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issues

SERVICE INSTRUCTION no. 2023/01 Installation of Transponder Equipment

Action: Installation of Transponder Equipment in basket

1. TRANSPONDER EQUIPMENT:

- Transponder equipment includes, but is not limited to the Transponder assembly, battery, GPS receiver, GPS antenna, transponder antenna, and associated wiring. The Transponder, battery, and other equipment should be mounted in a robust enclosure to protect the assembly and to allow easy installation (see section 3). Antenna may be mounted separately.
- The transponder equipment should be mounted in the basket in accordance with section 2 – Installation of Basket Equipment.

2. INSTALATION OF BASKET EQUIPMENT:

Additional basket equipment (e.g. instruments, radios, or other electronic devices) may be mounted only in any of the following locations:

- on inside wall of the basket, including the passenger partition(s).
 - on the upright pole covers
 - on the padded top profile of the basket
 - on the load frame or heat shield
 - sewn or laced to the basket padding.
- Installation in these locations may be permanent or temporary provided the following conditions are met:
 - The item including contents must not exceed 5kg in weight.
 - The item should be located such that it cannot interfere with the envelope control lines, fuel hoses or present a risk to pilot or passengers at any time in the flight or landing.
 - Attachment to the woven structure of the basket must be at no less than two points per item using either webbing, polyester cord or cable ties.
 - Attachment to the load frame may be with cable ties or commercial hardware such as hose clamps or bar mount clamps for action cameras, provided the load frame does not require modification.
 - Items such as radio or transponder aerials may be mounted through the heatshield provided the mounting hole is less than 30mm diameter and not less than 50mm from any edge of the heat shield or an adjacent mounting hole.
 - Temporary bags such as pilot bags or small back packs may be secured to rope handles with a carabiner or similar mechanical clip provided a minimum of one rope handle per occupant is still available for use during the landing.
 - Items such as radios, transponders or other equipment installed in boxes or other enclosures may be installed using a cylinder strap passed through two strap holes. The case must include “belt loops” or other fixings to prevent the strap from sliding vertically on the enclosure.

3. TRANSPONDER REQUIREMENTS:

- Installation of Transponder equipment into their enclosure is to be carried out using the Installation Manual of the applicable Transponder Manufacturer.

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- All models and options within the scope of the installation manual are permitted and are considered Acceptable Technical Data. In the absence of Balloon OEM instructions, wiring practices documented in FAA AC43-13-1B Chapter 11 are to be used. If Lithium batteries are used the requirements of EASA CS-SC034c must be followed.
- Unless mounted on the burner heat shield, Antenna not requiring a grounding are preferred (e.g. Procom FLX 900/1090, Funke ANTGS-TRT or Funke SP1090-4). Antenna should not be hung below the basket.
- Mode S Transponders require programming of the aircraft Mode S address. Tests must be carried out to confirm correct address transmission. Changes to the aircraft address may not be released to service by the pilot owner. The Balloon Registration card must be placed on the Transponder enclosure to match the programmed registration.
- Testing of Transponders to be in accordance with the Transponder Manufacturer's Instructions for Continued Airworthiness and the rules and regulations of the state of registration.

4. APPLICABLE MANUFACTURERS:

Suitable manufacturers for balloon use are:

- a) Trig
- b) Funke
- c) Becker
- d) TQ Avionics

5. RELEASE TO SERVICE:

- The assembly of the transponder, battery, and associated equipment into its enclosure is not suitable for the release to service of the aircraft by the pilot owner.
- The assembled unit is considered non-installed equipment and may be inserted into and removed from the basket by the pilot.

Technical content of this document is approved under the authority of DOA No. EASA.21J.277.

On behalf of Kubíček Factory s.r.o.



Ing. Petr Kubíček, technical director

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