

EUROPEAN SECURITY
VW Touareg smart key system
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SAMPLE



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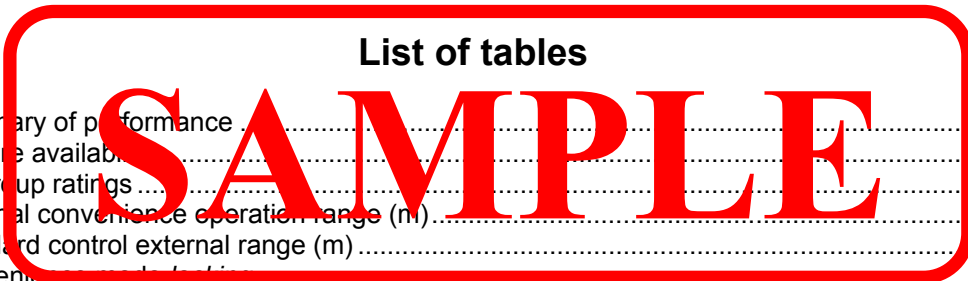
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1. Executive summary

1.1 Introduction

VW トーアレグはそのどのモデルにもキーレスアクセスシステムを持って購入可能である。キーレスアクセスはスマートキーシステムにあたる VW 独自のシステム名であり、スマートエントリー（施錠、解錠）とスマートスタート（イモビライザ操作、エンジン始動・停止）の両方の機能を持つ。

V10 エンジンモデルの規格として購入可能であるが、トーアレグのその他のエンジンモデルには英国仕様右ハンドル車両に £665、ドイツ仕様左ハンドル車両に 990 ユーロの選択装備装着費用として購入可能である。他の選択費用は他の市場に適用する

トーアレグの全ての他のセキュリティ装備は装着規格として

- ダブルロックング
- チルト、車内検知機能を含む工場装着アラームシステム
- 選択開錠システム
- 車速感応ロックングシステム
- グローバル開閉システム

いくつかのこれらの装備は選択可能（VW デイラーによるユーザーのセット要求が可能）。VW キーシステムは異なるキー（従って異なるユーザー）に独立的にユーザーの選択をプログラムさせる。

SBD は機能作用とパフォーマンスの詳細な調査を行なった。テスト車を Figure1 に示す

The VW Touareg is available with a **Keyless access** system across its range. **Keyless access** is the VW name for their smart key system. Keyless access includes both **smart entry** (locking and unlocking) and **Smart start** capability (immobiliser operation and engine starting and stopping).

It is only available as standard on the V10 engine model, but is available across Touareg models as an option fit feature costing £665 on a right hand drive UK specification vehicle, and €990 on a left hand drive German specification vehicle. Other option prices apply in other markets.

All other security features of the Toureg are standard fit:

- Doublelocking
- Factory alarm system including Tilt and interior detection
- Selective unlocking
- Speed sensitive locking
- Global open and close

Some of these features are configurable (they can be set at user request by a VW dealer). The VW key system allows different keys (and therefore different users) to store their configurations independently

SBD have conducted a detailed investigation into the functionality and performance of the Keyless access system. The test vehicle is shown in Figure 1:

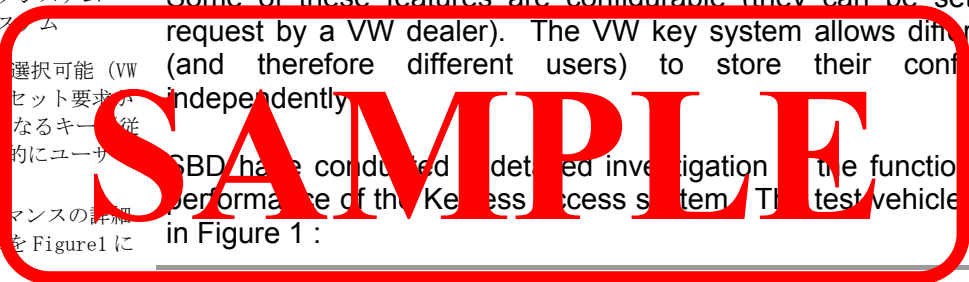


Figure 1. Test vehicle



- Model ~ Touareg V10 Tdi 5.0
- Specification ~ RHD UK with additional options fitted
- Engine ~ 4920cc diesel (10cylinder)
- VIN ~
- Registration ~

