)(O) May be inoperative provided: a. Fwd Tank Group is not to be not be refueled. Fwd Auxiliary FuelSystem Refueling Valve has been verified closed prior to starting to refuel Procedure for AFT tanks. b. Any fuel remaining in Fwd Tank Group may be used for flight.
28	AFT Auxiliary Fuel System Refueling Valve	C	1	0	(M)(O) May be inoperative provided: a. AFT Tank Group is not to be not be refueled. AFT Auxiliary Fuel System Refueling Valve has been verified closed prior to Starting refueling Procedure for Fwd Tanks. b. Any fuel remaining in Aft Tank Group may be used for flight.
28	Auxiliary Fuel Control Units				
28	Auxiliary Fuel Control Units Fuel Usable	C	-	1	(M)(O) Deactivate Tank Group with inoperative AFCU.
28	Auxiliary Fuel Control Units Tank Empty	C	-	0	(M)(O) Deactivate Tank Group with inoperative AFCU.
28	Auxiliary Fuel Low Level Float Switches				
28	Fwd Tank Group				
28	Auxiliary Fuel Low Level Float Switches FWD Tank Group Fuel Usable	C	2	1	(O) One low level switch may be inoperative provided fuel quantity indicators operate normally.
28	Auxiliary Fuel Low Level Float Switches FWD Tank Group Tank Empty	C	2	0	(M) Both may be inoperative provided auxiliary tank remains empty.

28	Auxiliary Fuel Low Level Float Switches FWD Tank Group Fuel Unusable	C	2	0	(M)(O) Both may be inoperative provided auxiliary fuel is included as part of Zero Fuel Weight.
28	Auxiliary Fuel Low Level Float Switches AFT Tank Group				
28	Auxiliary Fuel Low Level Float Switches AFT Tank Group Fuel Usable	C	2	1	(O) One low level switch may be inoperative provided fuel quantity indicators operate normally.
28	Auxiliary Fuel Low Level Float Switches AFT Tank Group Tank Empty	C	2	0	(M) Both may be inoperative provided auxiliary tank remains empty.
28	Auxiliary Fuel Low Level Float Switches AFT Tank Group Fuel Unusable	C	2	0	(M)(O) Both may be inoperative provided auxiliary fuel is included as part of Zero Fuel Weight.
28	Auxiliary Fuel QTY Processor	C	1	0	(M)(O) May be inoperative provided CWT, Wing tank 1 and 2 fuel is adequate to reach alternate destination.
28	Auxiliary Differential Pressure Switch and Differential Pressure Transducer				
28	FWD Tank Group Differential Pressure Switch and Differential Pressure Transducer				
28	FWD Tank Group Differential Pressure Switch and Differential Pressure Transducer Fuel Usable	C	2	1	(M)(O) May be inoperative provided: a. Both cabin pressure control systems operate normally. b. Both air conditioning packs operate normally. c. Fwd auxiliary fuel quantity indicator operates normally.

28	FWD Tank Group Differential Pressure Switch and Differential Pressure Transducer Tank Empty	C	2	0	(M) May be inoperative provided Fwd Auxiliary Fuel System Tank Group remains empty.
28	FWD Tank Group Differential Pressure Switch and Differential Pressure Transducer Fuel Unusable	C	2	0	(M)(O) May be inoperative provided fuel in Fwd Auxiliary Fuel System Tank Group is included as part of Zero Fuel Weight.
28	AFT Tank Group Differential Pressure Switch and Differential Pressure Transducer				
28	AFT Tank Group Differential Pressure Switch and Differential Pressure Transducer Fuel Usable	C	2	1	(M)(O) May be inoperative provided: a. Both cabin pressurization systems operates normally. b. Both air conditioning packs operate normally. c. Aft auxiliary fuel quantity indicator operates normally.
28	AFT Tank Group Differential Pressure Switch and Differential Pressure Transducer Tank Empty	C	2	0	(M) May be inoperative provided Aft Auxiliary Fuel Tank Group remains empty.
28	AFT Tank Group Differential Pressure Switch and Differential Pressure Transducer Fuel Unusable	C	2	0	(M)(O) May be inoperative provided fuel in Aft Auxiliary Fuel System Tank Group is included as part of Zero Fuel Weight.
28	Auxiliary Fuel Center Tank Float Switches Tank Empty	C	2	0	(M)(O) May be inoperative provided Auxiliary tank(s) remain empty.
28	Auxiliary Fuel Center Tank Float Switches Fuel Unusable	C	2	0	(M)(O) May be inoperative provided auxiliary fuel in the affected tank group is included as part of Zero Fuel Weight.
28	Fuel Quantity Indication Systems – Auxiliary Fuel System				

28	Fuel Quantity Indication Systems – Auxiliary Fuel System FWD Tank Group	C	2	0	(M)(O) With no fuel quantity indication, it is not possible to mission plan or determine CG effects of auxiliary fuel, therefore dispatch only with verified zero auxiliary fuel.
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28	Fuel Quantity Indication Systems – Auxiliary Fuel System AFT Tank Group	C	2	0	(M)(O) With no fuel quantity indication, it is not possible to mission plan or determine CG effects of auxiliary fuel, therefore dispatch only with verified zero auxiliary fuel.
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