NSAI

Approved Vehicle Body Builder Scheme (AVBB)

For

National Vehicle Approvals (NSSTA and IVA)

For

Complete/Completed Vehicles

Contents

Record of revision

Revision	Date	Description of change
1	09.07.2014	--
2	15.01.2015	-correction of detail contained in spray suppression section
3	16.11.2015	-removal of requirement for the issuance of a WMI and need to generate a new VIN on completed vehicles as a result of EU legislation 1171/2014/EU (previous requirements have been struck out in relation to this throughout this revision to manual) -General update of AVBB manual -Additional annex for IVA exemptions and IVA exemption justification form
4	16.01.2017	-Additional requirements for IVA and NSSTA application (~~see item 9 above)~~ -General update of AVBB manual -Last revision (03) struck out WMI/VIN. This revision has removed reference completely
5	02/07/2019	Updated quality system section and expanded AVBB manual for all categories: M, N and O

1. Application Process:

The application process for the NSAI Approved Vehicle Body Builder Scheme (AVBB) consists of the following steps:

- Complete and submit the AVBB application form which can be found from the following link: https://www.nsai.ie/certification/automotive/national-type-approva/approved-vehicle-body-builders/

- On receipt of a completed AVBB application form, NSAI will send out a "Quotation" to the applicant for signature.

- When the Quotation has been returned, fully signed by the applicant, NSAI will:

    - Assign the application to an NSAI auditor.
    - The NSAI auditor will contact the applicant to arrange an audit of the applicant's Quality System.
    - Before an audit can be organised the Body Builder must:
        - Have a Quality System in place, to the minimum requirements as outlined in Section 2 of this manual, before an audit can be organised.
        - Submit a copy of their procedures to the auditor prior to the audit.

    - Unsigned Quotation forms will be returned to the applicant for signature. The application process will stop and will not resume until a fully signed Quotation has been received by NSAI.

- On foot of a successful audit and close out of any non-conformities identified during the audit, the applicant will:
    - Be issued with their AVBB scheme approval.
    - Entered onto the list of NSAI Approved Vehicle Body Builders.

- The AVBB approval has a validity of one year and can be renewed annually.

- The validity of the AVBB approval is dependent on an annual audit of the Approved Vehicle Body Builder and their facilities, carried out by NSAI.

- NSSTA and/or IVAs cannot be granted for N, M & O category vehicles if a Body Builder's approval is out of date.

- For Manufacturers based outside of the Ireland who intend to submit IVA applications to the NSAI, Requirements as follows:

    - Must have a representative based in Ireland who shall take responsibilities for vehicle inspection and vehicle approval file management
    - Must satisfy the initial assessment and quality system requirements as per Annex X of framework directive 2007/46/EC i.e. suitable certification to harmonised standard EN ISO 9001 or equivalent
    - NSAI reserve the right to carry out a quality audit on manufacturer's based overseas if the need arises. In such a case, NSAI audit day rate and associated expenses of audit shall be applied.

2. Quality System:

At a minimum, the quality system shall consist of the following:

2.1 Contract Review:

- The AVBB shall determine the stage of build, each build is categorised as either:
  - **Complete** – AVBB building a vehicle from start to finish e.g. O category vehicles (trailers).
  - **Incomplete** – Uncommon. means any vehicle which must undergo at least one further stage of completion in order to meet the relevant technical requirements i.e. chassis cab
  - **Completed** – Most common. AVBB fitting a body on an incomplete vehicle i.e. chassis cab as a route to being approved as a completed vehicle.
- The AVBB is required to categorise the vehicle into a specific category:
  - M1, M2, M3, N1, N2, N3, O1, O2, O3, O4
- Category of base vehicle for build (if applicable).
  - Note: For bodybuilders building on an incomplete chassis, the base vehicle category will not change if no modifications were carried out.
- The AVBB shall use the coding to determine the type of bodywork for the vehicle:
  - Examples:
    - M2/M3 category vehicles; CA (Single-deck vehicle)
    - O category vehicles; DC (Centre-axle trailer)
    - N category vehicles; BA (Lorry)
  - See Annex II of 2007/46/EC as amended for full list of coding

- Route to approval should be determined at contract review, this will include but is not limited to:
  - Identification of the approval required (covered by an existing NSSTA or new IVA/NSSTA).
  - Job specification
  - Vehicle recall
  - Approved component selection
  - Bill of materials
  - Vehicle suitability/vehicle selection criteria e.g. body mounted on vehicle conforms to base vehicle manufacturer guidelines, coupling GVW suitability, overall dimension limitations, bodywork/chassis alterations etc.

2.2 Drawings:

- Controlled drawings of the build shall be required.
- These drawings shall include the material specification of the components, grade of bolts torque ratings etc.

2.3 Purchasing/Materials:

Inspection of Inward goods:

- The AVBB shall verify that the incoming vehicle(s)/materials/components are in-line with the specification for the build.

2.4 Production

At a minimum the AVBB production process shall have the following:

2.4.1 Production checks:

The AVBB shall implement and maintain production checks at each stage of production for example:

- Body assembly
- Component assembly
- Seat installation
- Installation of approved components against installation instructions
- Manufacturer guideline requirements
- CE marking requirements
- Regulatory requirements

These checks must be carried out by competent personnel and a record retained on file. All documents must be readily available at relevant workstations.

