

Loss prevention standards

# Vehicle Security

Despite modern day security enhancements, vehicle theft remains a threat with criminals developing sophisticated new methods. But measures can be taken to prevent this and minimise the risk.



## Introduction

[Home Office figures](#) have highlighted a 50% rise in vehicle thefts over the last five years. Figures from the Association of British Insurers (ABI) show that the number of motor theft claims are at their highest since 2012, with a payment made to a vehicle crime victim every eight minutes. In the last four years the overall cost of motor theft claims has doubled and works out at over £1.2 million paid to policyholders every day.



Whilst the more traditional methods of theft, such as breaking windows and forcing door locks are still prevalent, vehicle security has improved substantially over the last 30 years. Vehicles have become more sophisticated and less reliant on physical security and as a result, criminals are increasingly utilising methods to overcome electronic security and keyless entry. The rising number of thefts in part, reflects the vulnerability of some vehicles to keyless relay theft. Also, as vehicles get smarter and we move towards autonomy, cyber security is an emerging risk for motor manufacturers, insurers and end users, due to the threat of hacking and data theft. Mobile phone apps now include many features and settings, allowing the user to control the vehicle from a mobile phone, again potentially increasing the risk of theft if not properly managed. The future is likely to see the use of biometrics, such as fingerprint technology and face recognition for authentication purposes, using a person's unique features to enhance security.

Passive keyless entry systems, which allow vehicles to be opened and driven so long as the key fob is in the immediate vicinity, can be exploited using a technique called 'relay attack.' Thieves using a signal boosting device can capture the signal from the key fob, allowing the vehicle to be unlocked and consequently stolen within minutes.

## Thatcham Research

Established by the motor insurance industry in 1969, [Thatcham Research](#) is the UK motor insurers' automotive research centre. Against a backdrop of rising car crime, Thatcham Research has launched a [security rating](#) to help consumers better understand the theft risk of new vehicles. The ratings assess whether security measures to address a vulnerability in keyless entry/start systems, have been introduced by manufacturers. Vehicles are rated from poor to superior, based on the vehicle's vulnerability/resistance to relay attack

## Theft Prevention

Whilst vehicle security research by manufacturers and industry bodies continues, policyholders can also take preventative measures to ensure that the risk of vehicle theft is reduced, such as:

- Vehicle keys should be kept in a secure position at all times and not left within easy reach
- If you have a keyless entry vehicle:
  - make sure your keys are kept well away from doors and windows

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- consider the use of a signal blocking pouch, also known as a Faraday bag, to store the keys in when the vehicle is not in use. The pouch will prevent thieves from being able to amplify the signal used in relay theft – **don't forget to do the same for any spare sets of keys you have**
- **check the manufacturers' handbook to see if it is possible to turn off the wireless signal**; turning off the signal will also prevent relay attack
- **If you're unsure of the history of a vehicle you have bought or don't have both sets of keys, consider having the keys reprogrammed.** Whilst this may be an expensive option, it could prevent theft of the vehicle. The Master Locksmiths Association should be able to help with this
- Consider fitting additional security devices to the vehicle, such as steering wheel locks, alarms and tracking systems
- Park the vehicle securely – in an area that is less vulnerable and ideally secure and well-lit
- Avoid leaving items in the vehicle and on view that are theft attractive
- Ensure that any vehicle functionality controlled by a mobile phone app is regularly updated in accordance with manufacturers' recommendations

## Catalytic Converter Theft

Many modern vehicles are fitted with a catalytic converter, which uses catalyst substances to clean up harmful gases from the engine before they exit the exhaust pipe. Inside its metal casing there are usually two ceramic blocks made up of thousands of micro cellular channels – which resemble a honeycomb. The surfaces of these ceramic blocks are coated with precious metals such as platinum, palladium and rhodium, therefore making them theft attractive. Whilst there is an on-going exposure to catalytic converter theft, this tends to ebb and flow in accordance with scrap metal prices. Drivers can be unaware that the converter has been stolen, with the main symptoms being an increase in exhaust noise and a lack of vehicle performance.

Measures that can be taken to prevent catalytic converter theft include:

- If possible, park the vehicle in a locked building or compound when unattended
- **If it's not possible to garage your vehicle, park it in a busy, well-lit area as close to your property as possible**
- Consider installing a Thatcham approved alarm to your vehicle; ones that activate if your vehicle is lifted or tilted are particularly effective
- Use a [catalytic converter protection device](#) or marking system

[Selectamark](#) are the Aviva Specialist Partner for approved DNA marking systems.

