CAA MMEL ITEMS FOR RETENTION

Aircraft:	Boeing 737-100 to 500; 747-100/200/400; 757 Cessna 401, 402, 404, 411, 414, 421, 525A
Operational Applicability:	ANO, EU-OPS, and EASA Part Ops
Additional Reference:	CAP 747
Usage:	To overwrite existing entries in the Type Certificate Holder's MMEL approved by their Primary Certificating Authority for the aircraft types listed below.

With the withdrawal of CAA MMELs and CAA MMEL Supplements in July 2014, a number of MMEL items contained within those CAA documents which are associated with UK certification requirements need to be retained. This would be where there are notified UK national requirements, as published in CAP 747 'Mandatory Requirements for Airworthiness', or where a UK Flight Manual is used that has performance data based on UK certification.

MMEL Items that have been identified by the CAA for retention are listed below:

Boeing 737-100 to 500

21-22	Forward Outflow Valve	С	1	0	Except for 737C and STC CAA.21NE1.00092 cargo or cargo/passenger operations, may be inoperative closed.
		с	1	0	May be inoperative open provided both packs operate normally.
		С	1	0	(O) May be inoperative open with one pack operating normally provided flight altitude remains at or below FL200.
34-19	Instrument Comparator or Warning System (-200/-300/-400/-500) (If installed)	A	-	-	May be inoperative for day VMC provided: (a) The standby Attitude Indicator operates normally, and
					(b) Repairs or replacements are carried out within three calendar days.
78-1	Thrust Reverser Systems				
	(1) (-100/-200)	с	2	1	(M)(O) One may be inoperative provided:
					(a) The inoperative reversers are secured in the closed (forward thrust) position, Cont

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Opera	tional Applicability:	ANO,	ANO, EU-OPS, and EASA Part Ops							
Additi	onal Reference:	CAP	747							
Usage) :	Holder's MMEL			appro	entries in the Type Certificate oved by their Primary / for the aircraft types listed				
78-1	Thrust Reverser Systems				(b)	Reverser(s) may be used in override mode provided system(s) are armed				
	(1) (-100/-200) (Cont.)					only after landing,				
					(c)	Operations on slippery runways (very wet or icy), or runways contaminated by snow, slush or standing water are prohibited,				
					(d)	All ground spoilers operate normally,				
					(e)	Max EPR must be used for take-off i.e. reduced take-off EPR must not be used, except that use of reduced take-off EPR is permitted on DRY runways,				
					(f)	The Emergency Distance to be used in the D and V1/VR charts must be the corrected emergency distance available for the runway reduced by 11%. Then carry out calculations of take-off weight and V1 as in the usual way, and				
					(g)	The landing distance field lengths should be calculated in the usual way and then increased by 130 meters (426.5 ft).				
					<u>Note</u>	The engine with the operative thrust reverser should not be shut down until the aircraft is on the stand.				
		Α	2	0	(M)(O) Both may be inoperative provided:				
					(a)	The inoperative reversers are secured in the closed (forward thrust) position, Cont				

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Additi	onal Reference:	CAP 7	747				
Usage	9:	To overwrite existing entries in the Type Certificate Holder's MMEL approved by their Primary Certificating Authority for the aircraft types listed below.				oved by their Primary	
78-1	Thrust Reverser Systems (1) (-100/-200) (Cont.)				(b)	Reverser(s) may be used in override mode provided system(s) are armed only after landing,	
					(c)	Operations on slippery runways (very wet or icy), or runways contaminated by snow, slush or standing water are prohibited,	
					(d)	All ground spoilers operate normally,	
					(e)	Max EPR must be used for take-off i.e. reduced take-off EPR must not be used, except that use of reduced take-off EPR is permitted on DRY runways,	
					(f)	The Emergency Distance to be used in the D and V1/VR charts must be the corrected emergency distance available for the runway reduced by 11%. Then carry out calculations of take-off weight and V1 as in the usual way,	
					(g)	The landing distance field lengths should be calculated in the usual way and then increased by 130 meters (426.5 ft),	
					(h)	The aeroplane does not exceed 8 further consecutive flights or 72 hours, whichever occurs first, and	
					(i)	Any cockpit voice recorder required to be carried is operative.	

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Additional Reference:	CAP 747
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78-1	Thrust Reverser Systems	С	2	1	(M)(O) One may be inoperative provided:
	(2) (-300/-400/-500)				(a) The inoperative reversers are secured in the closed (forward thrust) position,
					(b) Operations on slippery runways (very wet or icy), or runways contaminated by snow, slush or standing water are prohibited, and
					(c) Operations are conducted in accordance with the Flight Manual.
					Note: The engine with the operative thrust reverser should not be shut down until the aircraft is on the stand.
		А	2	0	(M)(O) Both may be inoperative provided:
					(a) The inoperative reversers are secured in the closed (forward thrust) position,
					(b) Operations on slippery runways (very wet or icy), or runways contaminated by snow, slush or standing water are prohibited,
					(c) Operations are conducted in accordance with the Flight Manual,
					(d) The aeroplane does not exceed 8 further consecutive flights or 72 hours, whichever occurs first, and
					(e) Any cockpit voice recorder required to be carried is operative.

