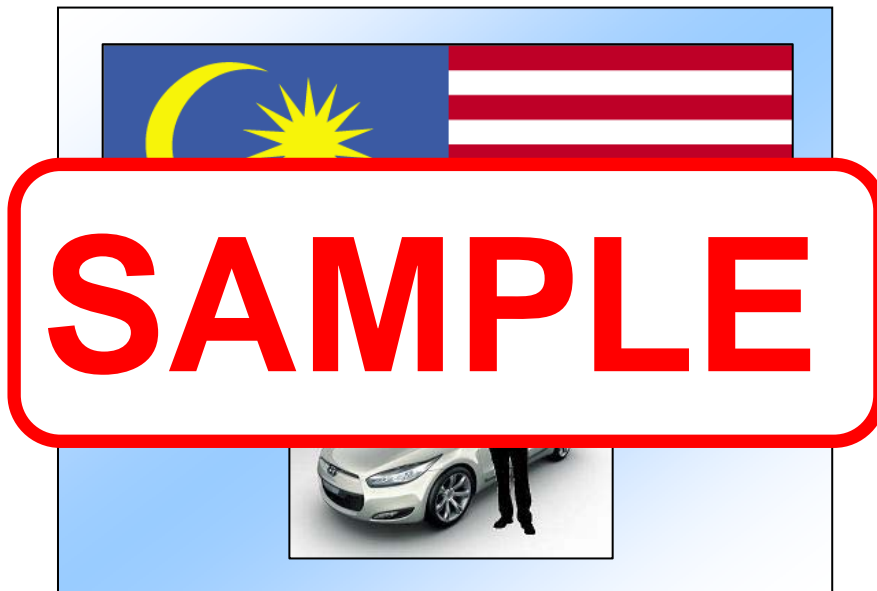




SECURITY REPORT
Malaysian Insurance Requirements
For Vehicle Security
March 2007



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SBD

Overview

SBD is an independent company providing specialist consultancy in the design and development of automotive components and systems. The company was founded in the UK in 1995 and has extensive knowledge of the strategic development of vehicle systems. A subsidiary company, SBD ジャパン was set up in Japan in 2006.

Working closely with manufacturers and suppliers, SBD provides consultancy at various levels including:

- ❑ **Technical Research**
- ❑ **Strategic Planning**
- ❑ **Program management**
- ❑ **Product Development.**

SBD also provides the industry with detailed market and technical reports on various technologies, market trends and competitor analysis.

The company has helped to develop many successful systems seen in the market today and is continuing to help manufacturers implement the next generation of systems with an emphasis on *Vehicle Security and cost of ownership* and *Vehicle Telematics and ITS*.

For more information, visit www.sbd.co.uk or www.sbdjapan.co.jp.

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The views expressed in this report are those of SBD only, and we do not take responsibility for any misinterpretation based on the information contained in this report. Vehicle testing reports can only be considered to represent the specific vehicle being tested at that time, and are not necessarily representative of the complete range of vehicles and models available.

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1. Executive summary

1.1 Overview

マレーシアでは現在、車両防犯装置を装備しても、保険上明らかな利点がない。しかし、この状況は、XXXX XXXX XXXX されれば変わる。

特に XXXX 車や XXXX 車など、XXXX 車の盗難率は、現在非常に高い。このため、そのようなハイリスク車には、保険をかける条件として、追加の防犯設備の装備を求めてくる保険会社が増える可能性がある。

盗難率上昇と、最近の盗難予防キャンペーンにより、車両防犯の重要性に対する一般市民の認識が高まりつつある。保険関係者が、車両防犯性を高めると保険上メリットが得られるようにすることが、車両犯罪削減戦略の主要部分であると合意するならば、短期間で保険制度の改訂が行われるであろう。

よって、自動車メーカーは、マレーシアの XXXX XXXX、もし XXXX XXXX XXXX XXXX の場合は、リスクに相応しい XXXX XXXX XXXX を検討することが好ましい。

There is currently no clear insurance benefit for the fitment of vehicle security systems in the Malaysian market. However, this situation will change if the XXXXXX XXXXXX XXXXXX XXXXXX is introduced.

Theft rates of vehicles from XXXXXX XXXXXX, particularly XXXXXX and XXXXXX, are currently very high. This may result in more insurers requesting owners of such high-risk vehicles to install additional security as a condition of insurance.

