

## TECHNICAL BULLETIN - This bulletin contains technical information

**ADIPS Bulletin No. TB 002-24**

**ADIPS Issued : 05 August 2024**

**Originating Author : Universal  
Verification Ltd**

**FAO : IB's & Controllers**

**Search Terms : #Universal #Modification**

### **ADIPS Executive Summary : Due Process for Undertaking Safety Critical Modifications on Amusement Devices**

It appears that controllers are carrying out safety critical modifications on rides/amusement devices without informing their Inspection Bodies in accordance with HS(G)175.

Given that such modifications may render the device unsafe, this will invalidate the DOC for the device in question and may well invalidate Insurance cover as well as expose the controller to potential prosecution.

Where any change is made such that there is a deviation from the original design specification of the device and/or replacement of parts which are not like for like then this should be treated as a safety critical modification and the relevant IB consulted for further advice prior to any change(s) being made.

END

### **Originating Author text**

## **Safety Critical Modifications**

Concerns have recently been reported by NAFLIC members that safety critical modifications to rides are being made by controllers without appropriate pre-use inspections by an ADIPS Inspection Body being completed.

The glossary of HSG 175 states that a Safety-critical modification is “Any alteration to the hardware and/or software of a piece of equipment, including the introduction of a safety-critical component which results in a deviation from the original design specification.”

It further states that a Safety-critical component is “Any type of component on an amusement device on which the safety of the passengers (or others who may be affected) is dependent.”

For further clarification, HSG 175 paragraph 203 states “Any safety-critical modification should be subjected to pre-use inspections. This should include (but not be limited to) changes to:

- loading (e.g. changing seating arrangements, fitting heavier or lighter passenger units);
- speed or operating cycle;
- range (e.g. height of lift);
- safety envelope;
- safety-critical components, devices or systems;
- structural and mechanical components;
- drive mechanisms;
- control mechanisms (e.g. brakes, shock absorbers, speed limiters, speed or position sensors);
- electronic control system including hardware and software;
- passenger containment (including fencing and barriers);
- passenger height restrictions.

HSG 175 paragraph 205 states that: “If in doubt, it should be assumed that every modification is safety-critical and the advice of a competent person should be sought.”

It is the duty of the controller to communicate with their Inspection Body prior to performing any safety critical modification on any ride/amusement device . If controllers fail to disclose this information, it could invalidate the DOC as well as Insurance cover and render the controller liable to prosecution.

For Inspection Bodies, your attention is drawn to ADIPS/ADSC Safety of Amusement Devices – In-service Annual Inspection document 2008 paragraph 25 which states that “The IB should make all reasonable enquiries with the controller as to whether any modifications that may affect the safe operation of the device have been made since the previous DOC was issued and that the design review, assessment of conformity and initial test, as required, are in the operations manual.

END

**ADIPS Peer Review By : Scott Ingram (Universal Verification Ltd)    Date : 05 August 2024**

Where HSG 175 paragraph 203 says a modification ‘should be subjected to pre-use inspections.’ These inspections, as with all PUI under the ADIPS scheme must be performed by a ADIPS Inspection Body with a schedule which includes PUI activities (Design Review, Assessment of Conformity to Design and initial Test).

If in doubt, clarification must be sought from the Inspection Body.

The controller should also ensure that the appropriate documentation/ modification reports are retained with the device.