



Informal document GRSG-106-37
(106th GRSG, 5-9 May 2014
agenda item 13.)

PROTECTION AGAINST MILEAGE FRAUD

A WORLD IN MOTION

FEDERATION
INTERNATIONALE
DE L'AUTOMOBILE

FIA.COM



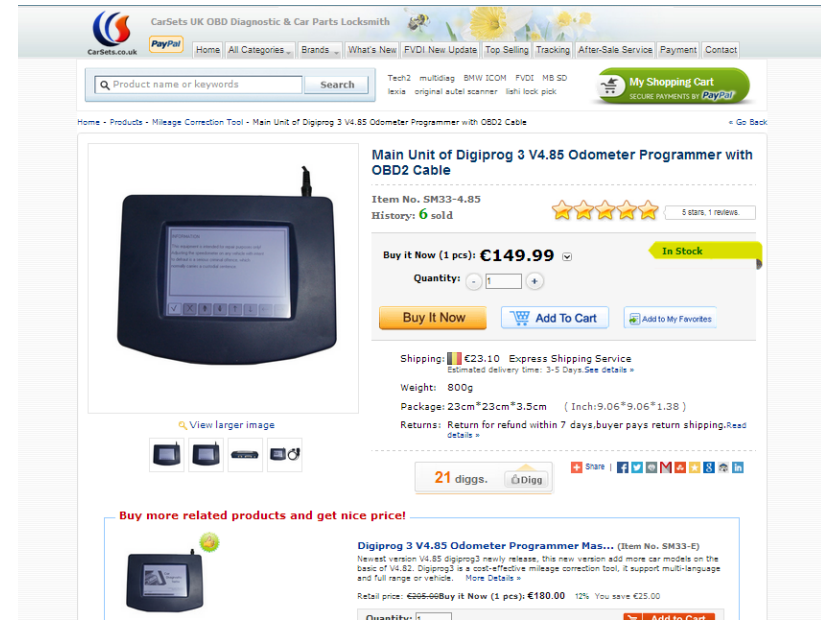
- An everyday scam
- Approaches
 - Raising consumer awareness
 - National database
 - European database
 - Odometer protection



- The European Commission estimates that mileage fraud affects 5%-12% of used car sales, a yearly economic impact of €5.6 billion to €9.6 billion within the EU
- Figures are far higher in cross-border used car sales
- Ultimately, consumers are the victims, as mileage fraud artificially elevates the cost of used vehicles, often by thousands of euros



- Devices to tamper odometers can be found on the internet for less than €150
- Tampering odometers is easy and untraceable



Tampering with the mileage – done in the blink of an eye!



1. Original mileage



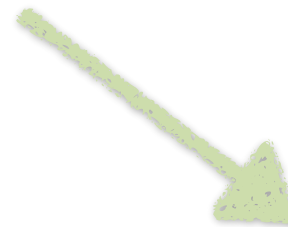
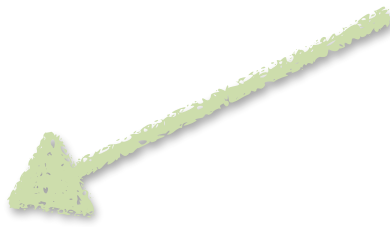
2. Plug tampering device into the OBD interface



3. Key in false new mileage



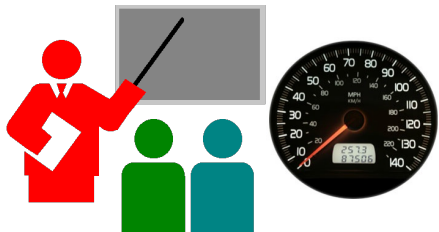
4. Mileage changed – in all control units




Raising Awareness

National/European Database

Technical Solution



FIA [video animation](#) explaining the issue



The screenshot shows a car's infotainment screen with a menu. The menu items are: Radio, Auxiliary input, Trip computer (highlighted with a red box), and Settings. Below the menu, the screen displays 429 km, 15°C, 12:29, 0.0 km, 009984 km, and P. The video player interface includes a play button, a progress bar at 03:15, and an HD icon.

The public reacts to mileage fraud
from **FIA Region I** PLUS 1 month ago NOT YET RATED

FIA Region I stunt in Place Luxembourg Brussels just in front of the European Parliament to show the public just how easy mileage fraud can be.



