

# **NSAI Licensed Adaptor Scheme**

## **Guidance Document for**

### **Individual Vehicle Approval (IVA)**

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## IVA Guidance for Special Purpose Vehicles

Since the 29th of April 2012 a Special Purpose Vehicle (SPV) is required to be type approved. This legal requirement comes directly from the European Framework for the type approval of motor vehicles, Directive 2007/46/EC. NSAI, the Irish Type Approval Authority has since been issuing IVA (Individual Vehicle Approval) certificates for passenger vehicles which have been adapted and are now classified as a SPV. The aim of this document is to provide procedures and technical requirements to be followed under this scheme.

### Documentation Required to Accompany IVA Applications <sup>(1)</sup>:

**Copy of the Certificate of Conformity (COC) for the vehicle**

**Vehicle IVA Application and Configuration sheet**

**Job Card**

**Drawings, Specifications** *(must be available to NSAI on request)*

**Photographs of the adapted vehicle**

All adaptations as described on the configuration sheet are assessed by NSAI on a case by case basis. NSAI reserve the right to issue/refuse IVA as they deem appropriate.

Details covering Wheelchair Accessible Vehicles (WAV SPV) are not covered in this document. Please refer to the NSAI website for documentation relating to WAV SPV application process.

NSAI may request a recall or inspect vehicles adapted under the scheme as they see fit. The licensed adaptor will be responsible for this recall.

IVA will only be granted for applications submitted that meet all of the administrative provisions and technical requirements.

Please note, it is critical the IVA certificate issued is passed on to the vehicle owner (and dealer as applicable) prior to registration.

The Licensed Adaptor must also produce an IVA sticker/label for each vehicle they adapt as per the template in this document. This sticker/label must be fitted to the vehicle by the licensed adaptor or, where this is not possible, the adaptor must post the finished sticker/label to the customer or dealership to be fitted. The IVA granted to the vehicle is only valid once the sticker/label has been affixed.

**An incomplete application will not be processed further and will be returned to the applicant for completion. Re-submission of the full application will be required after all information is completed.**

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<sup>(1)</sup> list not exhaustive and NSAI could request further items depending on the adaptation(s) conducted

## Specific Document Requirements

Certificate of Conformity (COC) Requirements:	
<b>Required:</b>	A copy of the COC for the vehicle must be submitted with every application.
<b>Notes:</b>	<p>The COC must be legible.</p> <p>The COC must bear the manufacturer's authorised signature.</p> <p>If the COC is missing any information, then the application will not be processed.</p> <p>The COC must be in one of the official languages of the European Community</p>

  

Configuration Sheet Requirements:	
<b>Required:</b>	A completed configuration sheet detailing the adaption work carried out to the vehicle must be submitted with every application.
<b>Notes:</b>	<p>The configuration sheet must be legible.</p> <p>If the configuration sheet is missing, then the application will not be processed and will be returned to the applicant.</p> <p>The customer signature must be requested in all cases for the configuration sheet.</p> <p>A customer email address must be requested. In circumstances where this is not available NSAI will still process the IVA application.</p>

  

Job Card Requirements:	
<b>Required:</b>	A completed job card detailing the work carried out.
<b>Minimum Requirements:</b>	<p>Job number, date of adaption.</p> <p>Dealer name and address, sales person.</p> <p>Sign off: Functionality, test drive if applicable, date code, adaptor sign off, customer sign off.</p> <p>A note to clearly communicate to the customer that all servicing and repairs to be conducted by licensed adaptor.</p>
<b>Notes:</b>	Any information mentioned above that duplicates information specified on the configuration sheet may be omitted from the job card.

**Component Drawings and Specification Requirements:**

<b>Required:</b>	<p>For all adaptor fabricated parts, a drawing must be available upon request.</p> <p>The specifications of all materials and fastening material used must be included in the drawings.</p> <p>These drawings may be retained on ShareFile.</p>
<b>Notes:</b>	<p>Any welding of components requires a valid welding certificate for the person carrying out the welding. This may be requested at any time by NSAI.</p>

