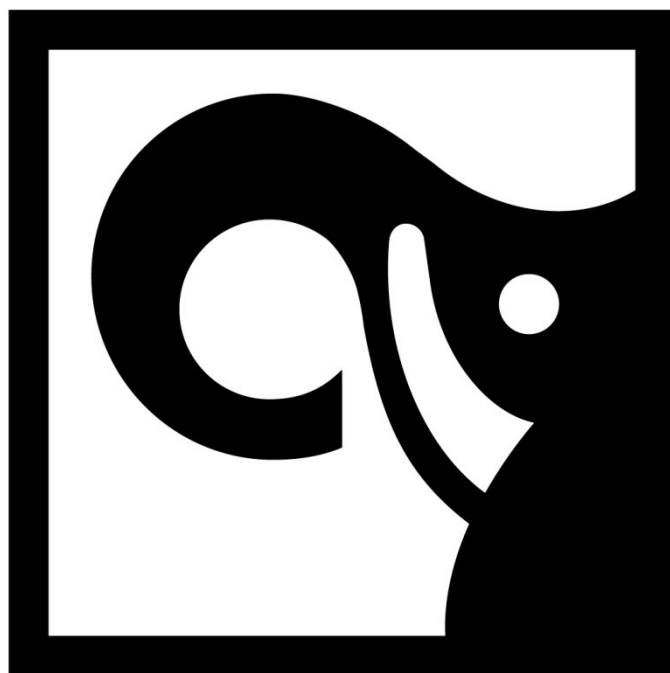




CARGOTEC

ECWVTA

European Community Whole Vehicle Type Approval



What is Type Approval

- Type approval is a procedure that enables manufacturers who produce vehicles to proven standards to be able to sell them in the marketplace without further constraint.
- Both the vehicle, i.e. chassis and bodywork, and production process will require initial approval.



Which Type Approval Route?

As a Manufacturer, there are three options of approval available:

- **IVA** (Individual Vehicle Approval)
 - UK / Issuing member state only. Inspection of each vehicle, no limit on numbers, NO CoP
- **NSSTA** (National Small Series Type Approval)
 - UK only / Issuing member state only. A limit of up to 250 Units belonging to one Type per year. There are however 'eased' technical requirements
- **ECWVTA** (EC Whole Vehicle Type Approval)
 - Full technical & administrative requirements

