

Non Access Gantries with Mounted ADS Signs

Incident Description

An incident occurred when a supporting Frame structure to an ADS at M1 J13 northbound slip road failed and part of the sign came down on bank holiday Monday 28th March. The Area 8 service provider attended and secured the support structure and made safe. The partial failure occurred during storm conditions.

Investigation/findings

The ADS support frames were installed with the new gantries as part of the M1 J10-13 Smart Motorway scheme which was completed in 2012.

The support frames are fixed to the gantry structure with bolted connections. All similar gantries within the M1 J10-13 scheme have been inspected and made safe. A failure rate of approx. 20% of the bolts with loose or missing nuts was identified.

The problem has only be identified on support frames and gantries provided by Varley & Gulliver.

The root cause leading to loosening of the nuts is still being investigated. However, no locking nut or similar device was present to prevent loosening of nuts in oscillating load conditions. The nuts may have been secured with a locking compound at the time of installation; the reason for this being ineffective is being investigated.

It is not possible to investigate this problem on non-access gantries without close inspection which will require traffic management.

Actions:

Immediate

- **Identify and check all non-access gantries with ADS support frames provided by Varley & Gulliver**
- **Sample check all non-access gantries with mounted ADS signs, provided by other steel suppliers**

Short-medium term

- **Review maintenance and inspection regimes and procedures for all gantries (both inaccessible and accessible)**
- **Review quality control and assurance processes for construction or installation contracts, especially for non-accessible assets**
- **Review guidance for designers on provision of fixings in oscillating load conditions**

For further information about this incident please contact: Mark.Ryan@highwaysengland.co.uk

If you wish to issue an alert or require more detail about process email: wayne.mullin@highwaysengland.co.uk