Source: SBD Ltd. 2004

1.2 Summary of performance

総体的に VW トーアレグは優れたレベルの
 便利性そして規格装備の幅広い選択性を提
 供する。それらの規格装備はユーザーの独
 自のニーズに合わせて選択できる。車両は
 又、高度の
 ステ
 かに
 ある。

Overall, the VW Touareg offers a good level of customer convenience,
 and an excellent selection of standard features are provided which can
 be selected by the user to configure the vehicle to individual
 requirements.

The vehicle also offers high levels of security which is only
 compromised by xxx xxxx xxxxx xxxxxx xxxx xxxxxx.

Table 1. Summary of performance

Criteria	Convenient Access	Keyless start (and immobiliser)	Alarm
Convenience			
Features			
Security			

★★★★ Excellent ★★★ Good ★★ Average ★ Poor

Source: SBD Ltd. 2004

コンビニエンスシステム

ユーザーの選択する、3種のロックングモード
 の内の1種によってシステムはセットされ
 る。それは解錠、ドアを開ける為の単一のハン
 ドルを引く動作と施錠する為の直角にハンドル
 ボタンを押す動作の容易な使用性を持つ。車

Convenient access

The system can be set by the user to any one of three different
 locking modes. It has an easy to use single pull handle
 movement to unlock and open the doors and an intuitive push
 handle button movement to lock.

る。

Keyless start

キーレス スタート

このシステムは使用が容易であり、リモート
 コントロールでイグニッションロックボードに
 差し込む、又は車内のどの場所に置くことでも
 操作できる。全般的に良いレベルのパフォー
 マンスを提供する。

The system can be operated with the remote control either
 inserted in the ignition lock port, or located anywhere inside the
 passenger cabin and generally offers a good level of
 performance.

スタート/ストップボタンは 段階で操
 るが、

The start/stop button operate in two-stage operation and can
 be xxx

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vehicle.

ら。

Alarm

アラーム システム

アラームシステムは外部からリモートコント
 ロールまたキーでロックをかけるとセットされ
 るが、キーを差込解錠した場合はセットされた
 ままである。アラームの装備は優れていて、チ
 ルトと車内検知システムはそれぞれもしくは、
 共に機能を停止させることができる。外装セキ
 ュリティはすぐれているが、劣っ

The alarm system is set whichever method of exterior vehicle
 locking is used and it does not unset if the mechanical key is
 used to **unlock** the vehicle. The features of the alarm are
 excellent, and tilt and interior movement sensing can be excluded
 both individually or together. The perimeter protection

る。

However, xxx

しかしながら、

3. Summary of application

3.1 Feature availability

Table 2. Feature availability

Feature	Standard fit		Option fit
	Fixed	Configurable	
Convenient access			
Doublelocking	✓		
Full alarm system		✓	
Selective unlock		✓	
Speed sensitive locking		✓	
Global open and close	✓		

Source: SBD Ltd. 2004

3.2 UK insurance Group ratings

Table - UK group rating

Model	Trim grades	Fuel type	Transmission	Group	Electric security
2.4	TDI PD & Sport TDI PD	Diesel only	Manual & Auto		
3.2	V6 & Sport V6	Petrol only	Manual & Auto		
4.2	V8 & Sport V8	Petrol only	Auto only		
4.9	V10 TDI	Diesel only	Auto only		

Source: Association of British Insurers

4. Attachments:

1. Convenient access system (34 pages)
2. Keyless start (and immobiliser system) (22 pages)
3. Alarm system (19 pages)

The attachments include sections on **Features and Operation**, **Functionality**, and **Performance**.

3.1 External convenience operation range

In general the unlock range is on each door, and the performance of each door is almost identical. The tailgate unlock range is slightly larger.

