

## 413.

# Nottingham UK Miami - corrosion to over the shoulder passenger restraints

We have received an urgent defect report from a UK registered inspection body relating to the over the shoulder passenger restraints on a Nottingham UK Miami ride manufactured in 2009. The defects were discovered during an annual inspection which revealed extensive corrosion on 14 out of 16 of these safety critical components. Full details of the circumstances surrounding this defect can be found in the accompanying report but additionally, operators and controllers are reminded that this type of inspection applies to any and all devices with over the shoulder restraints. There may be suitable NDT techniques for inspection purposes while an alternative may be to remove the foam padding and re-cover following an inspection.

Committee Members: Mr. D Dadswell (Chairman), Mr. A Mellor (Secretary), Mr. P Smith, Mr. J Green, Mr. D Cox, Mr. M Thirkettle, Mr. I Davies, Mr. J Shilling & Mr. D Inman

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www.geary-powersystems-ltd.co.uk  
 unit 13, douglas court, team valley,  
 Gateshead, tyne & wear, ne11 ojj.  
 Tel; 0044 7473420602.  
 Email ; paulgeary106@msn.com  
 or gearypowersystemsoffice@yahoo.com



Date; 10-3-2016

Device; Miami – notts uk – year of manufacture 2009.

Scope of report; Annual inspection.

Defects found / Reported; extensive corrosion to safety critical components – over head safety restraints.

1. As part of the annual inspection, surface corrosion was noted at the hinge / tube connection point of the overhead restraint bars, the device has 16x single overhead units, the outer polyurethane (padding) covering was removed from 2x safety bars as a percentage strip down, the results can be seen from the 2x attached pictures, there is no documented history of this level of stripdown being carried out on this device- as such we shall assume this is a progressive corrosion over the life of the device – the padding once removed was found to have degraded and as such water and moisture was trapped – sponge like against the steel work.
2. The remaining units were stripped down and 14 out of 16 were found to be in varying stages of extreme corrosion.
3. The manufacture has supplied 16x new units of which the steel work is galvanised.
4. Contact with the manufacturer of the polyurethane covering has confirmed the moulding is weather proof until the outer membrane / finishing is damaged or broken, the other point of entry for water is the sealing between the tube and top of the covering.

<b>Prepared;</b>	P.Geary – MI Mech/Elec- ONC.
<b>Checked;</b>	S Webster – B Eng (Hons).
<b>Issued / revision;</b>	4857-9 – rev 1. 4857-9- report of urgent defect.

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1) Miami; overhead lap bar stripped down – padding removed.



2) Showing corrosion of tube steel section.



3) Showing new safety restraint bars fitted.

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