

## Marten defense

### General information and benefits

For internal use.



Volkswagen



## Why do they bite?

To understand better how to protect vehicles from marten damage, you have to know what makes martens cause the damage:

**Hiding place:** The engine compartment is a popular hiding place for martens. The heat, which is frequently believed to play a role, is not a factor here.

**Exploring:** Martens explore their environment with their teeth. They bite through cables, tubes and gaskets.

**Territorial battles:** When martens smell the scent of a rival, they become extremely aggressive. Therefore, vehicles which are frequently parked in varying "marten territories" are at particular risk.

## When to use ultrasound or high voltage?

### Ultrasound: For "headstrong" martens

Martens find the sound unpleasant and avoid it.

#### The benefits of K&K devices:

- Pulsating sinusoidal ultrasound waves (inaudible to humans)
- At varying intervals to avoid a habituation effect
- Imitates animals' warning cries, therefore a particularly effective deterrent
- 360° dome speaker - all-round protection
- Enclosed, fully sealed speaker → Industry-leading waterproofing enables low-level installation and withstands engine washes

### High voltage: „Those who don't want to listen, find out the hard way".

For older martens (poor of hearing) or aggressive animals (territorial battles), high voltage is recommended.

#### The benefits of K&K devices:

- Approved for all engine generations
- Soft start-up - slow start at low power level
- Do not affect the vehicle electronics
- Do not require connection to terminal 15, as device is used independently
- Increased safety due to bonnet safety switch with quick discharge
- Battery monitor protects against full car battery discharge

For internal use.

## Marten defense

### Products and their application areas



## Pre-treatment

### Remove territorial markings

Before successful application of a marten deterrent, remove scent markers using scent remover 000300 or by carrying out an engine wash.

## Which product for which application?

### Ultrasound devices:

#### M2700 - 000-054-651-A

- **THE recommendation** for ultrasound
- Full waterproofing ensures lower installation – thus creating a “sound carpet”
- Ultrasound radiates like light and sound shadows can be avoided already during installation



#### M8700 - 000-054-650-E

- Standalone battery operation (AA batteries)
- Can also be used outside the engine compartment (**carports**)
- Suitable even for **short-term use** - e.g. rental cars

#### M7500 - 000-054-650-H

- The special device **to avoid animal footprints** on paintwork
- Is attached to the bonnet and uses it as a resonance body to also issue the ultrasound to the exterior.

### High-voltage combined devices:

#### M4700B - 000-054-650-J

- **THE recommendation** due to new brush technology
- +/- high voltage also penetrates the insulating fur
- Wider sound range and ambient-independent installation are guaranteed
- Bonnet safety switch with quick discharge included

#### M9700 - 000-054-650-K - (Battery variant with brushes)

- Also suitable for vehicles **not in constant use** (**convertibles, vintage cars, camper vans**)

#### M4700 - 000-054-650-F

- The predecessor of M4700B with all the benefits except for the +/- brushes
- This device uses 6 sliding stainless steel plates

#### M5700N - 000-054-650-G

- 6x Ultrasound (integrated in the six high-voltage satellites)
- allows a wide dispersion of sound in **wide engine compartments** (**SUV, transporter**)