- Average lock range =
- Average unlock range =
- Average tailgate range =

The side door ranges are approximately semi-circular and approximately centred on each side of the vehicle, indicating two separate antenna locations, one in each side. A third (tailgate) antenna is located at the centreline of the vehicle rear.

Test conditions

The range test was undertaken in a brick constructed workshop environment with no other vehicles present.

Battery voltage was approximately 12.2v ± 0.2 with the engine off. The test was conducted with the remote control held vertically in front of the body at waist height consistently throughout the test.

Results

The lock and unlock ranges were measured for all five apertures. A high consistency between the range of the left and right hand sides of the vehicle was found, and can be considered identical.

Table 4. External convenience operation range (m)

Angle (°)	Front door		Rear door		Tailgate (open only)
	Lock	Unlock	Lock	Unlock	
0					
22.5					
45					
67.5					
90					
112.5					
135					
157.5					
180					
Average					

Source: SBD Ltd. 2004

Figure 18. Flowchart showing *Lock* operation sequence

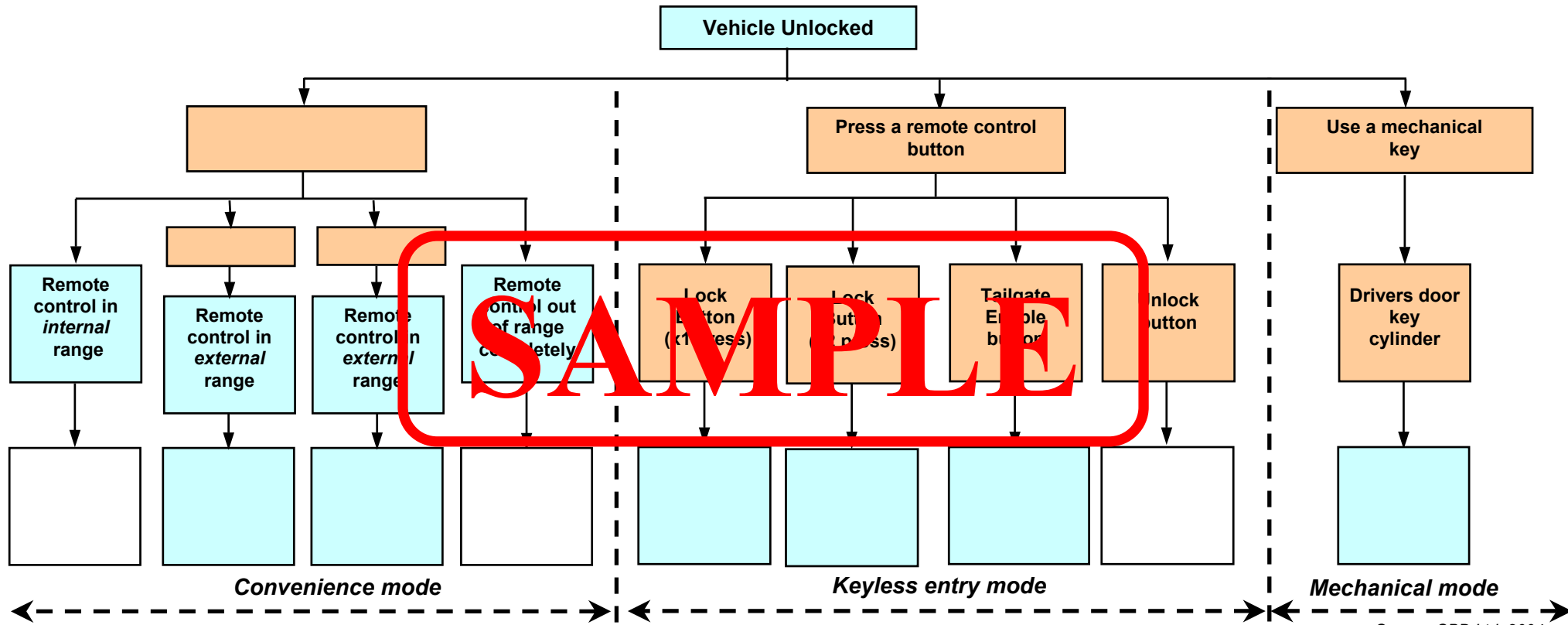


Table 10 continued. Mechanical mode *locking*

Operate internal central locking switches- Drivers door lock switch

Door status			Feedback			Alarm		Result			Comments
