SUBJECT	:	MMEL for airships
REQUIREMENTS incl. Amdt.	:	CS GEN-MMEL at Issue 2
ASSOCIATED IM/MoC	:	Yes☒ / No ☐
ADVISORY MATERIAL	:	

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ABBREVIATIONS:

LFLS	**L**ufttüchtigkeits**f**orderungen für **L**uft**s**chiffe der Kategorien Normal und Zubringer

IDENTIFICATION OF ISSUE:

Zeppelin plans to deliver a new aircraft of the Zeppelin LZ N07 type in Q3 2024, which triggers OSD elements per Article 7a of Regulation (EU) 748/2012.

Article 7a determinesthe applicability of OSD to "The holder of an aircraft type-certificate issued before 17 February 2014 intending to deliver a new aircraft to an EU operator on or after 17 February 2014". EASA TC EASA.AS.001 for the Zeppelin LZ N07 predates this mandate and until today no new aircraft was delivered.

CS-MMEL and CS-GEN-MMEL are not applicable to airships and they do not adequately address the design requirements of that category of aircraft. The following proposed requirements are based on the certification basis of the LZ N07 as recorded in TCDS EASA.AS.001.

Considering all the above, the following Special Condition is proposed.

M-TS-0000363

Special Condition

MMEL for airships

1. APPLICABILITY

This SC is applicable to normal and commuter category airships with LFLS issue 3 as certification basis.

2. SPECIAL CONDITION

The CS-GEN-MMEL is amended in the following:

2.1 CS GEN.MMEL.100 Applicability

These Certification Specifications are applicable to:
— other-than-complex motor-powered aeroplanes, except:
  — ELA 1,
  — ELA 2,
— other-than-complex motor-powered helicopters, except helicopters certificated for:
  — operation under instrument flight rules (IFR),
  — flight into icing conditions, or
  — Category A operations.
— normal and commuter category of airship with semi-rigid design.

2.2 CS GEN.MMEL.115 Addition of MMEL items

For items installed (other than non-safety-related items) that are not listed in Appendix IV or in this SC, yet the applicant wishes to provide relief for the end user, may be justified for inclusion into their MMEL. The justification should be based on the CS-MMEL Book 1 except the following amended paragraphs:

CS MMEL.145 Justification of MMEL items
(a) The justifications are provided by the applicant along with each MMEL item.
(b) The inclusion of each item in the MMEL is justified following one or more methods, also referred to as MMEL safety methodologies, as agreed with EASA.
(c) The justifications include at least a qualitative safety assessments which:
  (1) evaluate the consequences of the proposed MMEL dispatch configuration on the aircraft functional capabilities, crew workload and discomfort to occupants and show compliance with CS MMEL.140;
  (2) evaluate the consequences of the next worst safety-related failure and, if applicable for the item, separately evaluate the consequences of the external event for which the item was designed to protect against, and ensure the combination of the MMEL dispatch configuration with the next worst safety-related failure or event do not correspond to an hazardous or catastrophic failure condition; and
(e) When an operational or maintenance procedure is associated to an MMEL item, corresponding symbol is included in the MMEL, and the intent of the procedure is specified in the associated item justification.

(f) when relief is proposed for items, functions and/or systems involved in catastrophic or hazardous failure conditions, and the severity of the failure condition under MMEL configuration is not mitigated by special operating conditions, limitations or procedures, a qualitative analysis may only be used for conventional and simple systems when the airship certification basis includes LFLS §1309 issue 3 requirement or equivalent.

GM1 MMEL.145(d) Justification of MMEL items

QUANTITATIVE SAFETY ASSESSMENT
Not applicable

2.3 Appendix III — Definitions and explanatory notes

(e) Definitions for the purpose of this MMEL:

'Commencement of flight' is the point when the airship is released from the mast for the purpose of taking off (off-masting).

'Flight' or "flight time": a flight is defined as the moment an airship is released from the mast for the purpose of taking off or if applicable, when the ground crew chief transfers responsibility to the pilot in command up to the moment the airship finally comes to rest at the end of the flight, and is secured on the mast or its ground device, or if applicable, when the pilot in command transfers the responsibility to ground crew chief.

'Ferry flight' refers to delivery flights for the purpose of returning an aircraft to base, moving an aircraft from one base of operations to another or moving an aircraft to or from a maintenance facility for repairs, overhaul or other work. Authorized flight crew is the minimum flight crew necessary to conduct the flight. No passengers are authorized on board.