2.4.2 Final inspection checks:

All vehicles shall be subject to a final inspection.
This final inspection shall include, but is not limited to, the following:

- A check to ensure all type approval related requirements have been complied with. The checklist must contain actual provisions within the specific piece of legislation
- Base vehicle/additional component manufacturer installation requirements.
- Any other relevant checks.

These checks must be carried out by competent personnel and a record retained on file.

2.4.3 Control Plan:

Each AVBB shall establish a control plan to ensure that all relevant checks are complied with. This document should at a minimum cover the following:

- Identify the various points during the build process where checks are made to ensure the build complies.
- Specify what these checks are.
- Reference the records that are used to record these checks.
- Reference the procedure to follow where discrepancies arise.

2.4.4 Conformity of Production (COP):

The AVBB shall implement a COP procedure, this is to ensure the build is appropriately documented and verified at all relevant stages of the build.

- Procedure shall ensure that the Body Builder has control over the production of the completed vehicle.
- Tests or checks of vehicles are taken and recorded at appropriate intervals, to ensure conformity with the approved type.
- Approved component verification.
- Results of tests or checks are analysed.
- Further sampling is taken if necessary.
- Where non-conformities arise all steps are taken to restore conformity of the vehicle(s).
- COCs issued to vehicles correspond to the approved type.
- Should be NSSTA specific (eg. box body, tank, crane, Bus etc).
- ATC check frequency.
- All records of COP, checks, tests remain available for a period of 10 years.

2.5 Procedures

As a minimum, Body builders shall develop documented procedures for the following areas:

2.5.1 Training procedure:

- All personnel must have the appropriate qualifications and/or training e.g. welders must have appropriate welding certificates.
- Minimum level and/or years of experience (to be decided by the body builder).
- Ongoing training:
  - Company practices
  - Base vehicle specific
  - Product specific (e.g. lift/hoist installation, approved floor installation, body assembly etc.,)
- Training plan i.e. controls are in place to ensure adequate training is provided and maintained

2.5.2 Calibration and Equipment:

- All measuring equipment used must be part of a routinely planned calibration/inspection system.
- All measuring equipment must be uniquely identified.
- Measuring equipment that can be calibrated must be calibrated at least annually. Calibration stickers **must** be displayed on these measuring devices.
- Measuring equipment that does not require calibration (e.g. measuring tapes, rules etc.,) must be checked for continued good use.
- Equipment that requires scheduled maintenance/calibration must be part of a planned routine calibration/inspection system.

Equipment out of calibration shall not be used as part of the production process

2.5.6 Document control procedure:

- All records associated with the build must be revision controlled (documentation if updated, is assigned a revision number with records of revision). Document revision/modification must only be carried out by the quality system owner. This includes, but is not limited to, the following:
    - Bill of Materials (BOM) for each different build.
    - Forms and records (checklists, goods inwards, drawings, final inspection, etc.)
- The AVBB is required to have access to all relevant type-approval legislation e.g. lighting and light installation access to UNECE R48 (or equivalent), Rear under run access to UNECE R58 (or equivalent) etc…

2.5.7 Forms/Records:

- Bill of Materials (BOM) for each different build.
- All forms and records.
- COC for base vehicles.
- Mass distribution sheet(s).
- For NSSTA approval, COC templates for completed vehicle.
- Approval file (approved components and/or vehicle approval records).
- Maintenance records.
- Calibration records.
- Control plan(s).
- Documents for inclusion with the approved vehicle.
- Final inspection records.
- Notification of re-call.
- Special Purpose Vehicles.

2.5.8 Retention of Records:

- Approval file and associated records must be retained in a secure and safe location for a minimum period of 10 years.

2.5.9 Vehicle Approval File procedure:

An approval file will be required for each approval granted.

- For NSSTA approval: this file will consist of the following:
  - Appropriate NSAI Evaluation Form for vehicle category (eg. N1, N2, N3 etc.) (Only one form required for each type – not necessary to reproduce for each vehicle in the type.)
  - Base vehicle documentation (EC file, Base vehicle TVV, multi stage agreements etc)
  - Type variant version coding (2nd stage)
  - Base vehicle COC for each vehicle in the type. *(To demonstrate compliance of the base vehicle)*
  - Individual COCs issued for each vehicle in the type.
  - Appropriate inspection checklists for each vehicle a completed COC issued for.
  - Mass distribution sheets
  - Copies of ATC test reports.
  - Control Plan for the type.
  - Final inspection records.
  - Copy of NSSTA certificate.
  - Conformity of Production (COP) records.

- For IVA: this file will consist of the following:
  - Appropriate NSAI Evaluation Form for vehicle category (e.g. N1, N2, N3 etc.)
  - Component approvals fitted to vehicle
  - Base vehicle COC or IVA certificate. (To demonstrate compliance of the base vehicle)
  - Appropriate checklists of inspection
  - Copies of ATC test reports.
  - Final inspection records.
  - Copy of IVA certificate.

