



# **ECWVTA Seminars – June 2008**

## **Day 2 – Trucks and Body Builders**

1. Welcome Address – The Principles of Type Approval  
- Alternative UK and EC TA Schemes

### **Speaker:**

**Brian Perrett**

Head of VCA Product Development



# Type Approval Seminars for Industry

*Don't let Type Approval put your business in a spin!*

*VCA is here to help!*





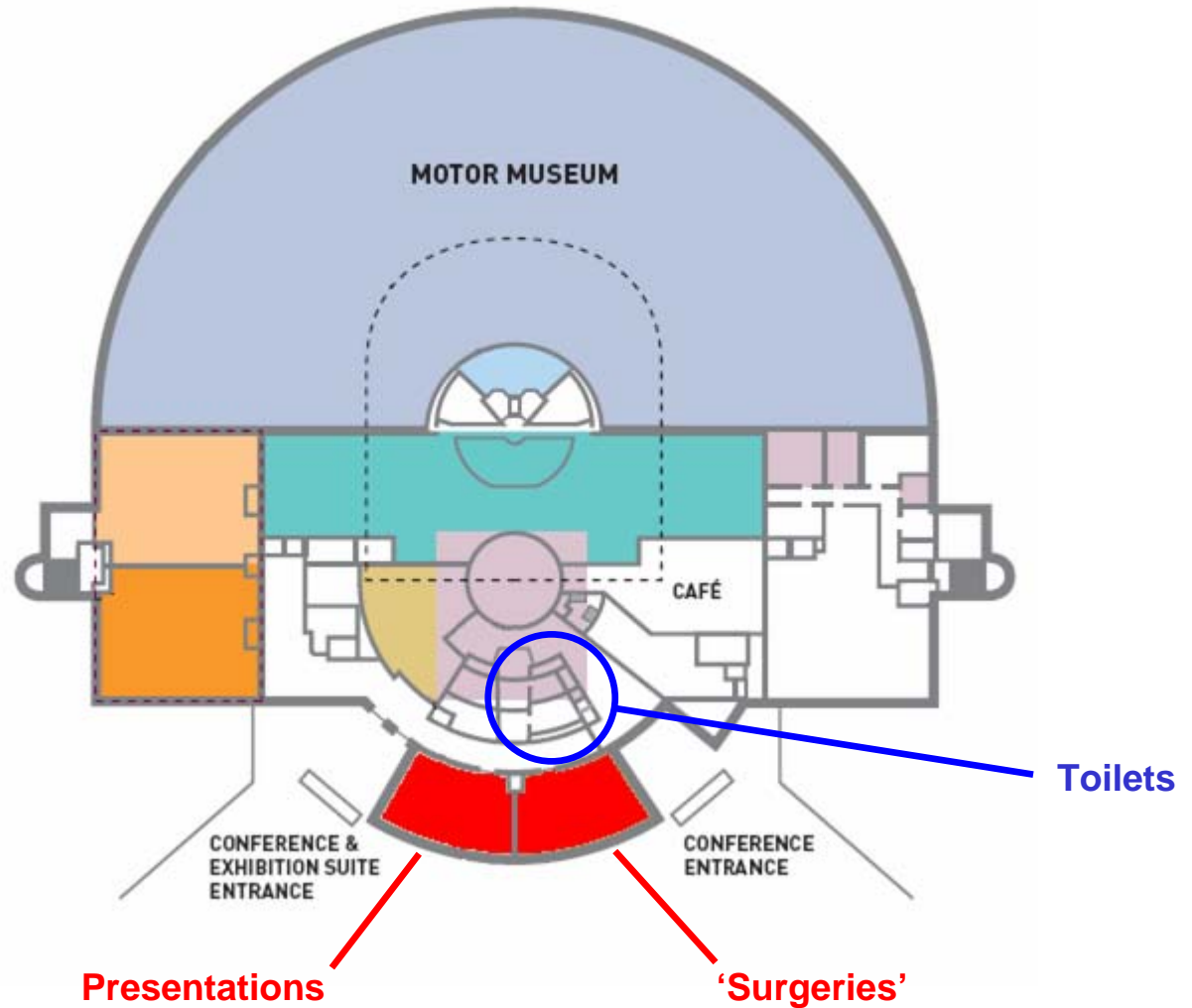
# Welcome to VCA's Industry Seminars on Type Approval

