

MARA UNIVERSITY OF TECHNOLOGY

SHAH ALAM

FINAL YEAR PROJECT REPORT

**Faculty of Mechanical Engineering**

*CASE STUDY OF FLOW CHART HAND- BUILT CAR  
(FIBRE GLASS BODY)*



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FINAL PROJECT (TVR SPORTS)

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## **INTRODUCTION**

TVR Engineering was started by Trevor Wilkinson and Jack Pickard in 1947 at Blackpool, United Kingdom. He built himself a light alloy chassis based on the Alvis Firebird. The first actual TVR with its own chassis was built in 1949 and it was powered by a Ford side valve engine.

Presently, there are 3 different models, which are the Griffith 500, the Chimaera and the Cerbera. The Griffith was a best seller and this was the model which was made TVRs the most desired car by the British public and with the 5.0-litre Rover V8 it was deemed to be an all time classic. The Chimaera which was designed to be slightly more cultured is powered by a 4.0-litre Rover V8. The Cerbera is powered by a very powerful newly designed AJP8 engine. From Car Magazine, UK September 1996, in terms of acceleration 0-60 mph the TVR Cerbera is ranked at number five with a stunning 4.0 seconds while the Griffith 500 is ranked at number seven with a time of 4.1 seconds.

The model available in Malaysia is the Chimaera. It comes with the standard of 4.0-litre engine but a 5.0-litre engine is available as an option. Therefore a TVR can be said to be one of the fastest cars on the Malaysian roads currently.

Official production of the TVR Chimaera was started in March 1996 and in August of 1996 the first batch of cars were exported to Europe and

Australia. This is part of a Manufacturing and Distribution Agreement which TVR Engineering Ltd. UK will provide all the necessary technological support and they will work together with TVR Sports (Malaysia) Sdn. Bhd. to manufacture the cars and develop a distribution network in the Asia Pacific Region.

Most of the components of the car is produced locally while certain items like the engine is brought in from England. The components manufactured locally in our plant includes the body and the chassis which are 2 major items of the car.

TVR Malaysia is committed to delivered the same standards of perfection that is part of the TVR's tradition and therefore the team of the people working at TVR Malaysia are all experienced and dedicated to their work. No shorts cuts are taken and this is one of the things which enable TVR to produce high performance quality cars.

## **FURTHER INROADS INTO CAR MANUFACTURING FOR MALAYSIA**

### ***FIRST LOCALLY HAND-BUILT SPORT CAR, TVR CHIMAERA, LAUNCHED***

Malaysia once again created history by rolling out its first fully handcrafted performance sportscar, the TVR *Chimaera*, marking the beginning of Malaysian manufactured high performance sportscar. The Launch was today officiated by the Prime Minister of Malaysia, Ybhg. Dato Seri Dr Mahathir Mohamad.

Manufactured by TVR Sports (Malaysia) Sdn Bhd, the two-seater *TVR Chimaera* is different from conventional cars as it is constructed with a lightweight but strong composite body mounted on a rigid tubular spaceframe chassis. The distinct advantage of being light and strong is thus inherent in the *TVR Chimaera*. It does not dent easily and will not rust. In the event of an accident, it can be easily restored to its original state with the same material.

A high percentage of the car such as the body, chassis, seats and interior trims are manufactured in-house. This is in support of the Government's call for high Local Content in the Automotive Industry. The cooling system and air-conditioning have also been modified to suit local conditions. TVR (Malaysia) also has a progressive programme to localize the car parts, which are later to be exported to UK as well.