

Safety Alert

**Failure of a sensor on an Impact Protection Vehicle
whilst working under a rolling road block**

11 February 2020

The following pages of this safety alert were issued by
Highways England's supply chain partner:

Amey

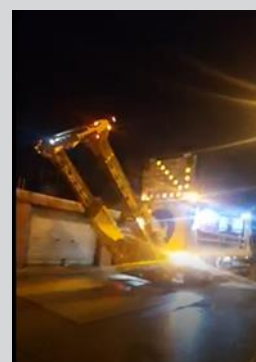
HEALTH AND SAFETY ALERT

TITLE OF ALERT	Failure of a sensor on an Impact Protection Vehicle whilst working under a rolling road block		
TARGET AUDIENCE	Highways England and wider community	REF NO.	Amey TM 01/21
AUTHORISED BY	Craig Willsher	DATE ISSUED	10/02/2021

REASON FOR THIS HEALTH AND SAFETY ALERT

During the night shift on the 21st of January 2021 an incident occurred where a Verdigr Blade crash cushion fitted to a hired IPV, whilst being deployed, over extended whilst in the vertical position. In addition to the technical failure a potential hazard associated with overhead clearance had been introduced.

At the time of the failure the IPV was being used to install a taper in the All Lanes Running section of M6 motorway near junction 17 under a rolling road block.



ACTION TO BE TAKEN AND LEARNING TO BE APPLIED

All the IPV's in the Amey TM fleet across the UK (hired through Blakedale) were immediately inspected. One other vehicle was found to have a similar but intermittent fault. The faulty sensor was replaced, but once again the sensor failed, during the third night shift after replacement.

The IPV's in scope i.e. Verdigr Blade type in the Company TM Fleet were immediately stood down from impact protection duties and used solely as TM vehicles in the short term, whilst the investigation was concluded.

The investigation identified that: -

- A sensor had failed, and the over extension had occurred in a manner that had never previously been seen.
- There was no secondary sensor, or any other preventative system installed by the Blade manufacturer Verdigr to prevent a failure of this nature.
- Blakedale considered the sensor failing was due to water ingress on the IP67 which is the standard sensor fitted to the majority of outside electrical components. IP67 is classed as waterproof although not against prolonged or high pressure streams of water, (e.g. pressure washers used for vehicle cleaning or severe weather)
- To reduce the possibility of water ingress Blakedale fitted higher rated IP69 sensors as the secondary sensor and will do so for all other sensors during the routine maintenance program for the Blade units. This modification has been extensively tested with no repeat of the fault occurring

The manufacturer of the Blade (Verdigr) confirmed to Amey Fleet and Plant that there have been no similar incidents with the overextension. Blakedale have informed all other agents of

the Verdigro Blade Crash Cushions in the UK and have fitted the secondary sensor to all the units supplied by them

CONCLUSION / FINAL NOTE

- To reduce the possibility of water ingress Blakedale fitted higher rated IP69 sensors as the secondary sensor and will do so for all other sensors during the routine maintenance program for the Blade.
- Blakedale immediately notified the manufacturer /UK distributor and all known UK suppliers/operators of the failure, and their cause.

Please display this Health and Safety Alert on noticeboards and brief to all relevant employees within 48 hours.