**Brian Perrett**

Head of VCA Product Development

**No Approval, no sale!**

# Today's facilities





# Today's team

- VCA
  - *The UK's Type Approval Authority.*
    - Brian Perrett – Head of Product Development
    - Mick Hepworth – Technical specialist
    - Nick Clay – Certification process specialist
    - Derek Lawlor – Conformity of Production specialist
    - Type Approval 'Consultants'
      - Pete Bawn
      - Chris McCabe
      - Nic Fasci
      - Nick Sanderson
      - Nick Babbage
      - James Ecclestone
- VOSA
  - Roger Trubridge
- SMMT
  - Colin Wilde

# Outline of the day

Designed to help you prepare for the new EC-driven Type Approval regulations;

- Overview of different Type Approval Schemes
  - Builds on previous VCA seminars
- Provide an introduction to Technical Requirements
- Walk through the Approval process
- Outline Conformity of Production obligations
  - Sampling requirements
  - Quality system requirements

At-elbow access to VCA experts – ‘Surgery’ process

- Discuss Type Approval with a VCA Type Approval consultant



# Background

## The EU has approved the Revised Framework Directive (RFD) 2007/46/EC

- Enables vehicles to be sold throughout the EU without hindrance
  - removes barriers to trade
- Common requirements for safety and environmental standards throughout Europe
- Individual Member States may implement national schemes allowing companies to manufacture and sell limited numbers of vehicles annually within that Member State
- Individual Member States may implement national IVA schemes
  - No limits on numbers
- Prohibits any vehicle to be sold or to enter service without a relevant approval
- A UK Statutory Instrument (SI) is under preparation to implement these EU requirements

# Type Approval in a Nutshell

- Whole Vehicle Type Approval authorises a manufacturer to;
  - produce vehicles to a proven specification and
  - self-certify these as compliant with relevant legislation - Certificate of Conformity, or ‘**CoC**’
  - sell without further constraint across the relevant market
- Two fundamental requirements;
  - Meeting the technical and administrative requirements and capturing the design
  - Ensuring that subsequent production vehicles are manufactured in conformance with the approved design (Conformity of Production)

# Type Approval Key Questions

## Which vehicles are affected?

- Directive extends ECWVTA to all new road vehicles & trailers
- This means new approval requirements for:
  - All large passenger vehicles (M2-M3)
  - All goods vehicles (N1-N3)
  - All trailers (O1-O4)
  - All Special Purpose Vehicles (incl. M1)
  - Does not apply to vehicles already registered



# Type Approval Key Questions

What does the change mean?

If you sell in the UK only:-

## Current situation

- Bus & Coach manufacturers
  - COIF, C&U & RVLR
- Truck / chassis manufacturer
  - GVNTA, SVA, C&U & RVLR
- Trailers
  - C&U, RVLR(self certification')

## Future situation

- EC
  - ECWVTA
  - EC Small series
- National
  - National Small Series Type Approval
  - Individual Vehicle Approval



# Type Approval Key Questions

**What does the change mean?**

**If you sell in other EC countries:-**

## Current Situation

- You have to adhere to member state national schemes
- Each member state has its own national schemes

## Future Situation

- ECWVTA – no annual limit
- EC Small Series – 1000/ type/annum (passenger cars only)
- NSSTA and IVA may be accepted across all member states