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Additional Reference:	CAP 747
Usage:	To overwrite existing entries in the Type Certificate Holder's MMEL approved by their Primary Certificating Authority for the aircraft types listed below.

Boeing 747-100/200

78-1	Thrust Reversers	С	4	2	 (O)(M) One fan reverser may be inoperative, or two may be inoperative if symmetrical reverse thrust is available, provided: (a) The associated reverser(s) is (are) verified to be locked in the forward thrust position by an approved procedure, Note: If the associated engine is fitted with a turbine reverser, it must also be locked out. (b) No damage exists which would impair structural integrity of the associated reverser, (c) Auto-spoilers, anti-skid and wheel brake systems operate normally, (d) Appropriate performance decrements for non-availability of reverse thrust are applied (take-off/landing), (e) Operations on icy runways or runways contaminated by snow, slush or standing water are prohibited, and (f) JT9D engined aircraft only: On those aircraft not fitted with SB 747-32-2141 or production equivalent, in the event of failure of the ground safety relay in the flight position with No. 2 or No. 3 engine reversers inoperative, landing
					relay in the flight position with No. 2 or

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Additional Reference:	CAP 747
Usage:	To overwrite existing entries in the Type Certificate Holder's MMEL approved by their Primary Certificating Authority for the aircraft types listed below.

Boeing 747-400

36-11-3	Engine High Pressure Bleed Systems	С	4	3	 (M)(O) One may be inoperative provided: a) Associated High Pressure Shutoff Valve (HPSOV) is secured closed, b) A minimum of 70% N1 (60% N1 for RR) is maintained at or above 10,000 ft MSL, or 55% N1 is maintained below 10,000 ft MSL on the associated engine while in icing conditions, c) Bleed systems on remaining engines operate normally, and d) For GE, associated engine thrust reverser is deactivated. <u>Note</u>: Flight Manual performance decrements will be applicable if performance credit is taken for the availability of reverse thrust on GE powered aircraft.
36-11-8	Bleed Air Pressure Regulating Valve (PRV) Systems (PW & GE)	С	4	3	 (M)(O) One may be inoperative with associated PRV secured closed provided: a) Airplane is not operated into known or forecast icing conditions, b) L and R ISLN valves are open for take-off, and when flaps are operated, c) Bleed systems on remaining engines operate normally, d) Associated ENGINE BLEED switch is selected OFF except for engine start, e) For GE, associated engine thrust reverser is deactivated, and Cont

Aircraft:		•) to 500; 747-100/200/400; 757 2, 404, 411, 414, 421, 525A
Operational Applicability:	ANO	, EU-(OPS,	and EASA Part Ops
Additional Reference:	CAP	747		
Usage:	Holde	er's N ficatin	1MEL	isting entries in the Type Certificate approved by their Primary thority for the aircraft types listed
36-11-8 Bleed Air Pressure Regulating Valve (PRV) Systems (PW & GE) (Cont.)				 f) Appropriate performance adjustments are applied.
				<u>Note</u> : Flight Manual performance decrements will be applicable if performance credit is taken for the availability of reverse thrust on GE powered aircraft.
	С	4	3	(M)(O) One may be inoperative with associated PRV secured closed provided:
				a) Associated fan air valve is secured in the intermediate open position,
				 b) Airplane is not operated in known or forecast icing conditions,
				c) L and R ISLN valves are open for take-off, and when flaps are operated,
				d) Bleed systems on remaining engines operate normally,
				e) Associated ENGINE BLEED switch is selected OFF except for engine start,
				f) For GE, associated engine thrust reverser is deactivated, and
				g) Appropriate performance adjustments are applied.
				<u>Note</u> : Flight Manual performance decrements will be applicable if performance credit is taken for the availability of reverse thrust on GE powered aircraft.
	С	4	3	(M)(O) One may be inoperative with associated PRV open provided:
				a) Associated PRV operates pneumatically in the full open position, Cont
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Aircraft:		Boeing 737-100 to 500; 747-100/200/400; 757 Cessna 401, 402, 404, 411, 414, 421, 525A					
Operatio	onal Applicability:	ANO, EU-OPS, and EASA Part Ops					
Addition	al Reference:	CAP 747					
Usage:		To overwrite existing entries in the Type Certificate Holder's MMEL approved by their Primary Certificating Authority for the aircraft types listed below.					
36-11-8	Bleed Air Pressure Regulating Valve (PRV)	b) Associated HPSOV is secured closed,					
	Systems (PW & GE) (Cont).	c) Associated Bleed Air Over-pressure switch is deactivated,					
		d) Associated ENGINE BLEED switch is selected OFF except for engine start,					
		e) L and R ISLN valves are open for take-off, and when flaps are operated,					
		f) Bleed systems on remaining engines operate normally,					
		g) A minimum of 70% N1 is maintained at or above 10,000 ft MSL, or 55% N1 is maintained below 10,000 ft MSL on the associated engine while in icing conditions, and					
		h) For GE, associated engine thrust reverser is deactivated.					
		Note: Flight Manual performance decrements will be applicable if performance credit is taken for the availability of reverse thrust on GE powered aircraft.					
36-11-11	Intermediate Bleed Check Valves	C 4 3 (M)(O) One may be inoperative open provided:					
		a) A minimum of 70% N1 (60% N1 for RR) is maintained at or above 10,000 ft MSL, or 55% N1 is maintained below 10,000 ft MSL on the associated engine while in icing conditions,					
		b) Associated HPSOV is secured closed,					
		c) Bleed systems on remaining engines operate normally, and					
		d) For GE, associated engine thrust reverser is deactivated.					