Public awareness of the importance of vehicle security is growing due to the increasing theft rate and recent theft-prevention publicity campaigns. If industry stakeholders agree that vehicle security insurance benefits are a key part of a strategy to reduce vehicle crime then change to the insurance system can be expected to happen within a short time-frame.



Vehicle manufacturers are therefore advised to XXXXXX XXXXXX XXXX XXXX Malaysia and, if XXXXXX XXXXXX XXXXXX XXXX, to consider the fitment of XXXXXX XXXXXX XXXXXX vehicles commensurate with the risk.

1.2 Current insurance situation

マレーシアには、自動車保険を提供している会社が 30 社以上ある。これらの会社と他の一般保険会社を代表するのが、マレーシア保険協会の、PIAM である。

マレーシアの自動車保険市場は、規制が厳しく、保険会社は、PIAM と（マレーシア中央銀行の）BNM の管理するモータータリフに準拠した商品を提供しなくてはならない。最低保険掛金が設定され、保険割引の種類、掛金算出に組み込まれる要素などが定められている。

モータータリフがあるため、保険会社は XXXX XXXX XXXX XXXX XXXX XXXX することは許されていない。

その代わりに、モータータリフで定められている、車の価値、エンジン容量、ロケーション、車両の用途、運転者の保険利用履歴などに基づいて掛金が計算される。

国内ブランドの Perodua と Proton が、最も盗難数が多いが、海外メーカー（特に XXXX X）の高価格車（通常、高級モデル）も、盗難率が高い。保険会社がこれらの車の所有者に、盗難保険の条件として

There are more than 30 companies that offer *motor* insurance in the Malaysian market. These, and other *general* insurance companies, are represented by *Persatuan Insurans Am Malaysia* (PIAM) which is the Malaysian insurance association.

The Malaysian motor insurance market is very closely regulated. Insurers must offer products that conform to the *Motor Tariff*, which is regulated by PIAM and BNM (the Malaysian central bank). Limits are imposed on the minimum insurance premium, the types of insurance discounts available and the factors that affect the premium.

Due to the Motor Tariff, insurers are currently not allowed to XXXXXX XXXXXX XXXXXX XXXXXX, XXXXXX XXXXXX or XXXXXX.

Insurers instead base their premium calculations on factors such as vehicle value, engine capacity, location, vehicle use and the claims history of the driver(s), as prescribed by the Motor Tariff.

Domestic brands Perodua and Proton suffer the largest number of car thefts, but several high-value vehicles (commonly luxury models) from overseas manufacturers (especially XXXXXX XXXXXX) also have high levels of theft. Insurers are increasingly requesting owners of these

2. Malaysia

Figure 1. Malaysian market



Source: CIA World Factbook, 2006

Malaysia is a country in Southeast Asia with a population of approximately 27 million people. It is a federation of 13 states in two separate geographical regions separated by the South China Sea (Figure 1). Peninsular Malaysia (or West Malaysia) borders Thailand and contains 11 states, while Malaysian Borneo (or East Malaysia) is located on the North of the island of Borneo, and is split into 2 states.

Putrajaya is the newly-formed administrative capital for the federal government, but *Kuala Lumpur* remains the capital city of the country (for commercial, financial and legislative purposes) and is the location of the Malaysian parliament.

2.1 Market situation

Latest figures from the *Malaysian Road Transport Department* (JPJ) show that there were 6.5 million passenger cars registered for use (parc) at the end of 2005.

According to the *Malaysian Automotive Association* (MAA) there were approximately 490,000 new vehicles sold during 2006, of which *private* (non-commercial) passenger cars accounted for 360,000 sales.

