



32

File update report for Type Approval Testing

Date 10th November 1996

Subject Gatso Type 24 Speed Camera - Trailer Mounted

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Secretary ACPO(T) Traffic Enforcement Technology Committee

Introduction

Gatso type 24 speed cameras are Home Office type approved for operation in unattended fixed site installations and also for tripod mounted use whilst attended. There are also seven trailer mounted Gatso speed cameras in existence. Five are owned by T.C.S.U. and operated by the Metropolitan Police, one is owned by Wiltshire County Council and operated by Wiltshire Police, and one is owned by SERCo which was constructed for testing purposes.

Mr N Montgomery-Pott of the Home Office Operational Police Policy unit has raised the issue of trailer mounted Gatso type 24 speed cameras and the question of type approval for that configuration.

T.C.S.U. London

On 7th October 1996 I attended a meeting with _____ at Traffic Control Systems Unit, London, which is an agency within the DOT. We saw _____ who is responsible for supplying and maintaining enforcement equipment to the Metropolitan Police.

The subject of Trailer mounted Gatso Type 24 radar speed cameras was discussed and stated that he had been responsible for the design of the trailer fitted with a Gatso speed camera working together with SERCo and Crown Metals to produce it, primarily for use in roadworks. At the time it was introduced about 2 1/2 years ago he had not thought it necessary for the trailer mounted speed camera to have type approval as the Gatso Type 24 radar was already type approved. He likened the trailer to a tripod mounted system which has approval and said he had sought advice from Dr Steve Lewis on the subject and felt that he needed to do no more.

I was concerned about the way _____ described the set up of the trailer for enforcement. He quite clearly does not fully understand the set up and commissioning requirements of a speed camera for enforcement as detailed by SERCo / Gatso. I was also concerned at his thoughts that he believed it did not require Type approval as it was like a tripod mounted Gatso camera which is approved but only as an attended system. In support of _____ he would not be involved in the operation or set up of a trailer site for enforcement as it is the responsibility of the Metropolitan Police Gatso Enforcement Units.

The trailer is designed for unattended use and is in essence a transportable fixed site with the major difference being the way it is supplied with power. Any site would need surveying and secondary check marks being placed on the road to engineering standards. The speed camera would also need to be commissioned as a fixed site.

31

Metropolitan Police, Gatso Enforcement Unit, Chadwell Heath

Following the meeting at T.C.S.U. I went to the Metropolitan Police Traffic garage at Chadwell Heath where I saw _____ of the Gatso Enforcement Unit.

I ascertained that there are 5 trailers operated by the Metropolitan Police and which are all owned by T.C.S.U. The trailers were first used about 2 years ago and were primarily designed for use in roadworks sites on the North Circular road, London. They have only ever been operated for enforcement by one officer _____ and used only in roadwork's extensively on the North Circular road and to a lesser degree at the southern end of the M1 and about 2,000 prosecution's have taken place.

I discussed the operation and set up of both the trailer and radar with _____ and in my opinion he was completely competent in its operation and set up. He understood all the issues and limitations relating to the operation and set up of a radar enforcement site.

In preparation for use at a new trailer site, _____ Surveys the potential site and, if in his opinion suitable, the contractors prepare a suitable level base for its siting and also mark the road with secondary check marks to engineering standards following the approved national standard. He also stated that if the contractors wanted a site to be placed at a location that he considered unsuitable to any degree he would only operate it as a dummy site.

The Gatso trailer used by the Metropolitan Police is constructed by Crown Metals at Bristol and marketed by SERCo. I have attached an album of photographs of the Metropolitan Police trailer. The trailer has a hydraulic suspension system allowing the trailer to be lowered hydraulically onto the trailer chassis each side independent of the other to make a stable platform and difficult to move once lowered. It has four jacking points one at each corner for the purpose of levelling the trailer platform and which adds to its stability. To make the trailer secure locking covers for both wheels and the tow hitch are used. The trailer is powered by either a 12v battery system or plugged into a 240v generated supply or permanent supply using a power lead with an external 16 amp three pin plug fitting. The electronics within the camera housing are the same as a fixed site.

Wiltshire Police, Gatso Enforcement, Devises.

On 8th November I visited the Wiltshire Police Gatso Enforcement Unit at Devises where I saw Sgt _____ who was responsible for the operation of the Wiltshire Police, Gatso trailer.

He informed me that the trailer was purchased and owned by Wiltshire County Council for the use of Wiltshire Police from SERCo. The trailer was the same as the one supplied to the Metropolitan Police with a few modifications which had been carried out to enhance both the security and safety of the trailer. It has only been wired for 12v battery operation although with a little modification could accept a 240v power supply.

Wiltshire County Council workshops constructed covers for the trailers two rear light clusters and covered them with reflective material. Affixed to the top of these covers were battery operated amber flashing lamps that would activate automatically using light sensors. They would activate during the hours of darkness and switch off during daylight hours. The rear of the trailer was also covered in reflective tape to enhance its safety and visibility. The rear locker hinges were reinforced to add to the security of the locker which housed a securing chain for the trailer. The trailer has been modified to encompass a heavy duty chain which passes through the base of the rear locker and through a heavy

duty metal eye cemented in the road and then back through the locker base and padlocked inside the locker. This system would make theft of the trailer very difficult.