2.5.10 Body Builder Plate procedure (see 3 for further details):

- The following two plates shall be required for each completed vehicle:
  - A manufacturer's statutory plate (see 3.1) will be required for each vehicle. For a multi stage approval this plate shall be attached to the vehicle close to the base vehicle manufacturer's plate.
  - A plate with an identification number identifying the body, tank, crane etc., that is the subject of the build, shall be attached to the body/tank/crane etc. **(not required for complete vehicles).**
- Body Builders Plate procedure shall take into account the plate requirements contained in Section 3 below.

2.6 Vehicle Re-call:

As a minimum, Body Builders Quality Systems shall provide for vehicle re-call for the following situations:

- Completed vehicles owned by the Body Builder and sold directly to their client(s).

- Vehicles completed on behalf of dealers/distributors and returned to the dealer/distributor for subsequent sale.

1. Where it is necessary to re-call vehicles already sold, registered or put into service because one or more of the systems, components or separate technical units fitted to the vehicle as part of the Body Builders work, or any approved system, component or separate technical unit part of the base vehicle interfered with and/or modified etc, during the course of the Body Builders work; presents a serious risk to road safety, public health or environmental protection, the Body Builder shall immediately inform NSAI.

2. The Body Builder shall propose to NSAI a set of appropriate remedies to neutralise the risk referred to in paragraph 1. NSAI shall communicate the proposed measures to the Road Safety Authority (RSA) and National Consumer Agency (NCA) without delay.

3. If the measures are considered to be insufficient by the RSA and / or the NCA or have not been implemented quickly enough, they shall inform NSAI.

4. NSAI shall then inform the Body Builder. If NSAI is itself not satisfied with the measures of the Body Builder, it shall take all protective measures required, including the withdrawal of the vehicle approval where the Body Builder does not propose and implement effective corrective measures. In case of withdrawal of the vehicle approval, NSAI shall notify the Body Builder, the RSA and the NCA within 20 working days.

The following template shall be used for the notification of vehicle re-call:

Notification of Vehicle Re-Call

Base vehicle details:

VIN:
EC Type Approval Number:
Manufacturer:
Make:
Trade name:
Category:
(M1, M2, M3, N1, N2, N3, O1, O2, O3, O4)
Commercial Name(s):

Completed vehicle details:

VIN:
IVA Number:
NSSTA number:
Body Builder:
Body Builder Make description:
Body Builder Trade name:
Category:
(M1, M2, M3, N1, N2, N3, O1, O2, O3, O4)
Commercial Name(s): ???

The Safety Defect
???

List of vehicles affected (VINS)
???

Location and number of vehicles

Dealer(s)/Distributor(s)	Client(s) (if sold directly to clients)	Quantity	VIN(s)

The Proposed remedies/Corrective actions
???

2.6.1 Vehicle Re-call procedure:

- All Body Builders shall develop a Vehicle Re-call procedure.
- The procedure shall provide for the notification to NSAI of any vehicle that has been issued with a National approval, which requires re-call.
- The notification to NSAI shall be as per the model contained in Section 7.
- The procedure shall identify the vehicle(s) requiring re-call and detail the defects and proposed remedies.
- The procedure shall provide for notification of re-call to the vehicle owners for the following situations:
    - Completed vehicles sold directly by the Body Builder to their client(s).
        - For this situation the Body Builder shall notify their client(s) directly of the re-call.
        - The notification shall be as per the model contained in section 7.
    - Vehicles completed on behalf of dealers/distributors and returned to the dealer/distributor for subsequent sale.
        - For this situation, the Body Builder shall notify the dealer/distributor directly.
        - The notification shall be as per the model contained in section 7

2.7 Environment

The AVBB will need to provide a safe and sufficient workspace for the manufacturing and assembly of AVBB related products. The infrastructure must be suitable and support the duties related to the scope of the approval. Some examples of this are but are not limited to:

- Gantry cranes for the safe removal and transportation of bodies and heavy objects on the workshop floor
- Clean and tidy workspace to ensure a safe environment for the employer/employees
- Adequate lighting for the duties being carried out

Infrastructure can include:

- Buildings and associated utilities
- Equipment, including hardware and software

2.8 Multi-stage approval:

Extract from multi stage annex XVII of framework directive 2007/46/EC

The satisfactory operation of the process of multi-stage EC type-approval requires joint action by all the manufacturers concerned. To this end approval authorities must ensure, before granting first and subsequent stage approval, that suitable arrangements exist between the relevant manufacturers for the supply and interchange of documents and information such that the completed vehicle type meets the technical requirements of all the relevant regulatory acts as prescribed in Annex IV or Annex XI. Such information must include details of relevant system, component and separate technical unit approvals and of vehicle parts which form part of the incomplete vehicle but are not yet approved. The manufacturer of the previous stage shall provide information to the manufacturer of the subsequent stage regarding any change that may affect system type-approvals or the whole vehicle type-approval. Such information shall be provided as soon as the new extension to the whole vehicle type has been issued and at the latest on the starting date of production of the incomplete vehicle.

