



EASA

European Aviation Safety Agency

Standalone AFM changes introducing aircraft weight reductions Part 25 Aeroplanes

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STC Workshop

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Standalone AFM changes vs A/C weight reductions on Part 25 Aeroplanes

- Airport landing fees sometimes triggers operators / aircraft owners wish to declare reduced MTOWs for their aircraft.
- Most Airport Authorities / Service provider corporations charge a variety of fees on aircraft operation

Airport Fees based on aircraft MTOWs

- Landing and Take-off fees
- Aircraft parking charges
- Position Charge (surcharges for operation of pax walkways; stationary 400 Hz ground power supply normally are charged separately)



Other Airport fees

- Passenger fees (for commercial ops)
- Aircraft's Noise Level surcharges
- Emissions surcharges
- Security charges
- Use of terminal equipment/network connections for common use of passenger processing systems
- Etc.



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- Estimations of airport fees costs linked with MTOW. Informative estimation only. Real data must be based on updated information from official sources.
- A321-111/-112 Basic configuration WV000: MTOW 83000 Kg

Fees in Euros (*)	Paris Airports CDG/ORY			Dusseldorf Airport DUS				
	A/C MTOW	TO-Land Fee	Parking Fee 24h (remote stand)	Total	TO-Land Fee	Parking Fee 24h	Position Fee	Total
83 Tons		606	753	1359	215	166	94	475
80 Tons		595	726	1321	180	160	85	425

- AFM Revisions to declare reductions in Maximum Take Off Weight (MTOW) / Maximum Ramp Weight (MRW) is a tool offered by DOAs to airlines/operators in order to declare lower a/c weights, hence attracting smaller airport fees.

(*)Sources:

https://www.dus.com/~media/.../dus.../entgeltordnung2014_englisch_v_141009.pdf

<https://www.parisaeroport.fr/docs/default-source/...aux.../fee-schedule-2016.pdf>



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Specific considerations for AFM revisions with weight reductions for the purpose of reduced airport fees (1 of 3)

- There is no real “hardware”/ “structural” aircraft change behind.
- No modification/update of aircraft TCDS's / TCDSN's content is possible. Update of TCDS's / TCDSN's weight info only possible through “real” structural and acoustic - weight variant change if performed by TC holder.
- There must be a clear identification of what the applicable reference aircraft type, model and weight variant are.
- Original TC Holder's AFM envelope limitations to be respected
- However, the proposed MTOW/MLW/MRW reduction:
 - NOT being significantly below the reference aircraft weight.
 - Otherwise, it may be a major structural design change by altering previous certified configuration hypothesis and assumptions related with fatigue and damage tolerance.
 - No previous or subsequent weight reductions can be accumulated.
 - Must keep the aeroplane inside Large Aeroplanes CS Definition (5700 Kg) and do not go through any other weight related requirement (EU OPS)



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Specific considerations for AFM revisions with weight reductions for the purpose of reduced airport fees (2 of 3)

	MTOW/MLW reduction with NO change to certified noise levels	MTOW/MLW reduction WITH change to certified noise levels	
AFM Revision Classification	Minor Standalone	AFM Major Standalone – Simple If weight / noise level combination already EASA approved (**)	Major Design Change If aircraft weight/noise level combination not already certified by EASA
Impact on: • AFM Revision content • Individual aircraft noise certific.	AFM revision should contain a statement that there is no change to the certified noise levels. The individual aircraft noise certificate (EASA Form 45 issued by NAA of registry) not affected	AFM revision should indicate the aircraft weight / noise level combination. For (**): AFM to declare noise level was already published before in EASA noise database. The individual aircraft noise certificate (EASA Form 45) will need to be re-issued	
Involvement of EASA Noise Panel	NO	YES	

(**) EASA Noise DBs: <http://www.easa.europa.eu/document-library/noise-type-certificates-approved-noise-levels>



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Specific considerations for AFM revisions with weight reductions for the purpose of reduced airport fees (3 of 3)

- It is convenient to link the AFM revision to a minor design change consisting in adding a cockpit placard highlighting the aircraft reduced maximum weights.
- Both the cockpit placard and the AFM Supplement to be incorporated in aircraft through a maintenance action (not performed by flight crew) which must be recorded through an entry in aircraft log book.
- Convenient the DOA to formalise instructions (minor mod embodiment for cockpit placard – AFM update – aircraft log book entry) through a Service Bulletin (SB) containing necessary instructions so it can properly quoted in aircraft log book entry.
- The SB may then refer to “undo” actions (remove placard and AFM revision; logbook entry) to restore the aircraft back to the TC holder original weight configuration.
- DOA scope / privileges must cover minor AFM revisions and specifically this case.
- Otherwise, an application to EASA (Form 36) for a Standalone AFM Minor revision related with a minor design change is needed.



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Thank you for your attention



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