Wiltshire Police have added a Securicor Trakbak alarm system to the trailer which provides them with immediate notification if the trailer is moved without authority. The alarm system has been wired completely independently from the camera and radar using a 12v battery system. The system however does transmit and I am concerned about a potential conflict with the radar. I have contacted Securicor Trakbak who have supplied technical data on the system which should be examined by PSDb before the system is approved for operation with the Gatso Type 24 speed camera operating at the same time.

To date Wiltshire Police have not commenced enforcement and do not intend to use it for enforcement until formal guidance or approval is given by the Home Office. They have drawn up some operating guidelines which they have produced in association with SERCo for its use within Wiltshire Police area, a copy of which is attached.

I have attached an album of photographs showing the Wiltshire trailer and modifications.

Conclusions

In my opinion the concept of trailer mounted Gatso speed cameras is an extremely good use of the equipment under certain conditions. They are for example, ideal for use in roadworks either in place of or in support of fixed site cameras. They would also be a very useful cost effective option at a number of prepared fixed sites within an area, or where there is power supply problem i.e. in a remote area.

It is, I believe, very important to preserve the integrity of this equipment and strict guidelines should be applied to the operation of trailer mounted Gatso cameras. In my opinion strict control over the personnel allowed to operate the equipment should be applied and only fully trained and certified persons should be allowed to operate and site the trailer mounted speed camera.

I believe that trailer mounted cameras if approved, should be treated in essence as a fixed site applying most of the current criteria for site survey and installation with the exception of commissioning. I believe that trained Police personnel should be allowed to commission the trailer each time it is sited.

Commissioning of a trailer site is similar to a fixed site except it is not necessary to either check or test the power supply or wiring installation using test meters. The trailer relies on either battery power or an external power source and the wiring to the camera is tested and checked at the time of manufacture. To this end I believe commissioning could be carried out satisfactorily by trained Police personnel without compromising the requirements with fixed sites.

The operation of the trailer mounted Gatso Type 24 trailer has been extensively tested in our radar reflection tests at Moreton In Marsh during September this year. The equipment was tested extensively against a Corvette speed recording system and was well within acceptable tolerances on all occasions. PSDb, SERCo and Gatso were all present at the testing.

I have also used the trailer for test purposes in a set of major roadworks on the A12 at Langham, Essex. The trailer has been sited at various locations which were all surveyed and set up as per the my recommendations. The trailer was used in support of and between other fixed site installations in the works. I have included 3 sets of photographs taken by the trailer in the attached album and all the photographs taken show accurate speed measurements.

Recommendations

- 1 Trailer mounted Gatso speed cameras should be approved for use under strict operating and site set up guidelines which should be published by the manufacturer or supplier of the equipment. (Whilst I consider the operating guidelines written by SERCo in association with Wiltshire Police for their use to be accurate I do believe either SERCO or Gatso should publish these guidelines in their own name for use by trained operators.)
- 2 All Police personnel allowed to use the equipment should receive formal certified training from the equipment supplier SERCo in the site selection, commissioning of the site and operation of the equipment and receive a personal copy of the operating instructions for the equipment. I believe this training should remain with the supplier as it involves only a small number people and preserves the integrity of the equipment and also prevents any bad practices being passed on by previously trained Police personnel.
- 3 All potential enforcement sites should be surveyed in advance by the equipment supplier or manufacturer with representatives from both the Police and Local Authority or Contractors present as appropriate. A site survey report should be issued and retained by the Police for future evidential purposes.
- 4 The site, once having been surveyed and found to be suitable, should be marked with secondary check lines to engineering standards and to the agreed national standard.
- 5 The site must be treated as a fixed site in relation to signing, and current signing policy should be adopted.
- 6 A firm level base must be either found or installed for the siting of the trailer substantial enough to take the weight of the trailer without any subsidence. The trailer must be placed in position and the exact position marked and thereafter commissioned by **a trained person only**. This must take place every time the trailer is sited and a commissioning certificate completed. When the trailer is subsequently serviced ideally the same person should visit the site and again include in his evidence the fact that the trailer had not been moved since the last visit. **If it has been moved No Prosecutions should take place from that film.**
- 7 At the first time the trailer is sited at a location a set of all round photographs should be taken and retained by the Police unit operating that site. At subsequent sitings of the trailer at the same site, the photographs should be referred to, and if any changes have occurred at or around the site, a further set of photographs should be taken.
- 8 The security and safety of the trailer must be considered particularly if it is to be sited on a road or in a lay-by as it would not be tolerable for the trailer to be responsible for an accident during the hours of darkness if it had insufficient illumination.
- 9 The trailer at this stage should only be approved without the use of Trackbak until further investigations have been carried out by PSDB. Trackbak can be suitably disabled and is only installed on the Wiltshire Police trailer.