**Photograph Requirements:**

<b>Notes:</b>	<p>All photographs are to be colour and of good quality. All photographs must be submitted in image file format. Photographs should be supplied to capture all the details of the adaption performed.</p>
<b>Photographs common to all adaptations:</b>	<ul style="list-style-type: none"> <li>- Adaption specific photographs (clear photos of the adaption, showing all modifications to vehicle systems, see guidelines below).</li> <li>- Statutory plate/VIN marking (vehicle manufacturer's plate/label).</li> <li>- Date code and serial number of part(s) fitted.</li> <li>- Photograph verifying the vehicle was adapted at the adaptors workshop.</li> </ul>

**Additional Photograph to be Retained by the Licensed Adaptor ONLY:**

<b>Notes:</b>	<p>These are additional photos to be kept by the adaptor for their own records. These photos will be inspected by NSAI at audits. These photos do not need to be submitted with an IVA application to NSAI.</p>
<b>Photograph of the IVA sticker/label:</b>	<ul style="list-style-type: none"> <li>- Once NSAI have issued the IVA certificate the adaptor must prepare a sticker/label as per the guidelines in this document.</li> <li>- The adaptor must photograph the finished label and retain this photograph on file.</li> <li>- The adaptor must apply this sticker/label to the vehicle. If this is not possible the adaptor must send the finished sticker/label to the dealership or customer with a letter instructing them to affix it.</li> <li>- The IVA is only valid once this sticker/label is affixed to the vehicle.</li> </ul>

## Photograph Guidelines

Adaption:	Details to be Captured:
<b>Swivel Seats:</b>	<ul style="list-style-type: none"> <li>- The vehicle original front seat anchorage points before any work is carried out.</li> <li>- The vehicle original rear seat anchorage points before any work is carried out.</li> <li>- The vehicle original seat belt anchorage points before any work is carried out.</li> <li>- The laser cut and formed floor frame made in accordance with the design notes in this document.</li> <li>- The vehicle seat belt anchorage points after the adaption is carried out.</li> <li>- The front of floor frame, clearly identifying the securing bolts and capturing as much detail of the seat as possible.</li> <li>- The rear of the floor frame clearly identifying the rear securing bolts and the seat belt securing mechanism, capturing as much detail of the seat as possible.</li> <li>- The swivel mechanism date code and serial number.</li> <li>- Demonstrating the operation of the adaption.</li> </ul>
<b>Hand Controls:</b>	<ul style="list-style-type: none"> <li>- The steering column before adaption.</li> <li>- The pedals before adaption.</li> <li>- The hand controls kit as supplied and any additional components used.</li> <li>- The mounting method on to the steering column.</li> <li>- The mounting method on to the pedals.</li> <li>- The finished vehicle showing the adaption.</li> </ul>
<b>Seat Rail Extensions:</b>	<ul style="list-style-type: none"> <li>- The vehicle original front seat anchorage points before any work is carried out.</li> <li>- The vehicle original rear seat anchorage points before any work is carried out.</li> <li>- The vehicle original seat belt anchorage point before any work is carried out.</li> <li>- The laser cut and formed seat rail extension, clearly identifying the securing bolts.</li> <li>- The rear of the seat rail extensions clearly identifying the rear securing bolts and the seat belt securing mechanism (if modified from original).</li> <li>- The secured in use position demonstrating that the seat belt anchorage is within the designed position (if modified from original).</li> </ul>
<b>Personal Hoists:</b>	<ul style="list-style-type: none"> <li>- The personal hoist kit as supplied and any additional components used.</li> <li>- The wiring used to power the hoist showing the attachment method to the vehicle wiring system and fuse location.</li> <li>- All mountings of the hoist on the vehicle structure showing the use of suitable load spreading plates.</li> <li>- The hoist installed in the vehicle.</li> <li>- Demonstration of the hoist in its in-use position.</li> </ul>

Adaption:	Details to be Captured:
<b>Boot Hoists:</b>	<ul style="list-style-type: none"> <li>- The Boot hoist kit as supplied and any additional components used.</li> <li>- The wiring used to power the hoist showing the attachment method to the vehicle wiring system and fuse location.</li> <li>- All mountings of the hoist on the vehicle structure showing the use of suitable load spreading plates.</li> <li>- The hoist installed in the vehicle.</li> <li>- Demonstration of the hoist in its in-use position.</li> </ul>
<b>Other adaptations not covered above:</b>	<ul style="list-style-type: none"> <li>- The location in the vehicle the adaption is intended to be fitted.</li> <li>- Showing all components before fitting.</li> <li>- Demonstrating the installation in the vehicle.</li> <li>- Showing all mounting points and wiring as applicable.</li> <li>- Demonstrating the operation of the adaption.</li> </ul>

## Procedures for the Adaptions of Special Purpose Vehicles

The particular adaption(s) must be covered under the scope of the workshop licence issued by NSAI. If the adaption(s) are not covered by the workshop licence, the workshop can apply for their licence to be extended to cover this kind of adaption. Until the workshop's licence has been extended, this adaption cannot be carried out by the workshop.