2.8.1 Multi-Stage Agreements:

Approval applicants shall be required to have agreements in place for multi-stage approvals. This shall include signed agreements between stage 1 base vehicle manufacturer/representative and stage 2 bodybuilder. If there are more than 2 subsequent stage manufacturers i.e. bodybuilder fits tipper body and crane installer fits crane, agreements between these two parties shall also be required to ensure conformity of production.

Agreements between stage 1 and 2 (i.e. base vehicle manufacturer and AVBB) should contain but is not limited to the following:

- WVTA (Whole Vehicle Type Approval) Data
- Details of extensions regarding WVTA:
    - Information outlining the reason for base vehicle extension
    - Base vehicle Variant, Versions added/removed
- Exchange of systems approvals as relevant
- Modifications to the base vehicle as relevant
- Technical support i.e., access to bodybuilder portal, guidance documents, training, etc. (See base vehicle section below for more information)

Agreements between subsequent manufacturers should be tailored to suit the activities of each and to ensure conformity of production.

2.8.2 Base Vehicle Approval

Prior to commencement of the build, all incomplete base vehicles (e.g. chassis-cab, etc.,) are required to have:

1. An incomplete European Commission Whole Vehicle Type-Approval (ECWVTA)

AVBB's must obtain the incomplete ECWVTA COC for the vehicle. This is what demonstrates that the base vehicle is in compliance with their legislative requirements (e.g. braking, exhaust emissions, EMC, steering etc.). Without this information, body builders will be taking on full responsibility for the entire vehicle, not just the work they carry out.

Body Builders Document Control procedure and Approval File procedure must ensure these documents are obtained and located in the correct vehicle file.

2.8.3 Access to vehicle manufacturer's body builder instructions

All AVBB's must have access to the base vehicle manufacturer's body mounting instructions. This shall be achieved by an agreement between both parties (letter of association) that ensures the supply and interchange of relevant documents and information to ensure the finished vehicle meets all of the relevant technical requirements (Annex XVII agreement of 2007/46/EC as amended)

As a minimum, the bodybuilder must have access to the base vehicle manufacturer's body builder portal. **Minimum information required to be accessed form base vehicle manufacturer portal include:**

- All systems approvals which are granted to the base vehicle chassis for each variant and version (e.g. braking, masses and dimensions, rear under run, lateral protection etc.)
- Covered masses and dimensions including:
  - the maximum completed mass
  - the maximum allowed reference mass for the emission approval
  - rear overhang limitation
  - minimum front axle unladen mass
- The centre of gravity for the bodywork which is authorised regarding the difference vehicle axle loads
- Attachment of the bodywork or accessories on the chassis e.g.
  - forbidden welding points or
  - drilling points or
  - fixing point for the body
- Drawings

3. Plates and VIN:

3.1 Manufacturer's statutory plate:

Each Body Builder is required to fit a manufacturer's plate on completion of each stage of the build on all categories of vehicles.
This plate must be firmly attached, in a conspicuous and readily accessible position. The manufacturer's statutory plate shall consist either of: (a) a rectangular sheet of metal or (b) a rectangular self-adhesive label. Metallic plates shall be fastened with rivets. If the manufacturers plate is a label, it shall be tamper evident, fraud resistant and self-destructive in case there is an attempt to remove the label.
For 2nd or 3rd stage manufacturers, this plate must be close to the base vehicle manufacturer's plate on a part which cannot be removed i.e. B pillar. It must show clearly and indelibly the following information in the order listed:

- Name of the manufacturer,
- IVA or NSSTA approval number,
- The stage of approval i.e. stage 2 or stage 3
- VIN (Vehicle Identification Number) (if required)
- Bodywork Identification Number (See section 3.2 for further details)
- Maximum permissible laden mass of the vehicle (*),
- Maximum permissible laden mass of the combination (where the vehicle is permitted to tow a trailer) (*),
- Maximum permissible mass on each axle, listed in order from front to rear (*),
- In the case of a semi-trailer or centre axle trailer, the maximum permitted mass on the coupling device (*).

(*) Only where the value has changed during the current stage of approval. In this case these values need not be repeated on the current plate. An example of can be found below (this is given as a guide only):

MANUFACTURER'S NAME
e24*NKS*5515
Stage 2
Bodywork Identification Number: ABC??? (if required)

Example of a Body Builders vehicle plate **with masses and VIN** can be found below (this is given as a guide only):

MANUFACTURER'S NAME
e24*IVA*5515
SMNHY123T1Y000546
Bodywork Identification Number: ABC??? (if required)
2800 kg
3500 kg
1-1000 kg
2-1800 kg

The minimum height of the characters used on the plate is 4 mm.

Each Body Builder shall develop a procedure describing the generation of vehicle plates. This procedure shall include at least the following:

- The manufacture of these plates (either in-house or external manufacture).
- The person responsible for these plates (assigning the numbers, stock)
- The layout of these plates.
- Process for the correction of incorrect plates attached to a vehicle.
- Type of plate i.e. the category of vehicle, body type, number of axles.

3.2. Bodywork Identification Plate:

All bodies fitted to vehicles must be fitted with a Bodywork Identification Plate. The purpose of this plate is to uniquely identify the body fitted and is an additional plate to the manufacturers statutory plate.