Why The Directive

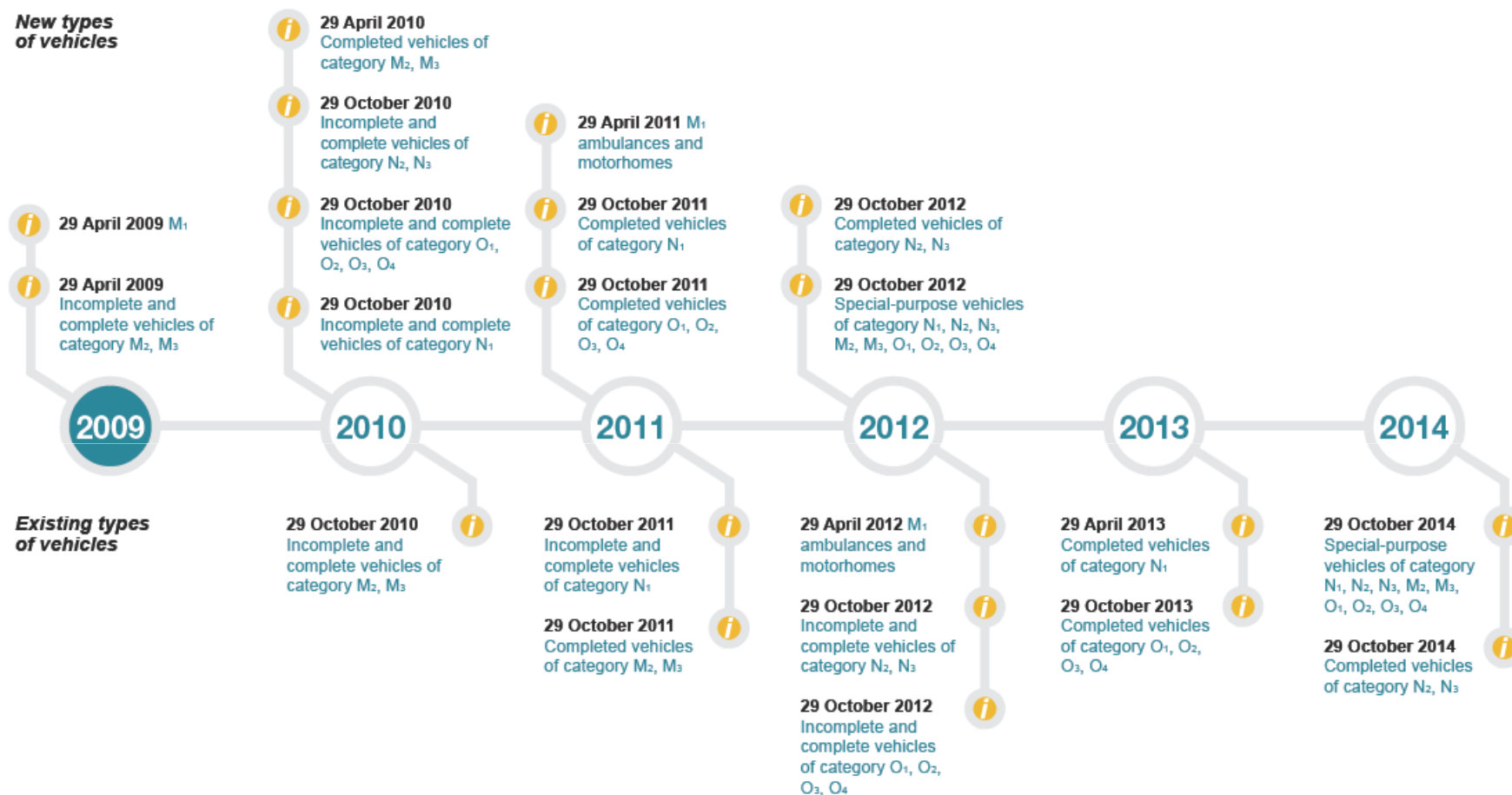
- Harmonisation Directive – to enable sale of commercial vehicles and Trailers throughout Member States without hindrance.
- Set common technical requirements for safety and environmental standards throughout Europe.
- Enables individual member States to have conformant national schemes allowing companies to manufacture and sell limited numbers of vehicles annually within that Member State.
- Prohibits any vehicle to be sold, used on the road or registered without relevant approval.

Impact on Businesses

- **Who will be affected?**
- The majority of businesses affected will be the manufacturers and converters of commercial vehicles, namely buses and coaches, goods vehicles and trailers
- Two business sectors which will be particularly affected are body builders, i.e. those that take a chassis and build or modify a body of any description on it before selling it to the customer, and manufacturers of commercial vehicles imported from inside or outside Europe.

Vehicle Category

Category	Definition
<u>M</u>	<u>Motor vehicles with at least 4 wheels, designed and constructed for the carriage of passengers.</u>
M1	Vehicles designed and constructed for the carriage of passengers comprising no more than 8 seats, in addition to the driver's seat.
M2	Vehicles designed and constructed for the carriage of passengers comprising more than 8 seats, in addition to the driver's seat and having a maximum mass not exceeding 5 tonnes.
M3	Vehicles designed and constructed for the carriage of passengers, comprising more than 8 seats in addition to the driver's seat, and having a maximum mass exceeding 5 tonnes.
<u>N</u>	<u>Motor vehicles with at least 4 wheels designed and constructed for the carriage of goods.</u>
N1	Vehicles designed and constructed for the carriage of goods and having a maximum mass not exceeding 3.5 tonnes.
N2	Vehicles designed and constructed for the carriage of goods and having a maximum mass exceeding 3.5 tonnes, but not exceeding 12 tonnes.
N3	Vehicles designed and constructed for the carriage of goods and having a maximum mass exceeding 12 tonnes.
<u>O</u>	<u>Trailers (including semi-trailers).</u>
O1	Trailers with a maximum mass not exceeding 750kg.
O2	Trailers with a maximum mass exceeding 750kg, but not exceeding 3.5 tonnes.
O3	Trailers with a maximum mass exceeding 3.5 tonnes, but not exceeding 10 tonnes.
O4	Trailers with a maximum mass exceeding 10 tonnes.