### **All adaptations must be carried out on the registered premises of the licensed adaptor.**

The adaption(s) must be prepared and completed in accordance with the instructions issued by the equipment manufacturer and NSAI guidelines.

Before installation, ***all new*** adaptations must be dated indelibly in a month - year format, e.g. 02/17 (meaning the installation was carried out February 2017). The minimum height of digits is 4 mm.

In the case of transferred adaptations the original date code must be filled in on the configuration sheet. Transfers that are not marked with a date code or serial number please contact NSAI with the IVA number and VIN of the transfer vehicle to check this information on the NSAI database.

- Hand controls greater than 6 years cannot be re-used.
- Swivel seats greater than 10 years cannot be re-used.

Optional marking of transfer date is also permitted. The letters "TF" must be marked as close as possible to that date. This is to avoid confusion with the age of the adaption e.g.

01/13  
TF 01/15  
TF 01/17

In this case the date code of the adaption is 01/13. It was transferred in January 2015 and 2017.



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Before installation, all adaptations being transferred must be inspected for any deterioration of structure, material, operation and paint work (e.g. no surface corrosion). All adaptations must be fit for purpose and in a presentable condition when fitted to the vehicle.

The vehicle must be taken for a test drive to ensure the functionality of the controls fitted.

Minor adjustments to the adaptation(s), if necessary to suit the user of the vehicle, may be carried out.

The workshop prepares the Configuration Sheet for application for Individual Vehicle Approval (IVA) and must submit this with the required IVA documentation. Applications submitted without the required documentation and photographs will be returned.

***NB.** All forms must be provided electronically and in an appropriate file format on ShareFile.*

Final inspection of the vehicle must be carried out and recorded prior to hand over to vehicle owner.

All records must be completed and filed. The adaptor is responsible for the retention of this information for at least 10 years.

Once NSAI have issued the IVA certificate the Licensed Adaptor must prepare a sticker/label as per the guidelines in this document. The adaptor must photograph the finished label and retain the photograph on file. The adaptor must apply this sticker/label to the vehicle. If this is not possible the adaptor must send the finished sticker/label to the dealership or customer with a letter instructing them to affix it. The sticker/label must be affixed as close to the vehicle manufacturer's plate/label as possible.

**The IVA is only valid once this sticker/label is affixed to the vehicle.**

## **List of modifications to the vehicle that require an IVA**

1. Hand controls
2. Swivel seats (driver and passenger)
3. Seat rail extensions (driver and passenger)
4. Seat risers
5. Left foot accelerator
6. Pedal extensions
7. Wheelchair/person hoist
8. Wheelchair storage system

This is not an exhaustive list and adaptations other than those specified above may be granted an IVA. In cases other than those above, the adaptor should contact NSAI prior to carrying out any work.