A Bodywork Identification Plate is not required in the following modifications:

- An M1 vehicle converted by the Body Builder to an N1 with bodywork code BB;
- An incomplete O category vehicle;
- A completed M1 vehicle adapted exclusively for wheelchair access.
- Stage 1 vehicle is a complete vehicle and bodywork not altered

The list above is not exhaustive and there may be other situations where a Bodywork Identification Plate need not be fitted. Contact NSAI if you need further information.

For further information on vehicle categories and bodywork codes, see Annex II of framework directive 2007/46/EC as most recently amended
Link here

This plate must be firmly attached, in a conspicuous and readily accessible position on a part of the body not subject to replacement in use. If possible, this plate should be fitted to the same side of the vehicle as the Body Builder vehicle plate in section 3.1.

This plate shall contain at least the following information:

- Name of manufacturer
- Bodywork Identification Number (should match the Body ID number on the body builder vehicle plate,)
- NSAI AVBB Body Builder number.

The minimum height of the characters used on the Body Identification Plate is 4mm

Example of a Body Identification Plate (this is given as a guide only):

MANUFACTURER'S NAME
Bodywork Identification Number
NSAI AVBB Body Builder Number

3.2.1 Bodywork Identification Number:

Each Body Builder is required to generate a number which uniquely identifies the type of body being fitted. This number must also appear on the manufacturers statutory in section 3.1.

For swap bodies:

- The first two characters shall consist of the bodywork code (see Section3.2)
- All bodyworks intended to be fitted to the swap system shall have a body ID plate fitted with unique body ID code
- All Bodywork Identification Numbers for a type of completed vehicle shall appear on the manufacturers statutory plate (3.1). See sample plate below:

MANUFACTURER'S NAME	
e24*NKS*5515	
Stage 2	
Bodywork Identification Number	
Swap Body 1:	01ABC??
Swap Body 2:	02DEF??
Swap Body 3:	03GHJ??
Swap Body 4:	04KLM??
2800 kg	
3500 kg	
1-1000 kg	
2-1800 kg	

As a minimum, each Body Builder shall:

- Develop a procedure for the generation and issuing of Bodywork Identification Numbers.
- For swap bodies this procedure shall:
    - Provide for the use of the Bodywork Codes for the first two characters of the Bodywork Identification Number.
    - Provide for the inclusion of all Bodywork Identification Numbers on the relevant Body Builder's Vehicle Plate.
- Develop a procedure describing the generation of Bodywork Identification Plates. This procedure can be part of the Vehicle Plate procedure and shall include at least the following:
    - Describe the manufacture of these plates (either in-house or external manufacture).
    - The responsibility for these plates.
    - The layout of these plates.
    - Process for the correction of incorrect plates attached to a body identified during production and in the field.

List of bodywork codes (Extracted from Annex II 2007/46/EC).

01 Flat bed;
02 Drop-side;
03 Box body;
04 Conditioned body with insulated walls and equipment to maintain the interior temperature;
05 Conditioned body with insulated walls but without equipment to maintain the interior temperature;
06 Curtain-sided;
07 Swap body (interchangeable superstructure);
08 Container carrier;
09 Vehicles fitted with hook lift;
10 Tipper;
11 Tank;
12 Tank intended for transport of dangerous goods;
13 Livestock carrier;
14 Vehicle transporter;
15 Concrete mixer;
16 Concrete pump vehicle;
17 Timber;
18 Refuse collection vehicle;
19 Street sweeper, cleansing and drain clearing;
20 Compressor;
21 Boat carrier;
22 Glider carrier;
23 Vehicles for retail or display purposes;
24 Recovery vehicle;
25 Ladder vehicle;
26 Crane lorry (other than a mobile crane as defined in Section 5 of Part A of Annex II of 2007/46/EC as most recently amended);
27 Aerial work platform vehicle;
28 Digger derrick vehicle;
29 Low floor trailer;
30 Glazing transporter;
31 Fire engine;
99 Bodywork that is not included in the present list.

3.3 Trailer specifics

In the case of trailers, the technically permissible mass on the coupling point must be mentioned.

In this case the coupling point is deemed the first axle and numbered '0'. See example below (this is given as a guide only):

MANUFACTURER'S NAME
e24*NKS*5515
Bodywork Identification Number: ABC??? (if required)
39000 kg
0-12000 kg
1-9000 kg
2-9000 kg
3-9000 kg
T-27000 kg*

(*) The symbol 'T' is used for the technically permissible maximum mass on the axle group

3.4 Material Requirement for plates (body ID plate and body builder vehicle plate)

The plate(s) shall consist either of:

(a) a rectangular sheet of metal;
(b) a rectangular self-adhesive label.

Metallic plates shall be fastened with rivets.

If self-adhesive labels are used instead of metallic plate, the labels shall be tamper evident, fraud resistant and self-destructive in case there is an attempt to remove the label.