Drivers door	Other doors	Tailgate or Tailgate window	Direction indicators	Mirror lights	Interior lights	LED	Status?	Drivers	Others	Tailgate and Tailgate window	
Closed	Closed	Closed									
Open	Closed	Closed									
Closed	Open	Closed									
Closed	Closed	Open									

Operate internal central locking switches- Front passenger door lock switch

Door status			Feedback			Alarm		Result			Comments
Drivers door	Other doors	Tailgate or Tailgate window	Direction indicators	Mirror lights	Interior lights	LED	Status?	Drivers	Others	Tailgate and Tailgate window	
Closed	Closed	Closed									
Open	Closed	Closed									
Closed	Open	Closed									
Closed	Closed	Open									

① The rear passenger doors xxxx xxxx xxx xxx xxxxx. They can be xxxxxx xxxxx xx xx x xxxx xxxxxx.

Figure 37. Exterior bleed – Plan view measurement positions

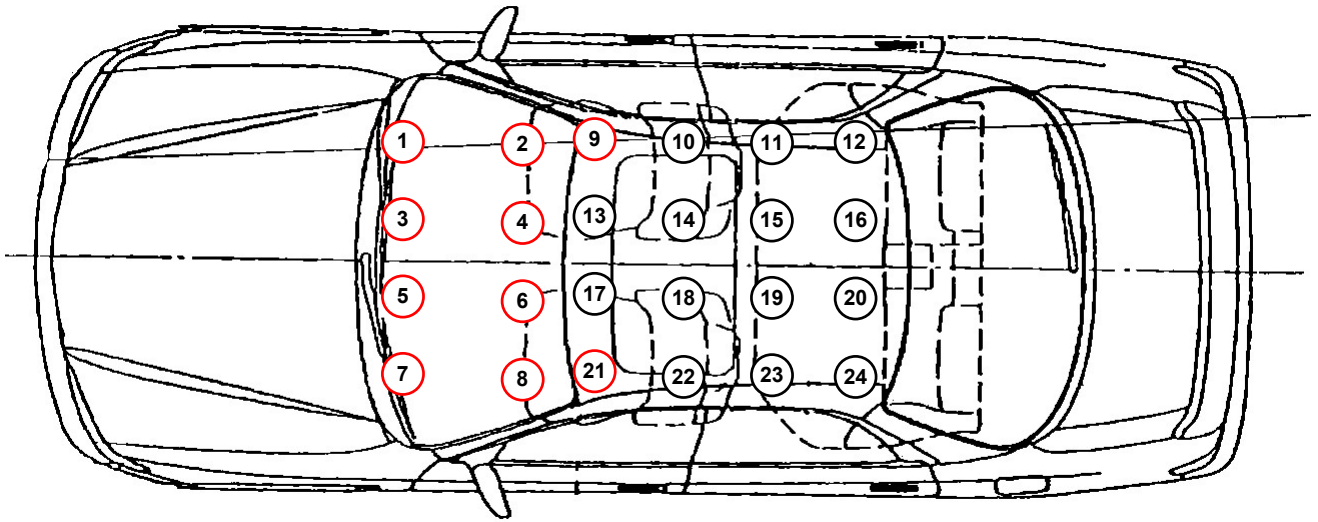


Table 13. Exterior bleed – Front screen and roof

Front screen position	Remote control orientation	
	Vertical	Horizontal
1		
2		
3		
4		
5		
6		
7		

Roof position	Remote control orientation	
	Vertical	Horizontal
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		

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xxx results exceed Thatcham draft guidelines.

Notes

- ① All measurements taken **perpendicular** to the glass.
- ② The test vehicle was **not** fitted with a sunroof.

Source: SBD Ltd. 2004