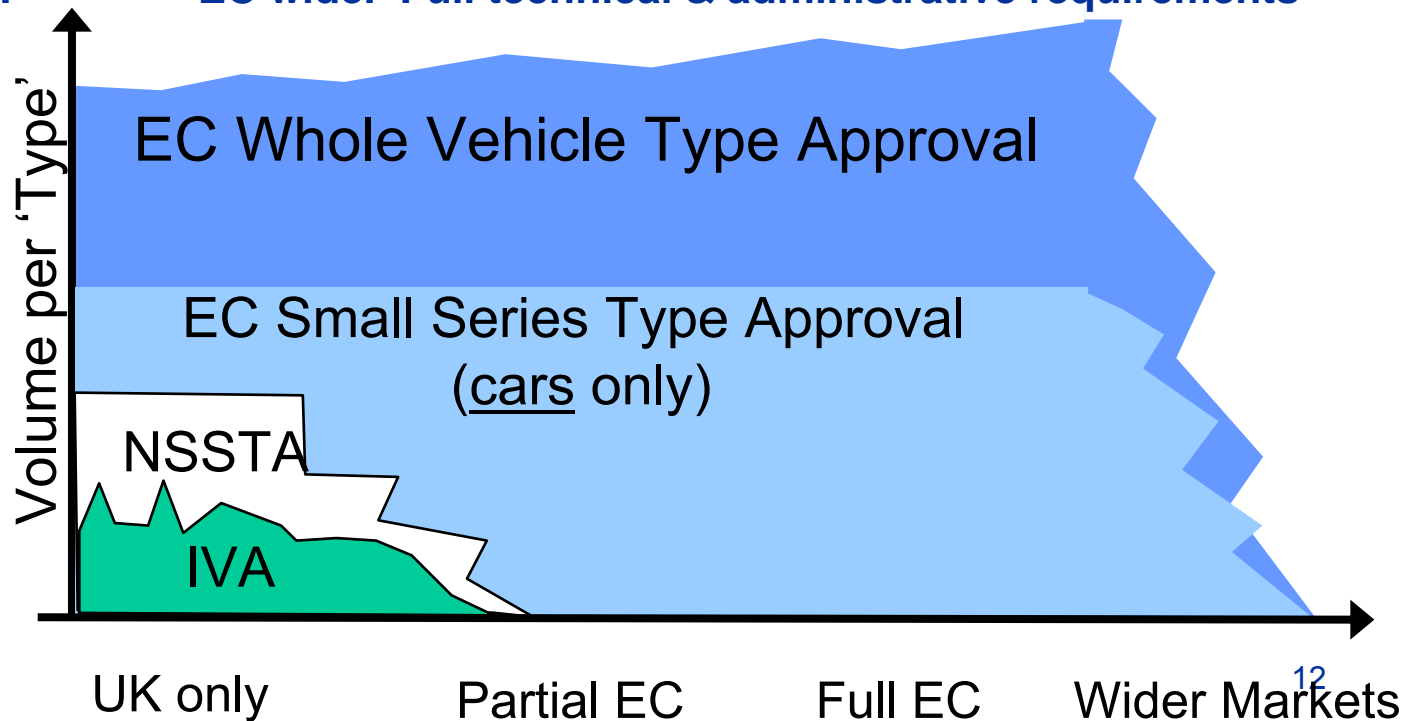
# Type Approval Key Questions

- Which approval route?
  - ECWVTA, NSSTA and IVA each have their own detailed technical requirements and costs
    - Economics will depend on sales volumes and complexity of your range
  - If exporting NSSTA or IVA may be accepted in other member states. You will need to check with the other member state (mutual recognition principle)

# Which Type Approval route?

## All vehicle categories:

- IVA:** UK only. Inspection of each vehicle, 'eased' technical requirements, no limit on numbers
- NSSTA:** UK only. # vehicles limited p.a., 'eased' technical requirements
- EC SSTA:** EC wide. Cars (M1) only, # vehicles limited p.a. (1000)
- ECWVTA:** EC wide. Full technical & administrative requirements





# What's a 'Type' anyway?

Definition from the Directive:

- "type of vehicle" means vehicles of a particular category which do not differ in at least the essential respects specified in Section B of Annex II.



# What's a 'Type' anyway?

Simply put for our purpose:

- It's a **label given to your products** that links groups with shared characteristics
- Types are broadly based on (amongst other things):
  - Gross Vehicle Weight (GVW)
  - Number of axles
  - Major chassis design differences
  - You and your product 'label'

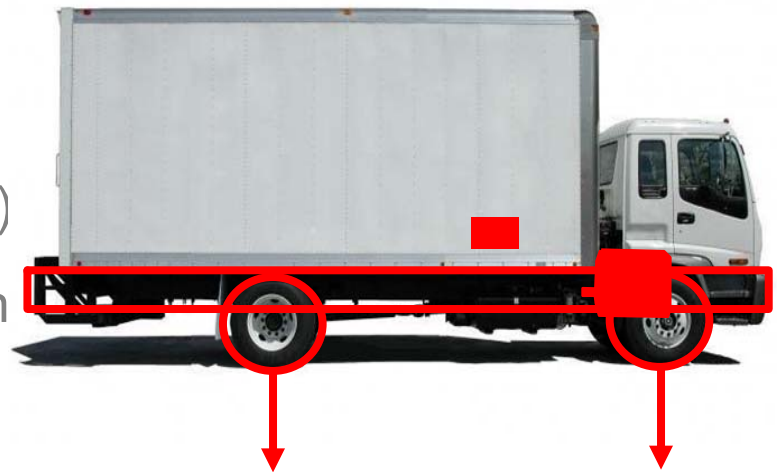


# Reducing Type Approval complexity

- Types, Variants and Versions permit different products to share key technical approvals
  - Helps to shape ‘Chunks’
- Structuring a model range into Types, Variants and Versions also reduces the volume of Approval administration
  - Reduces a manufacturer’s Type Approval burden
  - Simplifies the assessment of whether a new approval is required to cover a new product
- Type/ Variant/ Version definition varies by vehicle category