**New types
of vehicles**


ECWVTA Revised Framework Directives

- Existing Type – The specific type of trailer is currently
 - Manufactured in the UK /
 - Exported to a EU country
- New Types – A new design or trailer type
 - Manufactured in the UK /
 - Exported to a EU country

Whole Vehicle Approval Hierarchy

Three fundamental whole-vehicle Type Approval categories are available under both ECWVTA and NSSTA

1. Complete vehicle approval

- covers single-stage manufacture of a fully finished product

2. Incomplete vehicle approvals

- controls the specification of a partially assembled vehicle
- multiple approvals sometimes required
- can reduce Type Approval requirements for the final stage manufacturer

3. Completed vehicle approval

- final assembly of a multi-stage vehicle as a fully finished product

Timetable for Enforcement of the Directive.

Category	New Type Optional	New Type Mandatory	Existing Type Mandatory
N1 - Completed ^{ed}	29th April 2009	29th October 2011	29th April 2013
N2 and N3 Completed ^{ed}	29th April 2009	29th October 2012	29th October 2014
N2 and N3 In/complete	29th April 2009	29th October 2010	29th October 2012
O1, O2, O3 and O4 trailers - Completed ^{ed}	29th April 2009	29th October 2011	29th October 2013
O1, O2, O3 and O4 trailers – In/complete	29th April 2009	29th October 2010	29th October 2012

Motor vehicles with at least 4 wheels designed to carry goods.

N1 = maximum mass not exceeding 3.5 tonnes.

N2 = maximum mass exceeding 3.5 tonne but not exceeding 12 tonnes.

N3 = maximum mass exceeding 12 tonnes.

Trailers (including semi trailers).

O1 = maximum mass not exceeding 0.75 tonnes.

O2 = maximum mass exceeding 0.75 tonne but not exceeding 3.5 tonne.

O3 = maximum mass exceeding 3.5 tonne but not exceeding 10 tonne.

O4 = maximum mass exceeding 10 tonne.

Directives and Regulations

- For Whole Vehicle Type Approval we must comply with;
 - **EEC** (European Economic Community) directives
 - **UNECE** (United Nations Economic Commission for Europe) regulations
- And for here in the UK (just to make life hard) we also have to comply with;
 - The Road Vehicles (Construction and Use) Regulations
 - The Road Vehicles Lighting Regulations 1989

TYPE APPROVAL OF GOODS TRANSPORT VEHICLES



Release: July 2007

Type Approval Framework Directive 70/156/EEC - 2007/37/EC

ENVIRONMENT

- 1 SOUND LEVELS
Dir. 70/157/EEC - 2007/34/EC
- 2 LIGHT DUTY EXHAUST EMISSIONS
Dir. 70/230/EEC - 2003/76/EC
EC Reg. 715/2007
- 11 DIESEL SMOKE
Dir. 72/304/EEC - 2005/21/EC
- 39 CO₂ EMISSIONS AND FUEL CONSUMPTION
Dir. 80/126/EEC - 2004/3/EC (N1)
- 40 ENGINE POWER
Dir. 80/126/EEC - 1999/99/EC
- 41 HEAVY DUTY EXHAUST EMISSIONS
Dir. 2005/55/EC - 2005/78/EC - 2006/51/EC
- 59 RECYCLABILITY (RRR)
Dir. 2005/64/EC (N1)
- 61 MOBILE AIR CONDITIONING (MAC)
Dir. 2006/40/EC - EC Reg. 706/2007 (N1 Class I)