Explanations:	
<b>New Vehicle:</b>	<p>Means a vehicle:</p> <p style="padding-left: 40px;">that is unregistered;</p> <p style="padding-left: 40px;">or</p> <p style="padding-left: 40px;">which is less than 3 months old when reckoned from its first entry into service or which has travelled less than 3,000 kilometres*</p> <p><i>* as per section 133 of the Finance Act, 1992</i></p>
<b>Special Purpose Vehicle (SPV):</b>	Means a vehicle of category M or N having specific technical features in order to perform a function which requires special arrangements and/or equipment.
<b>Swivel Seats:</b>	<p>A mechanism that allows the seat to rotate out through the door opening. In the case of fitting a swivel seat, the seat belt anchorages must <b>not</b> be located on the swivelling portion of the seat unless certified to do so.</p> <p>Where possible the design of swivel seats should utilise laser cut components as detailed in the design notes section of this document.</p>
<b>Seat Rail Extension:</b>	<p>An adaption which relocates the seat relative to its original anchorage points. The brackets used to relocate the seat must be <b>non-adjustable</b>.</p> <p>Seat rail extensions must not be longer than the length that still allows the seat to reach at least the rearmost position before the adaption. It is intended that the seat is within the positions designated by the vehicle manufacturer while driving.</p> <p>Where possible the design of seat rail extensions should utilise laser cut components as detailed in the design notes section of this document.</p>
<b>Seat Riser:</b>	<p>An adaption which consists of a structure intended to have the function of raising the entire seat. The structure used to fulfil this function shall offer support to the <b>entire length</b> of the original seat rail. Seat risers must be greater than 25 mm.</p> <p>Where possible the design of seat risers should utilise laser cut components as detailed in the design notes section of this document.</p>
<b>Bolts:</b>	Must be of a grade equal to or exceeding those used by the original vehicle manufacturer and of appropriate dimensions.
<b>Bolt Holes:</b>	Slotted holes may be used and are subject to engineering tolerances. These must be kept to a minimum.
<b>Seat Anchorage:</b>	The system by which the seat assembly is secured to the vehicle structure, including the affected parts of the vehicle structure.
<b>Safety Belt Anchorage:</b>	The parts of the vehicle structure or the seat structure or any other part of the vehicle to which the safety-belt assemblies are secured.



<b>Explanations:</b>	
<b>Airbag Electrical System:</b>	All of the electrical connectors associated with the wiring and sensors for the secondary restraint system (Airbag). Any modifications to this system must be noted in detail on the configuration sheet.
<b>Relevant drawings:</b>	This consists of a collection of detailed drawings/sketches/diagrams showing clearly the relevant parts of the design of an adaption. These must be available upon request from NSAI.
<b>Hand Controls:</b>	A hand operated device used to control the operation of the accelerator and brake of a vehicle. Hand controls must be installed in accordance with the manufacturer's instructions.
<b>Person Hoist:</b>	A hoist fitted in the passenger compartment and secured to the vehicle structure. This purpose of this is to lift a person into their seat. Mounting points on the vehicle structure must be appropriately supported with load spreading plates.
<b>Boot Hoist:</b>	A hoist fitted in the boot and secured to the vehicle structure. This purpose of this is to lift a wheelchair into the boot. Mounting points on the vehicle structure must be appropriately supported with load spreading plates.
<b>Wheelchair Storage System:</b>	A roof-top mounted purpose built storage system that can only be used to store a wheelchair.
<b>Left Foot Accelerator:</b>	A device that re-locates the accelerator pedal to the left side of the brake pedal.
<b>Pedal Extensions:</b>	Devices fitted to the original pedals which move the pedal surface significantly closer to the driver.
<b>Date Code:</b>	The date that an adaption is installed in a vehicle for the first time. This date must be inscribed indelibly on the adaption.
<b>Serial Number:</b>	If the component is supplied with a serial number this serial number must be used. Alternatively a serial number must be assigned to each adaption. Serial numbers must be inscribed indelibly on each adaption. The serial number must not be changed e.g. when transferred.
<b>Bill of Materials (BOM):</b>	A list of the raw materials, sub-assemblies, intermediate assemblies, sub-components, parts and the quantities of each needed to manufacture and install the adaption(s). A section for the BOM is given on the Configuration Sheet.
<b>IVA Sticker/Label:</b>	The sticker/label that the adaptor fits to all adapted vehicles. Please see below for a template for this label.
<b>Floor Bracket:</b>	An intermediate component or sub assembly between the vehicle structure and the adapted seat. Where possible the design of floor brackets should utilise laser cut components as detailed in the design notes section of this document.

## IVA Sticker/Label

Each Licensed Adaptor shall attach a 2<sup>nd</sup> or subsequent stage, label/sticker.

This sticker/label must be firmly attached, in a conspicuous and readily accessible position. It must be tamper proof and be close to the base vehicle manufacturer's plate/label on a part not subject to replacement in use. It must show clearly and indelibly the following information in the order listed:

- Manufacturer's name (i.e. Licensed Adaptor's company name) or trademark;
- IVA number.
- VIN
- Date code of adaption(s).
- Serial number of adaption(s)

The minimum height of the characters is 4 mm.