# Type Definition - Vans & Trucks (Goods Vehicles, category N1 - N3)

- For vans & trucks 'Type' definition is driven by essential aspects of construction & design – generally set by the chassis manufacturer;
- Number of axles
- Chassis / floorpan
- Powerplant (IC / electric / hybrid)
- Manufacturer & type designation
- GVW (category)





# Goods vehicles; variant definition

Variants within each Type are determined by the following differences;

- Extent of build: Complete / Incomplete
- Concept  
(complete vehicles only) eg Platform truck / Tipper / Tanker / Semi trailer, Hitch etc
- Powerplant: Working principle
  - Positive / compression ignition
  - Four stroke / Two strokeNumber & configuration of cylinders  
Capacity / Power differences <50%
  - Highest less than 1.5 times the lowest
- Powered/ steered axles: Number, position, interconnection
- Maximum laden mass: Highest is less than 1.2 times the lowest

# Multistage Build

- Enables base vehicle manufacturers to approve **incomplete** vehicles. Stage 1
- Enables stage 2 builders to gain approval for the systems and components they add, complete or modify
- There can be as many stages as it takes to arrive at the **completed** the vehicle, eg;
  - Stage 1 Chassis cab
  - Stage 2 Additional axle
  - Stage 3 Bodywork

# Multistage Build

- Each stage may issue a CoC covering the stage of completion of their product
- Each stage is only responsible to the Type Approval Authority for their part of the build
- Multistage approval is only permitted as part of a Type Approval process, ***not IVA.***
- But IVA can be used as the final step in getting approval for a completed vehicle
- CoC's for incomplete vehicles may not be used to put vehicles into service

# Type Approval Key Questions

## Scheme volume limits:

- Full ECWVTA supports unlimited import or production volumes for each vehicle Type
- Annual Community production (or import) limits are enforced for Small Series Approvals;
  - ESSTA (M1 only) – 1000 total
  - NSSTA;
    - M1 - 75 units per annum
    - M2/M3 - 250 units per annum
    - **N1 - 500 units per annum**
    - **N2/N3 - 250 units per annum**
    - O1/O2 - 500 units per annum
    - O3/O4 - 250 units per annum

# Type Approval Key Questions

## How do I decide which approval route?

- Define your market
  - UK / Europe / The world?
  - How many Types are there in your range?
  - How many vehicles you will manufacture per type?
- Unique requirements?
  - UK technical derogations may preclude export sale



# Type Approval Key Questions

## When will it happen?

- Regulations for GB and NI in place Spring 2009
  - Phased in between Spring 2009 and October 2014
- Optional approvals available from Spring 2009
- First approvals mandatory from October 2010
- Act now to be ready



# Type Approval Timeline

## Time line

Type Approval Regulations come into force for the following vehicles:

<b>October 2007</b> 2007/46/EC came into force.	<b>29<sup>th</sup> April 2009</b> Type approval is available (on a voluntary basis) for any vehicle type. *SVA becomes **IVA for Passenger Cars. SVA for light vans and trucks will continue until October 2011	<b>29<sup>th</sup> October 2010</b> Minibuses, buses and coaches built in one stage or first stage of a multi-stage build.	<b>29<sup>th</sup> October 2011</b> Light vans and trucks built in one stage or first stage of a multi-stage build. Minibuses, buses and coaches built in multiple stages.	<b>29<sup>th</sup> April 2012</b> Special purpose passenger vehicles (such as motor caravans, ambulances, hearses and armoured cars).	<b>29<sup>th</sup> October 2012</b> Medium/heavy vans, trucks and trailers built in one stage or first stage of a multi-stage build.	<b>29<sup>th</sup> April 2013</b> Light vans and trucks built in multiple stages.	<b>29<sup>th</sup> October 2013</b> Trailers built in multiple stages.	<b>29<sup>th</sup> October 2014</b> Medium and heavy trucks built in multiple stages and other special purpose vehicles, such as mobile cranes and trailer caravans.
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\*SVA=Single vehicle approval    \*\*IVA=Individual Vehicle Approval



# VCA's role in Type Approval

- VCA are the UK's Vehicle Type Approval Authority
- Over 30 years experience in Type Approval of all types of vehicles, systems and components
- Offices around the world
- Relationships with some of the world's biggest – and smallest - manufacturers in all vehicle sectors
  - We understand the motor industry's needs
  - We flex our ways of working to suit ***your*** needs



# Type Approval Overview

- Any questions?