## Light Commercial Vehicles (LCVs)

Research from Volkswagen Commercial Vehicles suggests that theft from and of light commercial vehicles has also increased [by 45%](#) over the last four years. Whilst also increasing insurance premiums for operators, the theft of a van could have a significant impact on the day to day running of a business.

Further prevention methods for van operators include:

- Window guards or full internal bulkheads, to prevent would-be thieves seeing inside

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- Fitting [additional locks](#) to rear and sliding doors to help deter thieves
- Investing in lockable internal racking or secure storage boxes for your most valuable tools
- Always storing your tools elsewhere overnight
- Ensuring you have the right insurance for your needs – private van insurance, commercial van insurance, hire & reward, etc.
- Considering an [ECU guard](#) or [OBD port protector](#) to prevent unauthorised access to the vehicles management control systems

[Maple Fleet Services](#) are the Aviva Specialist Partner for approved light commercial vehicle security solutions.

## Large Commercial Vehicles

Whilst the theft of larger commercial vehicles is less prevalent although still a concern, the theft of fuel and goods carried on the vehicle represents a significant exposure for operators. LGVs are particularly vulnerable when parked on industrial estates, service stations and laybys. Drivers should be made aware of criminal traps, where thieves will try and stop drivers while they are driving or delivering by using various ploys, such as staged accidents, or impersonating police officers/officials.

The risk of theft can be reduced by:

- Never leaving the vehicle with the key in the ignition and the engine running, unless a [key-out immobiliser](#) is fitted
- Utilising pre-planned, approved overnight parking facilities and avoiding laybys and remote industrial estates where possible
- Not allowing drivers to give lifts, or to have any unauthorised people in the cab. In addition to the security aspect, the carriage of unauthorised passengers could result in a third party personal injury claim against your fleet policy
- Only stopping for marked police/DVSA vehicles with uniformed occupants. If in doubt, ask for identification
- Reviewing the security procedures at your operating centre(s)
- Considering [kingpin](#) or [airline](#) locks to protect unaccompanied trailers
- Considering fitting an anti-syphon device to fuel tanks

## Motor Traders

Policyholders dealing with the sale, service and repair of vehicles should ensure that robust policies and procedures are established to ensure the security of vehicles under your control. This is of particular importance when it involves the custody of a number of vehicles, with various members of staff having access to vehicle keys:

- Vehicle keys should not be left in areas that are accessible by the general public and should never be left on an open key board
- Key access should be restricted to designated employees and key cabinets must be kept closed at all times unless removing or replacing keys
- Review your security procedures, giving consideration to lighting, CCTV, security hoops and entrance barriers

[Insafe](#) are the Aviva Specialist Partner for approved key cabinets.

## Parked/Stored Vehicles – Accumulation Risk

As part of your normal security and also business interruption plans, consideration should be given to the introduction of additional measures for occasions whereby a larger number of vehicles may be parked or stored together in one place for a prolonged period; examples of this would include public holidays or any unplanned event, such as a pandemic.

Having a larger than normal accumulation of vehicles could lead to the increased risk of vandalism, theft, fire, flood or other single impact events.

- Vehicles should be locked:
- Parked as far away from buildings and combustible materials (e.g. pallets, etc.) as possible:
  - Consider if any exposing buildings or materials caught fire could this spread to the vehicles, and vice versa?
- Parked with sufficient space between them to prevent the spread of fire:
  - If this is not possible then consider small clusters of vehicles with appropriate aisles and roadways
  - Consider the number and value of the vehicle clusters

If vehicles are to be parked inside a building or warehouse, then the keys should still be removed and returned and stored in an appropriately secure location(s).

Unless there is risk to life, it is unlikely that the Fire & Rescue Services will remove any vehicles from a burning building.

- Consider the implications of having all the keys in the same location or secure area:
  - What is the total number or value of vehicles exposed with the keys stored in a single location?
  - Should the number or value of the vehicles drive multiple secure locations for the keys?
  - Is the secure location/safe fire resistant?
  - **If a safe is used is it rated considering the 'value' of the vehicles?**
    - A simple key safe is not considered appropriate

Security measures should be risk assessed:

- For effectiveness, based on geographic location and surrounding areas; topography; value; number and nature of the vehicles
- Are fences appropriate?
- Is lighting appropriate?
- Are there any vehicle movement prevention devices that can be employed, e.g. bollards or temporary large scale concrete blocks?
- It may be necessary to employ temporary static guards and/or to increase the frequency of any roaming security visits
- Wherever possible, tools, equipment and personal effects should be removed from vehicles and stored securely

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- Have you and your surrounding community/neighbours, discussed the implications of any restricted movements during such periods (e.g. Coronavirus), and considered sharing security resources, costs and including each other in a wider security approach/plan?