Example of the adapted vehicle sticker/label (this is given as a guide only):

LICENSED ADAPTOR'S NAME
e24*IVA*xxxxx*00
VIN
Date code of adaption(s)
Serial number(s) of adaption(s)

This is the minimum level of information and is a guideline for each Licensed Adaptor. Additional information may be added to the 2<sup>nd</sup> stage sticker/label if required.

## Design Notes

### Swivel Seat Adaptions:

Floor brackets and swivel seat bases must be laser cut and formed to suit the vehicle. If, for technical reasons such as the shape of the vehicle floor, this is not possible an alternative method may be used. These alternatives must be designed in such a way to keep welding to an absolute minimum.

Existing mechanisms that are not of a laser cut design and have previously been certified for use under this scheme may continue to be transferred until such a time they reach expiration.

### Seat Belt Anchorages:

In order to ensure the integrity of the restraint system for an adaption, the following practices should be observed:

1. The floor bracket may have an anchorage for the seat belt buckle or stalk and buckle.

Note 1: In this instance great care should be taken to ensure the integrity of the floor bracket, where the seat belt anchorage point is to the rear of the base plate retaining bolt (original seat retaining bolt in vehicle floor), sufficient upturn plate material or bracing should be in place to accommodate the potential generated loads.

In some vehicles the lower door side anchorage is also located on the seat structure. A similar approach should be used to accommodate these too.



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2. Attach the seat belt buckle receiver to a robust stalk which is in turn fixed to the floor via the seat anchorage bolt. Ensure that the bolt has sufficient thread to allow for the stalk material, e.g. approx + 5 mm.

Note 2: Where possible use a genuine seat belt stalk rather than a fabricated/aftermarket unit. For vehicles with the seat belt attached to the door side, a stalk with sufficient flexibility and adjustment (fore and aft) should be installed.

Note 3: In many instances, the seat belt buckle is attached to the wiring loom and forms part of the CAN bus of the vehicle. As far as is possible, the original buckle and wiring shall be installed.

Where a type approval certificate accompanies the application, the certificate must be for the base, swivel and seat installed. Each component must be identified by part number/approval number on the type approval certificate.

After the adaption is complete, as far as possible the seat belt buckle must be fixed in the same relative location to the seating position as originally designed by the vehicle manufacturer.

### **Rising of Seat Mounting Points:**

The use of spacers between the vehicle structure and the swivel seat floor bracket is not permitted.

If rising of the seat is required for customer needs or to allow for suitable clearance to features on the vehicle floor structure, this can be achieved by appropriate design and forming of the floor bracket.

### **Seat Rail Extensions:**

#### **Number of Plates:**

Where possible seat rail extensions should be composed of a single floor bracket which joins all mounting points on the vehicle structure and all mounting points on the seat structure. Seat rail extensions must be laser cut and formed to suit the vehicle. If, for technical reasons such as the shape of the vehicle floor, this is not possible an alternative method may be used. These alternatives must be designed in such a way to keep welding to an absolute minimum.

Where due to the design of the vehicle and/or seat this is not possible, two rail extensions can be used. A single plate must be used for the left anchorages and a single plate must be used for the right anchorages.

**The use of four separate seat rail extensions is not permitted.**

#### **Adjustability:**

Adjustable/universal seat rails extensions are not permitted. Seat rails extensions must be designed for each specific vehicle floor.



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### **Seat Risers:**

Seat risers must be composed of a single floor bracket which joins all mounting points on the vehicle structure and all mounting points on the seat structure. Seat risers must be laser cut and formed to suit the vehicle. If, for technical reasons such as the shape of the vehicle floor, this is not possible an alternative method may be used. These alternatives must be designed in such a way to keep welding to an absolute minimum.

**The use of spacers between the vehicle structure and the seat rails is not permitted.**

### **Hoists:**

Where an electric boot or person hoist is installed the wiring used must be of an appropriate gauge for the maximum current draw of the lift.

An appropriate fuse must be fitted in the electrical circuit. This fuse must be located as close to the battery as possible.

Where the hoist is mounted by bolts through the vehicle structure suitably sized load spreading plates must be used to help support the vehicle structure.

*All adaptations must be installed in accordance with manufacturer's guidelines and instructions.*