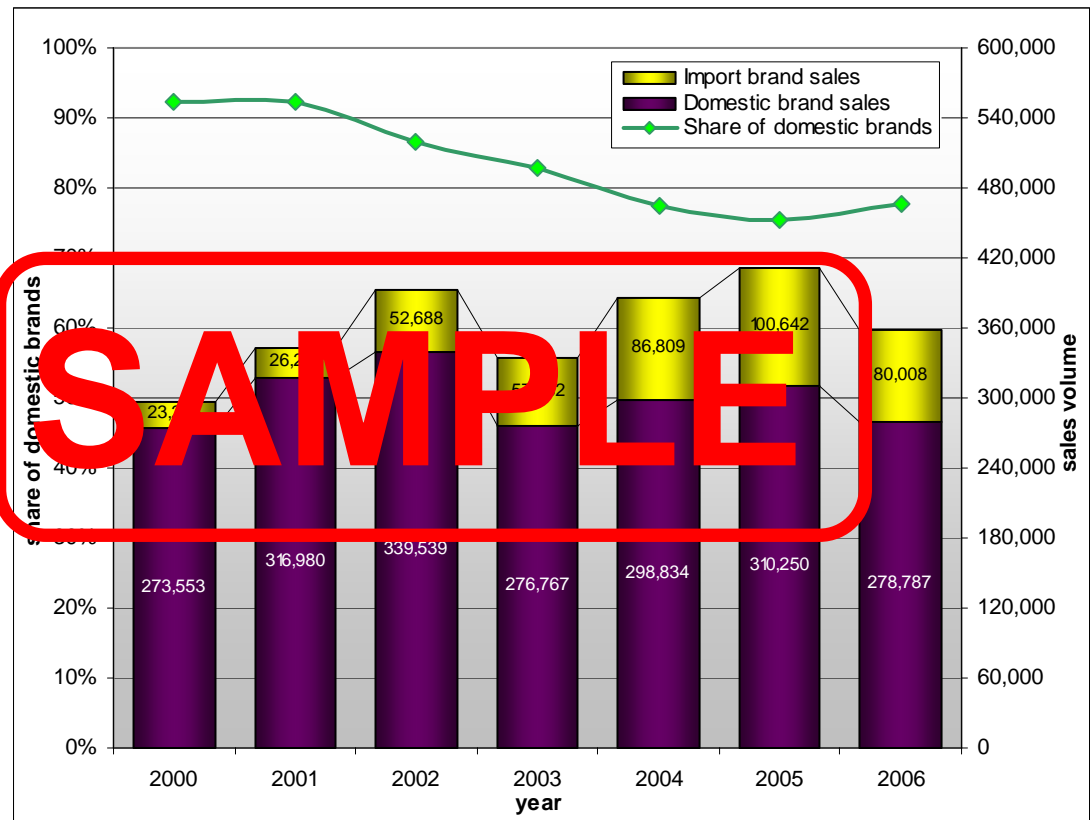
From this data, it can be observed that the Malaysian market (car parc and new car sales) is approximately the same size as that of the Netherlands.

Some popular models, such as the Toyota Harrier, are not actually sold via the manufacturer's dealership network and are present in significant numbers in the Malaysian market because they are *personal imports*.

New car sales figures from MAA (Figure 2) show that while *domestic* (Malaysian) manufacturers still have the largest share of the market, their market share has decreased over the last 6 years.

One reason foreign manufacturers have a low market share is that high import duties are imposed on imported vehicles. However, the Malaysian government is committed to reducing the tariffs on cars manufactured in ASEAN countries and has signed an accord with Japan to bring forward the tariff reduction on Japanese vehicles.

Figure 2. Malaysian new car sales (passenger cars only)



Source: Malaysian Automotive Association, 2007

Whilst *Proton* and *Perodua* are the largest Malaysian car manufacturers, they do not generally compete for market share because a majority of *Perodua* vehicles are in the city car category and *Proton* vehicles are typically larger in size.

Historically, *Proton* has always had the largest share of new car sales. However, Figure 3 shows that although *Proton* and *Perodua* still have the majority market share, their respective positions have changed. In 2006, *Perodua* sales exceeded those of *Proton* for the first time. *Proton* sales are now at their lowest level in over 7 years.

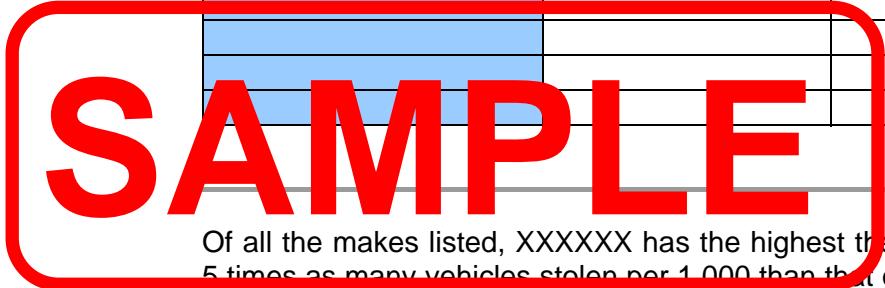
The foreign manufacturers with the largest market share are *Toyota*, *Honda* and *Nissan*.