3.5 VIN (Vehicle Identification Number)

The following general requirements must be adhered to for each vehicle:

- A VIN is required for each vehicle. For a complete vehicle manufactured by the Body Builder, a VIN must be generated by the Body Builder. This may require a World Manufacturers Identifier (WMI), for more information please see the NSAI website.
- The VIN must uniquely and unequivocally identify the vehicle
- It must be marked on the right-hand side of the vehicle chassis in a clearly visible and accessible position
- The method used should prevent the VIN from being obliterated or deteriorated. To this end the VIN must be marked by stamping or hammering
- The height of the characters on the VIN stamped on chassis must be no less than 7 mm
- The use of the letters 'I', 'O' or 'Q' is not be permitted

4. Issuance of completed vehicle Certificates of Conformity (COC):

As a consequence of National Small Series Type Approval (NSSTA), Body Builders shall issue a Certificate of Conformity (COC) for each vehicle in the type approved.

Body Builders Quality Systems and control plans shall provide for:

- **The generation and issuance, on Body Builder company headed paper, of a COC for every vehicle in the type approved.**

- **It must ensure that no vehicle within the type leaves the premises without its COC.**

- **NSAI is sent a copy of each COC issued within 24hrs of issuance. This must be uploaded to an appropriately named folder on NSAI Sharefile. This must consist of the completed COC generated attached with the incomplete COC of the base vehicle**

- **As of 12th September 2016, Revenue now requires that all COC's must be in XML format for registration purposes. More information on e-COC's can be found on Revenues website:** http://www.revenue.ie/en/tax/vrt/certificate-of-conformity.html

There are two main purposes for the COC as follows: It is a statement of compliance of the completed vehicle with the relevant National vehicle approval requirements.

1. It serves the purpose of vehicle registration.

To serve these purposes, the certificate of conformity has to include:

(a) The Completed Vehicle VIN.

(b) The exact technical characteristics of the vehicle (i.e. it is not permitted to mention any range of values in the various entries).

- It is not necessary to repeat any values that have not changed from the base vehicle incomplete COC.

Without the COC, the completed vehicle will not be registered.

4.1 General Description

The certificate of conformity shall consist of two parts.

- SIDE 1, which identifies the particular vehicle and contains a statement of compliance of the particular vehicle, by the manufacturer.
- SIDE 2, which is a technical description of the main characteristics of the vehicle. The template of side 2 is adapted to each specific vehicle category.

The certificate of conformity shall be established in a maximum format A4 (210 × 297 mm) or a folder of maximum format A4. The certificate of conformity shall be designed to prevent forgery. To that end, the paper used shall be protected either by coloured graphics or by a watermark in the form of the manufacturer's identification mark

For COC templates, see Annex IX of 2007/46/EC as last amended. see link here

5. Guide to Conformity of Production (COP) and control plans:

5.1 Conformity of production

Conformity of production is one the cornerstone requirements as regards type approval and series production.
Conformity of Production procedures are required to ensure that there are adequate arrangements in place to ensure that subsequent products produced on a series approval (i.e. NSSTA) continue to meet and conform to the approved type and to monitor that these arrangements continue to be effective during the life of the approval.
Manufacturers must have a detailed quality manual and control plans for each approval in order to demonstrate at initial assessment an ability to ensure COP going forward
The quality manual and control plans should be detailed enough to ensure with a high degree of confidence that compliance with the relevant directive or regulations can be continually met. In conjunction with the quality manual and control plans an onsite visit shall be required along with periodic inspections to ensure continued compliance.

All Body Builders will be subject to at least one COP inspection from NSAI each year (if holder of a series approval) at which time vehicles will be selected for re-test at an ATC.

The Body Builders COP procedure shall, in particular:

a) Ensure the existence and application of procedures for effective control of the conformity of completed vehicles to the approved type.

b) Have access to the testing or other appropriate equipment necessary for checking the conformity to each approved type.

c) Ensure that test or check results data are recorded and that annexed documents remain available for a period of 10 years.

d) Analyse the results of each type of test or check, in order to verify and ensure the stability of the product characteristics, making allowance for variation of an industrial production.

e) Ensure that for each completed vehicle type approved; at least checks based on ATC inspection check as a minimum are carried out.

f) The checks referred to in point (e) above shall also include the verification of the build specifications in relation to the approval and the information required for certificates of conformity (COC).

g) Ensure that any set of samples or test pieces, giving evidence of non-conformity in the type of test or check in question gives rise to a further sampling and test or check. All the necessary steps shall be taken to restore conformity of production.

5.2 Control plans

A control plan is the documented description of those procedures, checks or assigned activities necessary to verify that production units continue to conform to the type approval requirements with regard to specification, marking and performance.