If the vehicle has a battery isolation switch, then this should be turned off, to remove the risk of an electrical fault causing a fire.

Finally, consideration should be given to the natural catastrophe exposures of storing vehicles together in a single location:

- Flood – both from a nearby water course or a sudden torrential downpour
- Hail
- Windstorm

Further guidance on flood can be found in the Aviva Loss Prevention Standard [UK Flood Guidance and Mitigation](#).

## Checklist

A generic Vehicle Security Checklist is presented in Appendix 1 which can be tailored to your own organisation.

## Additional Information

- [Selectamark](#)
- [Maple Fleet Services](#)
- [Insafe](#)
- [Thatcham](#)

To find out more, please visit [Aviva Risk Management Solutions](#) or speak to one of our advisors.

Email us at [riskadvice@aviva.com](mailto:riskadvice@aviva.com) or call 0345 366 6666.\*

\*Calls may be recorded and/or monitored for our joint protection.

# Appendix 1 – Vehicle Security Checklist



Location	
Date	
Completed by (name and signature)	

	Vehicle Security Checklist	Y/N	Comments
1.	Is there a formal vehicle security procedure in place for all locations to ensure vehicles and keys are safe and secure at all times?		
2.	Are there documented inspections at the locations to verify that the vehicle security procedure is in place and being followed?		
3.	Following a vehicle(s)/key(s)/vehicle parts theft is an investigation into the location's management of vehicle security completed?		
4.	Has guidance been provided to all employees on the safe storage of keys (including keyless entry vehicles)?		
5.	Do the keys need to be reprogrammed for second-hand vehicles or where both sets of keys are not present?		

	Vehicle Safety Checklist Cont.	Y/N	Comments
6.	Have further prevention measures being considered to prevent theft/access to the vehicle, such as: <ul style="list-style-type: none"> <li>• Window guards or full internal bulkheads?</li> <li>• Fitting additional locks to rear and sliding doors?</li> <li>• Investing in lockable internal racking or secure storage boxes for your most valuable tools?</li> <li>• Storing your tools elsewhere overnight?</li> <li>• Fitting:               <ul style="list-style-type: none"> <li>○ an ECU guard or OBD port protector?</li> <li>○ kingpin or air line locks to protect unaccompanied trailers?</li> <li>○ an anti-syphon device to fuel tanks?</li> <li>○ a catalytic convertor protection device?</li> </ul> </li> </ul>		
7.	Is the vehicle security procedure adhered to when purchasing new vehicles?		
8.	Is the vehicle security procedure reviewed on an annual basis?		
9.	Has the accumulation risk been considered and quantified for occasions where there is a larger than normal number of vehicles? Has this been notified to your broker and/or insurer?		
10.	Does the site traffic plan allow for additional vehicles to be parked on site? Can this be completed safely?		
11.	Have the security implications of having a larger number than normal of vehicles housed together been assessed? Are there additional remedial measures needed or planned?		
12.	Have all the vehicles been locked?		

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	Vehicle Safety Checklist Cont.	Y/N	Comments
13.	Are the vehicle keys housed or stored in a detached or remote secure location, appropriately arranged for the value or number of vehicles?		
14.	Is an additional physical security presence required? Full time, or for a short or temporary basis? Roving both day and night? Are informal visits required by site personnel or management to supplement this?		
15.	Have any fire risk assessments been revised to include occasions when the premises have a larger than normal number of vehicles? Does this consider: <ul style="list-style-type: none"> <li>• Statutory requirements?</li> <li>• Property and business impact assessments?</li> <li>• Fire spread and methods of firefighting?</li> </ul>		
16.	Are the vehicles stored as far away from buildings and combustible materials as possible? Ideally this should be at least 10m.		
17.	Are the vehicles stored in groups with appropriate aisleways or breaks to minimise fire spread and assist firefighting?		
18.	Is the area used to store vehicles considered to be vulnerable to flooding? <ul style="list-style-type: none"> <li>• From a body of water?</li> <li>• From torrential rain/downpour?</li> </ul>		
19.	Is the removal of the vehicles to a less exposed location considered as part of any flood response plan?		

20.	Additional comments:
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