❑ **Most stolen vehicles**

XXXXXX manufacturers XXXXXX and XXXXXX have the highest number of vehicle thefts (Table 1), as may be expected from the fact that they have the most vehicles in the parc. Note that the following theft data is from 2004 and is the latest data released by PIAM.

Table 1. Vehicle thefts (by manufacturer) in Malaysia

Manufacturer	Vehicles stolen (Jan-Dec 2004)	Recovery rate



Source: PIAM, 2005

Of all the makes listed, XXXXXX has the highest theft rate, with over 5 times as many vehicles stolen per 1,000 than that of XXXXXX. SBD has calculated that the theft rate of other XXXXXX manufacturers, such as XXXXXX and XXXXXX, are also significantly above average.

The PIAM statistics also show the breakdown by vehicle model, as can be seen in Table 2 below:

Table 2. Most stolen vehicles in Malaysia

Vehicle model	Number stolen (Jan-Dec 2004)

Source: PIAM, 2005

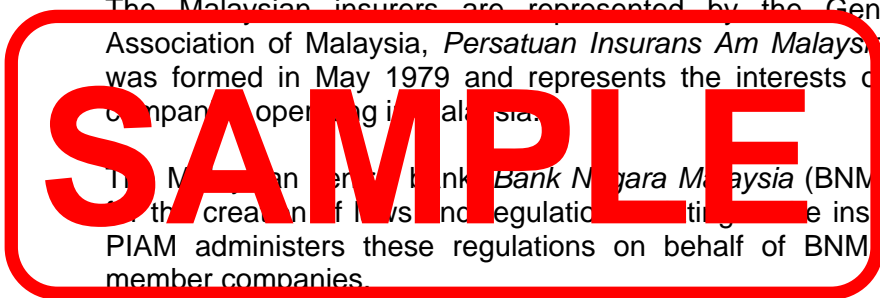
Of the 10 most stolen vehicles (by quantity) in Malaysia, the majority were XXXXXX models in the C-segment (small family car) category.

Table 4. Market share of motor insurance companies in Malaysia

	Insurance company	Written Premium (MYR)	Data source (Financial report)	Market share
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Source: SBD, 2007

2.2.1. Insurance association



The Malaysian insurers are represented by the General Insurance Association of Malaysia, *Persatuan Insurans Am Malaysia* (PIAM). PIAM was formed in May 1979 and represents the interests of the insurance companies operating in Malaysia.

The Malaysian central bank *Bank Negara Malaysia* (BNM) is responsible for the creation of laws and regulations governing the insurance industry. PIAM administers these regulations on behalf of BNM. PIAM has 41 member companies.

- **Contact details**
 Persatuan Insurans Am Malaysia (PIAM)
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 150, Jalan Tun Sambanthan,
 50470, Kuala Lumpur.
 P.O. Box 12555,
 50782 Kuala Lumpur

 Telephone: +60 3 22 74 73 99
 Fax: +60 3 22 74 59 10

2.2.2. Types of insurance

There are three types of motor insurance available in Malaysia:

- **Third party cover** (compulsory minimum insurance)
- **Third party fire & theft cover** (includes fire & theft insurance)
- **Comprehensive cover** (includes own-vehicle damage)

Several Malaysian insurers offer *Takaful* insurance, which is insurance that complies with Islamic law and is based on co-operative principles. Takaful products can be offered as any of the above three types of insurance.

Table 5. Summary of Malaysian insurance requirements

Document Reference		Application
		Defines objectives and scope of Malaysian insurance requirements (overview document)
		Door lock security (for passenger compartment and luggage area)
		Extension (to Section 1) for CDL systems
		Extension (to Section 1) for Deadlock systems
		Devices to prevent unauthorised vehicle use (<i>mechanical</i> devices acting on either <i>steering column, transmission</i> or <i>gearshift</i>)
		Alarm systems
		Immobiliser systems
		VIN location and attachment

Source: SBD summary of Malaysian requirements, 2007

Compliance with the Malaysian vehicle security standards is XXXXXX. Full attack testing XXXXXX XXXXXX XXXXXX in the XXXXXX.