Control plans must be supplied with each series approval application and must be tailored for such. All type approval items relevant to stage of build must be include in control plan. Control plans should contain at least the following:

- Control description i.e. What is been checked e.g. rear underrun installation, coupling installation etc
- Test method i.e. visual check, vehicle test, function check, type approval check, supplier check etc.
- Criteria i.e. pass/fail criteria for inspection and follow up actions as required
- Frequency of checks/inspections carried out
- Department or personnel responsible for checks/inspections carried out
- Reporting -reports for documenting for checks/inspections carried out

An example of a control plan below. This is an example only and manufacturers should design and tailor their own control plan as required

5.3 Example of a Control Plan

Control Plan for NSSTA			
Engineering Approval:	AVBB Number:	Part Number Change Level:	Project Number:
General Base Vehicle Details			
Manufacturer:	Category: N1: ☐ N2: ☐, N3: ☐,	Base Vehicle Type:	
Approval Number:			
Number of wheels and axles:	Number of wheels:	Number of axles:	
Axle configuration:			

Vehicle Details	
Brief description of body work: *(Box body, Tank, Crane etc)*	
Body Builders Unique Code identifying the build	
Approval Number (if available):	
Category:	N1: ☐ N2: ☐, N3: ☐,
Vehicle Body Code: *(See annex 2 of 2007/46/EC)*	BA: ☐, BB: ☐, BC: ☐, BD: ☐, BE: ☐, CA: ☐, CB: ☐, CC: ☐, CD: ☐, CE: ☐, CF: ☐, CG: ☐, CH: ☐, CI: ☐, CJ: ☐, DA: ☐, DB: ☐, DC: ☐ DE☐
Bodywork Code: *(See annex 2 of 2007/46/EC)*	01:☐, 02: ☐, 03: ☐, 04: ☐, 05: ☐, 06: ☐, 07: ☐, 08: ☐, 09: ☐, 10: ☐, 11: ☐, 12:☐, 13:☐, 14:☐, 15: ☐, 16:☐, 17: ☐, 18: ☐, 19: ☐ 20: ☐, 21: ☐, 22: ☐, 23: ☐, 24: ☐, 25: ☐, 26: ☐, 27: ☐, 28: ☐, 29:☐, 30: ☐, 31: ☐

Example of control plan continued

Process Control

(only an example and partially completed. Must to be tailored for actual activities)

Process number	Process name	Machine/ Device Tool	Specification Tolerance	Measurement Technique	Sample		Control Method	Reaction Plan to Non-Conformance *	Record number
					Size	Freq			
1	Bom Check			Review	1				
2	Receiving inspection	N/A	N/A	Certificate	1	100%			
3	Frame assy	Jig # 1		Measure	1	100%			
4	Chassis assy	Jig # 2		Measure	1	100%			
5	Ancillary fit			Checklist	1	100%			
6									

Completed Vehicle Checks

(only an example and partially completed for rear underrun/coupling section below. Must to be tailored for actual activities.)

Description	Legislation/ reference	Inspection type[1]	Frequency	Record Number	Result (Pass/ Fail)	Signed by:
Rear-under Run:	UNECE-R58	1 ~~2~~ ~~3~~ 4 5	100%	RUP-01	Pass	J. hill Quality manager
Couplings:	UNECE-R55	1 2 ~~3~~ 4 5	100%	Coup-01	Pass	J. hill Quality manager
Additional items as required	??					
Additional items as required	??					

*[1] Inspection type key: 1= visual inspection, 2 = vehicle test, 3=function check, 4- supplier check, 5=type approval check

*Details of any non-conformances identified during Process control and Completed Vehicle Checks:

*Relevant Procedure(s) to follow to correct non-conformance(s):

6. Type approval legislation summarised table (Annex IV 2007/46/EC)

	Regulatory act	M1	M2	M3	N1	N2	N3	O1	O2	O3	O4
Sound level	70/157/EEC	*	*	*	*	*	*				
Light duty emissions	715/2007/EC	*	*		*	*					
Fuel tank	R34	*	*	*	*	*	*				
Rear under run	R58	*	*	*	*	*	*	*	*	*	*
Rear reg plate space	1003/2010(EU)	*	*	*	*	*	*	*	*	*	*
Steering	R79	*	*	*	*	*	*	*	*	*	*
Vehicle access	R11-130/2012(EU)	**			**	*	*				
Audible warning	R28	*	*	*	*	*	*				
Mirrors	R46	*	*	*	*	*	*				
Brakes	R13/R13H	*	*	*	*	*	*		*	*	*
EMC	R10	*	*	*	*	*	*	*	*	*	*
Interior fittings	R21	*									
Anti theft	R18 R116 R97	**	*	*	**	*	*				
Protective steering	R12	*			*						
Seat strength	R17 R80	*	**	**	*	*	*				
Seat anchorage	R14	*	*	*	*	*	*				
Seat belts	R16	*	*	*	*	*	*				
External projections	R26 R61	*			*	*	*				
Speedometer reverse	R39	*	*	*	*	*	*				
Plates	19/2011(EU)	*	*	*	*	*	*	*	*	*	*
Installation of lights	R48	*	*	*	*	*	*	*	*	*	*
Towing device	1005/2010(EU)	*	*	*	*	*	*				
Forward vision	R125	*									
Tell tales/controls	R121	*	*	*	*	*	*				
Defrost demist	672/2010(EU)	*	*	*	*	*	*				
Wash wipe	1008/2010(EU)	*	*	*	*	*	*				
Heating systems	R122	*	*	*	*	*	*	*	*	*	*
Wheel guards	1009/2010(EU)	*									
Heavy duty	595/2009(EU)	*	*	*	*	*	*				
Lateral protection	R73					*	*			*	*
Spray suppression	109/2011(EU)				*	*	*	*	*	*	*
Masses and dim	1230/2012(EU)	*	*	*	*	*	*	*	*	*	*
Glazing	R43	*	*	*	*	*	*	*	*	*	*
Tyres	458/2011/EU R30 R54 R117	*** *	** *	** *	*** *	** *	** *	** *	** *	** *	** *
Speed limiters	R89		*	*		*	*				
coupling	R55 R102	*	*	*	*	*	*	*	*	*	*
Flammability	R118			*							
Bus and coach	R107 R66		*	*							
Front impact	R94	*			*						
Side impact	R95	*			*						
ADR	R105				*	*	*	*	*	*	*
Front underrun	R93					*	*				
Pedestrian protection.	78/2009/EC	*			*						
Recyclability	2005/64/EC	*			*						
Air con	2006/40/EC	*			*						
Hydrogen	79/2009/EC	*	*	*	*	*	*				
Gen safety	661/2009EU	*	*	*	*	*	*	*	*	*	*
AEBS	347/2012/EU		*	*		*	*				
LDWS	351/2012/EU		*	*		*	*				
CNG LPG	R67 R110	**	**	**	**	**	**				
Electrical safety	R100	*	*	*	*	*	*				
Cab strength	R29				*	*	*				
E-call	2015/758/EU	*			*						