ACTIVE SAFETY

- 5 STEERING EFFORT
Dir. 70/311/EEC - 1999/77/EC
- 7 AUDIBLE WARNING
Dir. 70/380/EEC - 87/354/EEC
- 8 INDIRECT VISION DEVICES
Dir. 2003/97/EC - 2005/27/EC
- 9 BRAKING
Dir. 71/320/EEC - 2002/78/EC
- 17 SPEEDOMETER
Dir. 75/443/EEC - 97/39/EC
- 20 LIGHTING INSTALLATION
Dir. 76/756/EEC - 2007/35/EC
- 33 IDENTIFICATION OF CONTROLS
Dir. 78/316/EEC - 94/53/EC
- 34 WINDSCREEN DEFROSTING AND DEMISTING
(Only the presence of an adequate device)
- 35 WINDSCREEN WIPER/WASHER
(Only the presence of an adequate device)
- 43 SPRAY SUPPRESSION SYSTEMS
Dir. 91/226/EEC (N2, N3)
- 46 TYRES
Dir. 92/23/EEC - 2005/11/EC
- 47 SPEED LIMITERS
• Installation:
Dir. 92/6/EEC - 2002/85/EC (N2, N3)
• Devices:
Dir. 92/24/EC - 2004/11/EC

PASSIVE SAFETY

- 3 REAR UNDERRUN PROTECTION - FUEL TANKS
Dir. 70/221/EEC - 2006/29/EC
- 6 DOOR LATCHES AND HINGES - CAB ACCESS
Dir. 70/387/EEC - 2001/31/EC
- 14 INTERIOR FITTINGS
Dir. 74/297/EEC - 91/662/EEC (N1 ≤ 1500 kg)
- 15 SEAT STRENGTH - HEAD RESTRAINTS
Dir. 74/408/EEC - 2005/39/EC
- 19 SAFETY BELT ANCHORAGES
Dir. 76/115/EEC - 2005/41/EC
- 31 SAFETY BELTS
Dir. 77/541/EEC - 2005/40/EC
- 43 LATERAL PROTECTION
Dir. 89/297/EEC (N2, N3)
- 45 SAFETY GLAZING
Dir. 92/22/EEC - 2001/92/EC
- 49 EXTERNAL PROJECTIONS (CABS)
Dir. 92/114/EEC
- 54 SIDE IMPACT
Dir. 96/27/EC (N1 R point height ≤ 700 mm)
- 57 FRONT UNDERRUN PROTECTION
Dir. 2000/40/EC - 2006/96/EC (N2, N3)
- 58 PEDESTRIAN PROTECTION
Dir. 2003/102/EC (N1 ≤ 2500 kg derived from M1)
- 60 FRONTAL PROTECTION SYSTEM (BULL BARS)
Dir. 2005/66/EC (N1)

