



TESTING AND INSPECTION

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TESTING AND INSPECTION

I have 20 minutes to give an overview of testing and inspection
WITH VCA.

First some Directive terms you need to know and to think about;

1. Options for Type Approval
2. Multi stage build system



TESTING AND INSPECTION

1. Think of where you want to sell your product and how many you will produce (Types, Variants and Versions)

2. Choose your approval route

Full European

National small series approval

Individual vehicle approval



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Full European

Test one vehicle fully. Issue as many
Certificates of Conformity as you
want

National small series approval

Tests less onerous. Limit on numbers

Individual vehicle approval

Test every vehicle (VOSA)

TYPE APPROVAL

Multi Stage Build

This is where a vehicle built in stages
In the framework directive it mentions

COMPLETE

This is where a vehicle is built in one
stage

INCOMPLETE

This is where a vehicle is built in several



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COMPLETED

This is where the vehicle has all stages and is finished

Only a COMPLETE or COMPLETED vehicle can be given a Certificate of Conformity and then be registered.

You can approve a vehicle at the first stage to full European approval and the same at subsequent stages



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You cannot approve a stage to Vehicle Approval and then move to the next stage and have the vehicle approved to full European approval



TESTING AND INSPECTION

Responsibility for approvals will
on how your product is built...

Remember no approvals can be
without Conformity of Production

Talk to VCA !!!!



TESTING AND INSPECTION

I have decided the best way to do is to run through a practical test start to finish.

I have chosen the subject of;

42. Side Guards (Lateral Protection)

TESTING AND INSPECTION

3. If you choose Type Approval, come and talk to VCA;

- Introductory meeting
- Worst case meeting

4. Come armed with as much information as possible about your product.

We treat your information as completely confidential

TESTING AND INSPECTION

At the 'worse case' meeting we can discuss;

1. What we need to test

- minimum amount of testing to cover maximum product range

2. Where to test;

You can choose where to test;

- On your own site, if you have facilities
- VCA have facilities for some tests.

TESTING AND INSPECTION

Where to test

- Recognised test facilities like Millbrook, MIRA, MI Technology, Status and some Universities to name but a few.
 - **ALPHABETICAL ORDER**
- Overseas facilities (VCA will send out a test engineer to witness the test)
- Using a component supplier's facilities

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So Side Guards;

You want to cover side guard legs at 400mm, 500mm, 700mm length (maybe next year a 600mm variant)

I would want to test the 700mm and would read all the rest in, including the 600mm which doesn't yet exist. Drawings of all legs would have to included in the document package

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But then you say, ah but;
I want to cover Steel legs and
Aluminium legs;

The test criteria is looking at
deflection so I would test the
Aluminium and ask for the
specification of both to include in
document package.

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But then you say, ah but;

I want to cover fix legs and hinged

I would want to look at samples of

If the hinged type was fixed with

substantial bolts and the fix type

just one bolt and welding I would

for the fix type and cover the

type

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But then you say, ah but;

I have two side guard rail sections
50mm deep, one 75mm deep;

Again we are looking for maximum deflection so I would chose the deep section as the weakest, test and include variants in the package

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But then you say, ah but;

I want to offer single and double side rails

Again we are looking at deflection so
would want to test the single rail
read the double rail in

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But then you say, ah but;

I want to cover legs that are 1m,
1.5m, 2m and 3m apart

Again we are looking at deflection so
would want to test the 3m
and read all the rest in. They would
again be included in the
documentation

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But then you say, ah but;

I would never make a 700mm drop,
Aluminium, fixed, small section,
rail, side guard.

Maybe not and maybe it will never
but it is 'Worse case' and covers
option you make with one test



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- Before the test you will need to supply an 'Information document' so that the VCA engineer will know what you are covering with the test work you are carrying out.
- This is quite a detailed document to allow a thorough 'Specification Check' of the vehicle or component to be carried out

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Next, the test...

Make sure you have the correct parts because what is tested will be what approved!

- you may not be able to change or include alternatives if they have not been previously considered

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Once the test work is finish the VCA engineer will require to see a of the installation on a vehicle as is a need to check rail spacing, end caps and various other criteria

For example (from Directive);

2.10 The side guard may not be used the attachment of brake, air or hydraulic pipes

TESTING AND INSPECTION

Discuss with the Type Approval engineer what documents are required for circulation.

These should be different to the 'information document' in so much they should include less detail than needed at the time of the test. Just enough to identify the vehicle/component.



TESTING AND INSPECTION

YOU HAVE GOT IT!

...NOW WHAT DO YOU DO WITH IT ?

You now need to maintain your approval

- Make sure you cover changes to your product with changes to your approval documents – talk to VCA!

Depending on the nature of your planned change, VCA will respond in one of four ways;



TESTING AND INSPECTION

1. Letter of no concern
2. Paperwork exercise
3. Partial test work
4. Full retest

This will be decided based on the extent of the changes you are making



TESTING AND INSPECTION

In order to keep up to date with legislation, we recommend you subscribe to VCA's legislative information package, **VISTA**

Like other systems, this includes up-to-date copies of EU Directives and (United Nations) Regulations

And VISTA contains other key information, particularly clarification of how VCA interpret these regs, which your design teams will find useful



ANY QUESTIONS?

I am here for the whole session so if you
any specific questions please come and
OR ask for a business card with my
details in case you think of something
THANK-YOU FOR YOUR ATTENTION