These standards were developed by a Vehicle Security Systems Working Group comprising representatives from the following organisations:

- Malaysian Automotive and Automobile Associations
- Malaysian OE alarm manufacturers
- Government agencies (Road Licensing [JPJ], Ministry of International trade, Ministry of Transport)
- Royal Malaysian Police
- SIRIM
- Vehicle manufacturers (Malaysian)
- Insurers (PIAM) [XXXXXXXX XXXXXX XXXXXX XXXXXX XXXXXX]

Although the documents authored by this group were influenced by the content of XXXXXX XXXXXX insurance requirements, the final criteria are XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX.

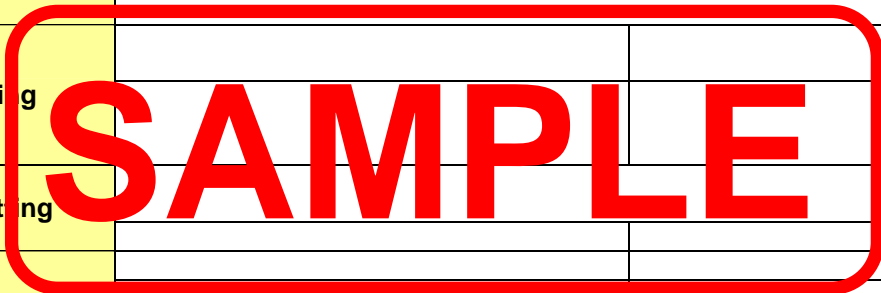
The following sections of this report provide a summary of the technical requirements of the separate sections of document XXXXXX XXXXXX (note that document XXXXXX XXXXXX is *not* summarised):

- **Section 2.4.1** ~ key points of **locking system** requirements in *Section 1, Section 2* and *Section 3* of XXXXXX: *Part XXX*
- **Section 2.4.2** ~ key points of **devices for protection against unauthorised use** requirements in *Section 4* of XXXXXX: *Part XXX*
- **Section 2.4.3** ~ key points of **alarm system** requirements in XXXXXX: *Part XXX*
- **Section 2.4.4** ~ key points of **immobiliser system** requirements in XXXXXX: *Part XXX*

2.4.3. Alarm system (VSAS) requirements

Table 8. Malaysian alarm system requirements

Requirement		Detail
Power supply		
Detection		
Panic alarm (option)		
Setting		
Unsetting		
Alarm signal		
Siren (Self-powered)		
Visual warning		
Immobilisation		
Testing		
Wiring		
Safety and reliability		

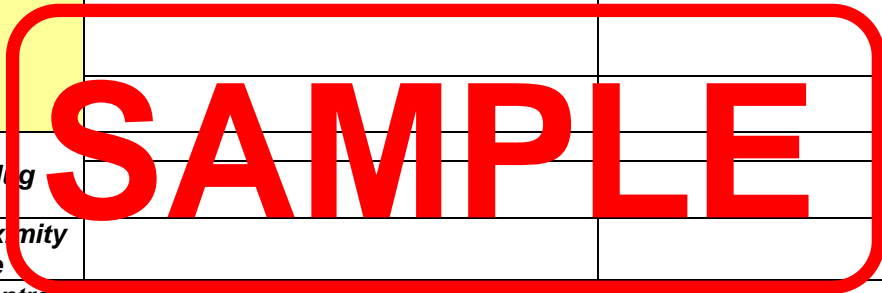


Source: SBD summary of XXXXXX: XXXXXX, 2007

2.4.4. Immobiliser system (VSIS) requirements

Table 9. Malaysian immobiliser system requirements

Requirement		Detail
Power supply		
Functionality		
Status indication		
Setting		
Unsetting		
Coded plug		
Coded proximity device		
Remote control device		
Key pad		
Immobilisation		
Testing		
Wiring		
Safety and reliability		



Source: SBD summary of XXXXXX: XXXXXX, 2007

Insurers are advised that security systems should be approved by a third-party to the Malaysian standards. Test facilities that are approved to SIRIM standards should be used.