OTHER REQUIREMENTS

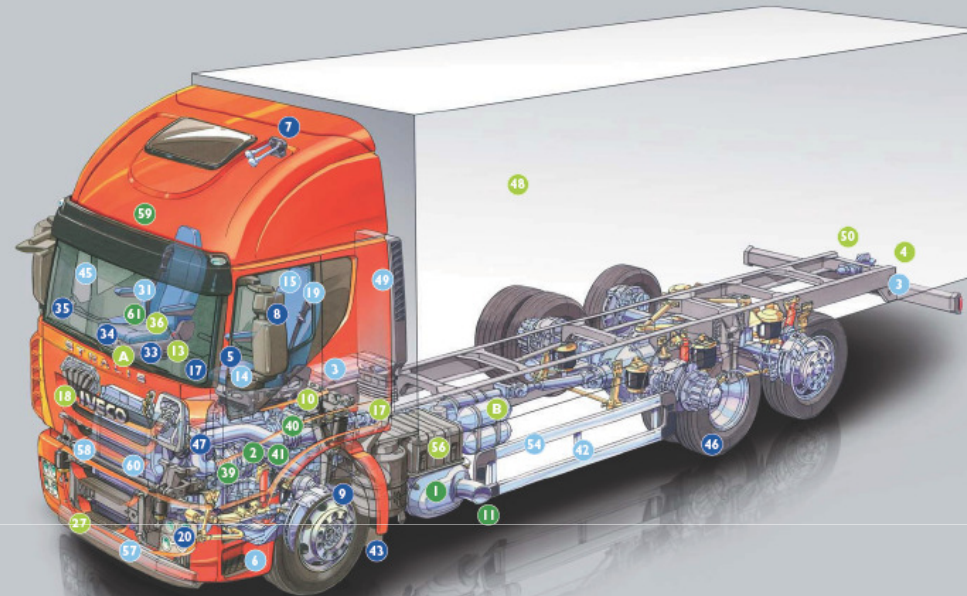
- 4 REAR REGISTRATION PLATE
Dir. 70/222/EEC
- 10 ELECTROMAGNETIC COMPATIBILITY
Dir. 73/23/EEC - 2004/28/EC
- 13 ANTI-THEFT IMMOBILIZER
Dir. 74/61/EEC - 95/56/EC
- 17 REVERSE GEAR
Dir. 75/443/EEC - 97/39/EC
- 18 STATUTORY PLATES
Dir. 76/114/EEC - 87/354/EEC
- 27 TOWING DEVICES
Dir. 77/389/EEC - 96/64/EC
- 36 HEATING SYSTEMS
Dir. 2001/56/EC - 2004/78/EC
- 48 MASSES AND DIMENSIONS
Type Approval: Dir. 97/27/EC - 2003/19/EC
(Circulations Dir. 96/53/EC - 2002/77/EC)
- 50 MECHANICAL COUPLINGS
Dir. 94/20/EC
- 56 TRANSPORT OF DANGEROUS GOODS (ADR)
Dir. 98/91/EC
- A TACHOGRAPH¹
EC Reg. 3821/85 - 561/2006
- B SIMPLE PRESSURE VESSELS¹
Dir. 87/404/EEC - 93/68/EC

¹ Not included in the scope of vehicle type approval

LIGHTING EQUIPMENT²

- 21 RETRO REFLECTORS
Dir. 76/757/EEC - 97/29/EC
- 22 POSITION, MARKER, STOP LAMPS
Dir. 76/758/EEC - 97/30/EC
- 23 DIRECTION INDICATORS
Dir. 76/759/EEC - 1999/15/EC
- 24 REAR REGISTRATION PLATE LAMPS
Dir. 76/760/EEC - 97/31/EC
- 25 HEADLAMPS AND FILAMENT LAMPS
Dir. 76/761/EEC - 1999/17/EC
- 26 FRONT FOG LAMPS
Dir. 76/762/EEC - 1999/18/EC
- 28 REAR FOG LAMPS
Dir. 77/538/EEC - 1999/14/EC
- 29 REVERSING LAMPS
Dir. 77/539/EEC - 97/32/EC
- 30 PARKING LAMPS
Dir. 77/540/EEC - 1999/16/EC

² Not indicated in the figure



Numbers in accordance with Annex IV of Type Approval Framework Directive. Legislation refers to the original and to the last applicable amendment where appropriate