6.1 Explanatory note and useful links

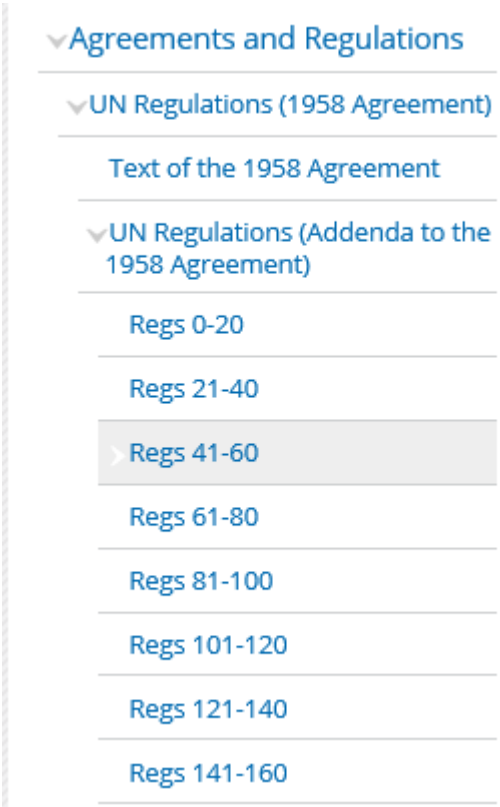
The table on the previous page is a summarised version of the complete list of requirements for categories N, M and O. It's worth noting that some areas are only applicable to certain categories of vehicles.
The 2nd column from the left is the actual regulatory act applicable to each item. Its required that manufacturers have access to the applicable legislation (in so far as it has an affect at their stage of build).

The regulatory act may be a **UNECE Regulatory Act** which is denote by "**R**" e.g. **Rear under run R58**
or
The regulatory act may be a **European Parliament Regulatory Act** denoted by **EC** or **EU** i.e. **Rear reg plate space 1003/2010(EU)**

For access to the UNECE Regulatory acts, see link here:

Step 1 for UNECE Regulatory access
To assist navigation on the UNECE webpage, determine which UNECE Regulation looking for e.g. UNECE R58. Follow the UNECE link above and on this page, to find applicable regulatory act, see the left-hand side of page.
Select "Agreement and Regulations – UN Regulations- and then select the range where the applicable regulation can be found i.e. R58 shall be in the 41-60 range of regulations.

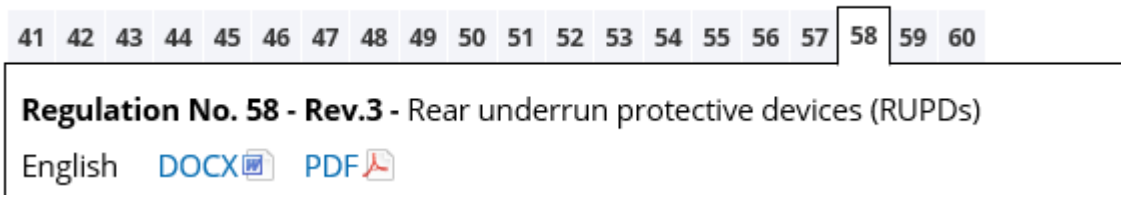
Screen shot:



Step 2 for UNECE Regulatory access

This should then show access to the required regulatory act required as below:
(some regulatory acts may also have amendments from original which may also need to be referred to)

Screen shot:



For access to the European parliament acts, see link here:

Following the link above gives access to all the relevant EU/EC legislative documents.
(some regulatory acts may also have amendments from original which may also need to be referred to)

Other useful links
EU frame work directive: 2007/46/EC, see link here
National standards Authority Of Ireland (NSAI), Automotive certification, see link here