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Operational Applicability:	ANO, EU-OPS, and EASA Part Ops						
Additional Reference:	CAP 74	7					
Usage:	To overwrite existing entries in the Type Certificate Holder's MMEL approved by their Primary Certificating Authority for the aircraft types listed below.						
36-11-11 Intermediate Bleed Check Valves (Cont.)			Cont <u>Note</u> : Flight Manual performance decrements will be applicable if performance credit it taken for the availability of reverse thrust on GE powered aircraft.				
36-21-4 Engine Bleed Overpressure Switch	C	4 3	 (M)(O) One may be inoperative deactivated provided: a) Associated HPSOV is secured closed, b) Associated Bleed switch remains OFF for takeoff, c) A minimum of 70% N1 (60% N1 for RR) is maintained at or above 10,000 ft MSL, or 55% N1 is maintained below 10,000 ft MSL on the associated engine while in icing conditions, 				

d)

normally, and

deactivated.

					taken for the availability of reverse thrust on GE powered aircraft.
78-31-1	Thrust Reverser Systems (such as, but not limited to: thrust reverser air system and REV unlock indications)	С	4	3	 (M) (O) One may be inoperative provided: (a) Associated reverser is deactivated and secured in the forward thrust position, (b) On associated engine, both T/R Control and T/R indication circuit breakers are pulled and collared,
					(c) Operating procedures appropriate to the various configurations of inoperative reverser(s) are devised, and

Bleed systems on remaining engines operate

d) For GE, associated engine thrust reverser is

Note: Flight Manual performance decrements

will be applicable if performance credit it

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Operatio	onal Applicability:	ANO	, EU-0	OPS,	and EASA Part Ops				
Addition	al Reference:	CAP	CAP 747						
Usage:		Holde	er's M ficatin	MEL	sting entries in the Type Certificate approved by their Primary hority for the aircraft types listed				
78-31-1	Thrust Reverser Systems (such as, but not limited to: thrust reverser air system and REV unlock	A	4	2	Cont (d) Appropriate Flight Manual performance decrements are applied. (M)(O) Two may be inoperative provided:				
	indications) (Cont.)				 (a) Inoperative thrust reversers are on symmetrical engines only, 				
					(b) Associated reversers are deactivated and secured in the forward thrust position,				
					(c) On associated engine, both T/R Control and T/R Indication circuit breakers are opened and collared,				
					 (d) Anti-skid and auto spoiler systems operate normally, 				
					(e) Operating procedures appropriate to various configurations of inoperative reverser(s) are devised, and				
					(f) Repairs are made within three flight days.				
78-34-1	Engine Reverse Lever Interlock	С	4	3	(O) One may be inoperative extended.				
		С	4	3	(O) One may be inoperative retracted provided:				
					(a) Flight Manual performance decrements for inoperative reversers are applied, and				
					(b) Operating procedures appropriate to the various configurations of inoperative reverser(s) are devised.				
					Note: Associated reverse thrust is limited to idle with the interlock retracted.				

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Operational Applicability:	ANO, EU-OPS, and EASA Part Ops							
Additional Reference:	CAP 747							
Usage:	To overwrite existing entries in the Type Certificate Holder's MMEL approved by their Primary Certificating Authority for the aircraft types listed below.							
78-36-1 Reverser Position Sensing System	C43(M)(O) One may be inoperative provided the associated reverser is considered inoperative, refer to item 78-31-1.							
	A 4 2 (M)(O) Two may be inoperative provided the associated reversers are considered inoperative refer to item 78-31-1.							

<u>Boeing 757</u>

34-25-1	Instrument Comparator Unit (If installed)	В	1	0	May be inoperative for day VMC provided the Standby Attitude Indicator operates normally.
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Cessna 401/402/404/411

31-23	Low Voltage	-	1	1	Must be operative
	(LOW VOĽT)				•

Cessna 414/421

24-4	Low Voltage Warning	-	1	1	Must be operative
	Light				·

<u>Cessna 525A</u>

78-1	Thrust Attenuators (SN's 1-299)	С	2	0	(O) (M) May be inoperative provided:
					 Both attenuators are hydraulically locked in the stowed position,
					 b) AFM performance limitations and abnormal procedure 'Dispatch with Attenuator Stowed' are complied with, and
					 c) Operations on wet / contaminated runway surfaces are prohibited.