FIAT
GROUP

External Relations
and Communication

IVECO

HIAB • KALMAR • MACGREGOR

European Community Whole Vehicle Type Approval of O3 and O4 category trailers

Recast Framework Directive 2007/46/EC

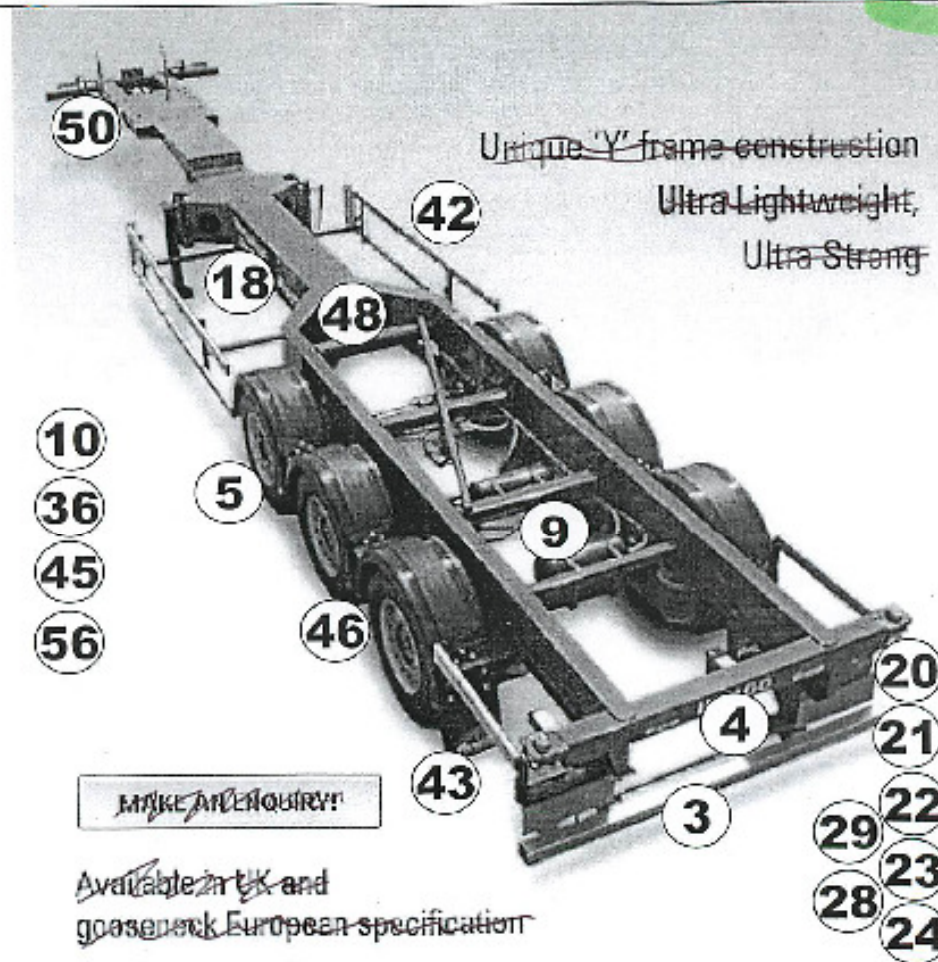
22 ITEMS

Active Safety subjects:

- 1 Item 5 - 71/311 EEC: Steering effort
- 2 Item 9 - 71/320 EEC: Braking
- 3 Item 43 - 91/226 EEC: Spray Suppression systems
- 4 Item 46 - 92/23 EEC: Tyres

Lighting subjects:

- 5 Item 20 - 76/756 EEC: Lighting Installation
- 6 Item 21 - 76/757 EEC: Retro reflectors
- 7 Item 22 - 76/758 EEC: Position, stop, marker and running lamps
- 8 Item 23 - 76/759 EEC: Direction Indicators
- 9 Item 24 - 76/760 EEC: Rear registration plate lamps
- 10 Item 28 - 77/538 EEC: Rear fog lamps
- 11 Item 29 - 77/539 EEC: Reversing Lamps



Passive Safety subjects:

- 13 Item 3 - 70/221 EEC: Fuel tanks / Rear protective devices
- 14 Item 42 - 89/297 EEC: Lateral Protection
- 15 Item 45 - 92/22 EEC: Safety glazing

Other required subjects:

- 16 Item 4 - 70/222 EEC: Rear registration plate space
- 17 Item 10 - 72/245 EEC: EMC
- 18 Item 18 - 76/114 EEC: Statutory plates
- 19 Item 36 - 2001/56 EC: Heating systems
- 20 Item 48 - 97/27 EC: Masses and dimensions
- 21 Item 50 - 94/20 EC: Mechanical Couplings
- 22 Item 56 - 98/91 EC: Transport of dangerous goods (ADR)

Information

- <http://www.dft.gov.uk/vca/vehicletype/index.asp>

Conformity of Production (CoP)

- Cop is fundamental to Type Approval
 - VCA must have confidence in our manufacturing and change control systems to enable us to issue CoCs
 - **Quality Management System** – controlling the policies and day to day activities of the business that could influence conformity of the product to the approved ‘Type’
 - ISO 9001 satisfies this requirement
 - **Control Plan** – a detailed description of all checks performed that ensure completed product conforms to each aspect of approval
- **CoP clearance is a pre-requisite of Type Approval**
- In the UK, VCA are responsible for assessing a manufacturers compliance for CoP

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