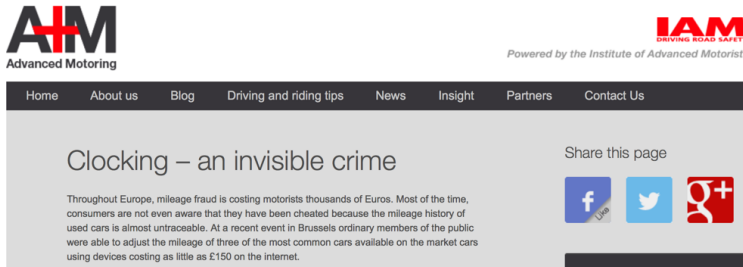
Public event in Brussels



FDM, in Denmark



OEAMTC, in Austria



IAM, UK

Czech Republic reacted to UAMK initiative to look into mileage fraud



► Un técnico de la Fundació RACC muestra el aparato que modifica el cuentakilómetros, ayer.

RACC, Spain



FIA Fédération Internationale de l'Automobile
Region I

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LATEST NEWS

Updated: 24 April 2014 Interview with Kerstin Westphal (S&D-DE)

Interview with MEP candidate Kerstin Westphal, S&D DE, on her vision for mobility and what she has done for mobility in the European Parliament

Updated: 10 April 2014 Mobilità 2014 (pdf)

An Italian version of our campaign is now available.

TWITTER

With #ep2014 and #mobility2014, you too, can take part in the debate for this year's European Parliament elections.

#ep2014



MEP Saïd El Khadraoui, S & D,
TRANSPORT Committee member



Endorsement by MEP Mathieu Grosch & MEP Saïd El Khadraoui



Demonstration with European Commission representatives

<http://mobility2014.eu>

- National databases like Car-Pass in Belgium are a first approach to tackle the problem.

HOWEVER:

national databases cannot prevent cross-border fraud



- In the frame of the European roadworthiness package it was decided to record the mileage at every periodical technical inspection and to set up a European-wide database.

HOWEVER:

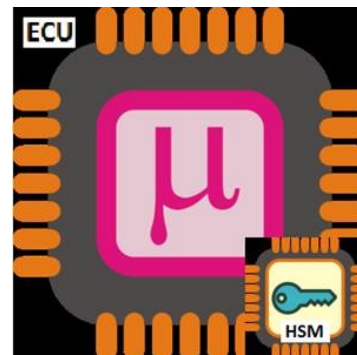
the first vehicle periodical technical inspection is mandatory after 4 years, while most fraud occurs before.



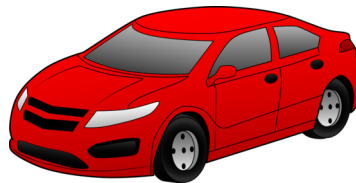
- While odometer readings have become easier to read through OBD access, the lack of protection makes them very easy to tamper with.
- A way to fight mileage fraud is to protect the odometer reading and make tampering so costly that it gets unattractive. A very successful example was the introduction of anti theft systems



- Since UNECE Regulation 18 (anti-theft of motor vehicles) mandates systems to protect vehicles from unauthorised use
- For instance, systems such as the Secure Hardware Extension (SHE) or Hardware Secure Module (HSM) are fitted in vehicles
- Those systems provide physical protection of ECUs from non-authorized access.
- They contain high-value cryptographic keys that block non-authorized access



- Vehicle manufacturers have started to protect modules of ECUs against theft and chip tuning, but not against mileage fraud
- Such protected modules of ECUs allow secure communication between the system components involved by long cryptographic codes and secure key storage
- Similar systems are used to secure e-ticketing or credit card chips
- Modules, such as SHE and HSM, are approved and installed by several vehicle manufacturers and can also be used to protect vehicle odometers from being tampered with



- The current technology for the protection of ECUs can be adapted e.g. anti-theft cryptographic key technology can be used to manage the security of the odometer protection
- The necessary software development, programming and management, provided the protection system is already installed, would come at a comparatively low cost



Technical specifications for odometer need to be anchored in the vehicle type-approval

- Describing the quality of the odometer reading
- Setting the level of protection against mileage fraud;
- Proposing a periodical improvement of the protection according to the technical development
- Using standardised processes like IT-safety certification ISO/IEC 15408.





Thank you for the attention

HAVE YOUR SAY
IN THE UN
#GLOBALVOTE



Luca Pascotto,
FIA Global Public Policy Manager,
lpascotto@fia.com

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<http://walksafe.myworld2015.org>