

## **TESTING AND EVALUATING A PROTOTYPE - WHY?**



- Testing a prototype / developed design is a very important part of the design and manufacturing process.
- Testing and evaluation, simply confirms that the product will work as it is supposed to, or if it needs refinement.
- In general, testing a prototype allows the designer and client to assess the viability of a design.
- Will it be successful as a commercial product?
- Testing also helps identify potential faults, which in turn allows the designer to make improvements.
- There are many reasons why testing and evaluation takes place.

- Testing and evaluation, allows the client / customer to view the prototype and to give his/her views.
- Changes and improvements are agreed and further work carried out.
- A focus group can try out the prototype and give their views and opinions.
- Faults and problems are often identified at this stage.
- Suggestions for improvement are often made at this stage.



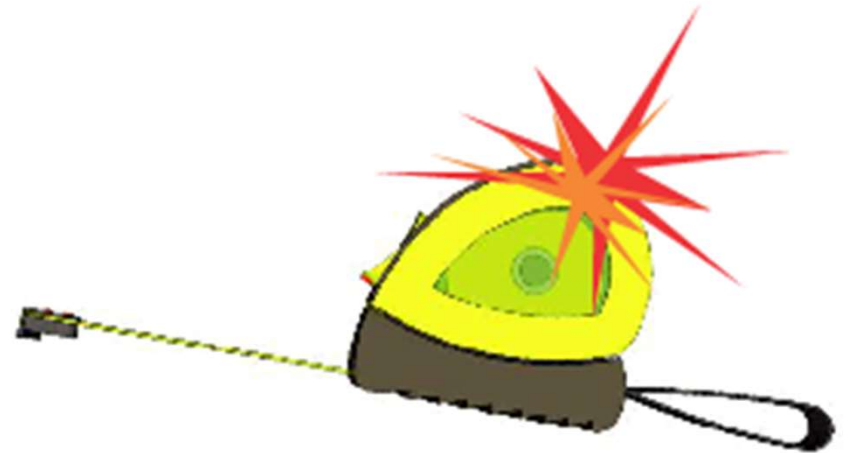
- Safety issues are sometimes identified, by thorough testing and evaluation.
- The prototype can be tested to British and European Standards.
- The prototype can be tested against any relevant regulations and legislation.
- Adjustments / improvements to the design can then be made.



- Evaluating a prototype allows the production costs to be assessed and finalized.
- Every stage of manufacturing can be scrutinized for potential costs.
- If the client has set financial limits / restrictions, then alterations to the design or manufacturing processes, may have to be made.
- This may lead to alternative and cheaper manufacturing processes being selected, for future production.



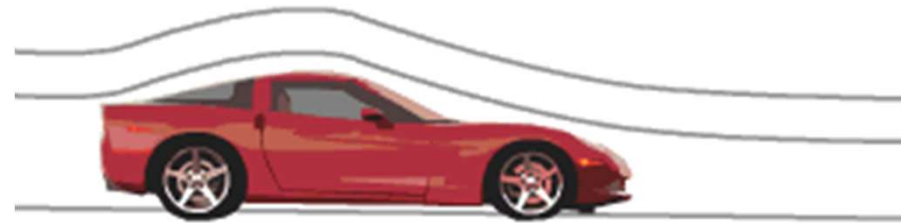
- Component failure is often identified during the testing process.
- This may mean a component is redesigned and not the entire product.
- Sometimes a component or part of a product, will be tested separately and not the whole product.
- This allows more specific tests to be carried out.



- Evaluating the manufacture of the prototype, allows the designer to plan an efficient and cost effective manufacturing production line.



- Prototype testing can be carried out alongside the testing of similar designs or even the products of competitors.
- This may lead to improvements.





- Testing ensures that any user instructions can be worked out, stage by stage, so that the future consumer can use the product efficiently and safely.
- This guarantees customer satisfaction.



- Testing a prototype allows 'concept' designs to be evaluated fully.
- This is sometimes called 'proof of concept'.
- This usually happens during the early development of a product.



- Testing against the design specification, helps ensure a full and relevant evaluation of a prototype is carried out.
- This should be carried out during the entire development process.



- The testing and evaluation phase, allows fellow designers, knowledgeable in the specialist area, to offer opinions and suggest critical improvements.
- This may lead to a more successful design.