'Master Maintenance and Operating Procedures (MMOP)' means a document, that establishes maintenance and operating procedures associated to aircraft items listed in the MMEL. The procedures defined in this document are required to be conducted in case the associated aircraft item listed in the MMEL is inoperative to safely dispatch the aircraft.

2.4 Appendix IV — Item list
The aircraft applicability reported in this Appendix must be disregarded. The applicability of each item or sub-item listed in this Appendix needs to be properly evaluated in regard to the scope of this SC. If an item or sub-item is found applicable to the airship as reported in the CS, justification is not needed.

Associated Interpretative Material / Means of Compliance

The associated Interpretative Material / Means of Compliance is published for awareness only and is not subject to public consultation.

ATA CHAPTER: 26 Fire protection				**PAGE: 26-1**
(1) System & sequence numbers item	(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions
26-60-1 Lightning protection box				
26-60-1A	A	–	–	(M) (O) May be inoperative for ferry flights only, provided: (a) the affected system that the inoperative lighting protection box is part of, is within MMEL, and (b) flight in adverse weather condition or high probability of lightning strikes should be avoided. (M) To provide guidance for deactivation of the affected components. (O) To provide alternate flight planning procedures.

ATA CHAPTER: 31 Indicating/Recording systems						PAGE: 31-1
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
31-50-1	**Ballonet Auxiliary Pressure Indicator**					
31-50-1A	(ALL)	B	-	0	May be inoperative.	
31-50-2	**Helium Auxiliary Pressure Indicator**					
31-50-2A	(ALL)	C	-	0	May be inoperative.	

ATA CHAPTER: 33 Lights						**PAGE: 33-4**
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch		
33-44-2	**Approach light FWD**					
33-44-2A	(ALL)	C	-	0	May be inoperative, provided day-only operations are conducted.	
33-44-2B		A	-	0	May be inoperative, provided: a) only ferry flights are conducted at night and, b) landing light (item 33-44-1) is operative c) approach light AFT (item 33-44-3) is operative.	
33-44-3	**Approach light AFT**					
33-44-3A	(ALL)	D	-	0	May be inoperative, provided day-only operations are conducted.	
33-44-3B		A	-	0	May be inoperative, provided: a) only ferry flights are conducted at night and, b) landing light (item 33-44-1) is operative c) approach light FWD (item 33-44-2Calo) is operative.	

ATA CHAPTER: 53 Fuselage						PAGE: 53-1
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
53-50-1	**Ballonet control system Automatic mode**					
53-50-1A	(CAT)	B	1	0	May be inoperative provided valve and blower is manually actuated.	
53-50-1B	(Other than CAT)	C	1	0	May be inoperative provided valve and blower is manually actuated.	
53-50-2	**Ballonet blower**	A	-	1	(M)(O) Any in excess of one may be inoperative for ferry flight only provided: (a) blower is deactivated, and (b) alternate procedures are established and used. (M) To provide guidance for deactivation of the blower. (O) To provide alternate crew procedures.	
53-50-3	**Ballonet valve**	A	-	1	(M)(O) Any in excess of one may be inoperative for ferry flight provided: (a) affected valve is deactivated in closed position, and (b) performance penalties are applied. (M) To provide guidance for deactivation of the valve. (O) To provide performance penalties to be applied.	

ATA CHAPTER: 53 Fuselage						PAGE: 53-2
(1) System & sequence numbers item		(2) Rectification interval	(3) Number installed	(4) Number required for dispatch	(5) Remarks or exceptions	
53-50-4	**Helium differential pressure transducer**	A	-	1	(O) Any in excess of one may be inoperative for ferry flight provided alternate procedures are established and used. (O) To provide alternate crew procedures.	
53-50-5	**Ballonet fill level sensor**	A	-	1	(O) Any in excess of one may be inoperative for ferry flight provided alternate procedures are established and used. (O) To provide alternate crew procedures.	
53-50-6	**Helium valve proximity switch**	A	-	1	(M)(O) Any in excess of one may be inoperative for ferry flight provided alternate procedures are established and used. (M) To provide guidance for deactivation of the proximity switch. (O) To provide alternate crew procedures.	
53-50-7	**Air valve proximity switch**	A	-	1	(M)(O) Any in excess of one may be inoperative for ferry flight provided: (a) proximity switch is deactivated, and (b) alternate procedures are established and used (M) To provide guidance for deactivation of the proximity switch. (O) To provide alternate crew procedures.	