

Film on bus emergency exits

Purpose

This guide provides advice for manufacturers, modifiers, owners and operators of buses about the vehicle standards requirements when applying films (advertising, vandal proofing, tinting and other films) to bus emergency exits.

Introduction

The application of film to windows or other surfaces of a bus is considered to be a minor modification and can be done without approval from the National Heavy Vehicle Regulator (NHVR) or an Approved Vehicle Examiner (AVE).

However, when performing a minor modification, you must ensure the modification does not impact the bus's compliance with the *Heavy Vehicle (Vehicle Standards) National Regulation* and the Australian Design Rules (ADRs).

While for most buses applying film is relatively straight forward, additional consideration is needed when a film is installed over an emergency exit to ensure the emergency exit continues to comply with ADR 44/.. *Specific Purpose Vehicle Requirements* or ADR58/.. *Requirements for Omnibuses Designed for Hire or Reward* (as applicable).

The information in this guide outlines the minimum steps to be followed that will provide satisfactory evidence of compliance with the ADRs in relation to the installation of bus window film.

Vehicle Standards Requirements

When installing film to an emergency exit, there are ADR requirements that must be considered:

- Identification – emergency exits must be clearly identified by a prominent sign inside and outside displaying the words 'EMERGENCY EXIT'. Some exits may also need to indicate the method of opening unless the method is obvious (*Clauses 44.9.5.1 of ADR 44/02 and 58.12.3 of ADR58/00*)
- Ease of use – emergency exits must be able to be opened from the inside and outside of the bus. Limits also apply to the force needed to operate the exit (*Clauses 44.9.4.1.1 and 44.9.4.2.1 of ADR44/02 and 58.12.3 of ADR58/00*).



Typically compliant installation of films

Push-out and Pull-out

Where a film is applied to a push-out/pull-out emergency exit, the film must be cut or a gap left so that the exit can still be pushed/pulled-out without needing to tear the film. Where the push-out/pull-out exit is a window (or other similar type opening) there must be two cuts or gaps in the film, the first between the body of the bus and the closing material/window seal and a second between the closing material/window seal and the glazing.



Figure 1: Push-out emergency exit (inside)
Red line indicates where film should be cut or a gap left



Courtesy of Dave Brown via Flickr
Figure 2: Pull-out emergency exit (outside)
Red lines indicate where film should be cut or a gap left

Breakable

In the case of breakable emergency exits, film is most commonly cut in a grid pattern as well as having a cut or gap around the entire edge of the emergency exit.



Figure 3: Breakable rear exit
Red lines indicate where film should be cut or a gap left



Courtesy of Dave Brown via Flickr
Figure 4: Breakable side exit
Red lines indicate where film should be cut or a gap left

Certification requirements

Any film applied to an emergency exit must be tested and certified that it does not affect the compliance of emergency exits with ADR44/.. or ADR58/.. (as applicable). Films must be tested on the types of emergency exit surfaces to which they will be applied. If a film has not been tested on the type of emergency exit surface it is being applied to, it cannot be applied or certified as compliant.

Testing

To ensure the film does not impact the operation of an emergency exit, testing must be carried out by an appropriately qualified independent certifier. This testing must verify that for every combination of emergency exit type and film type, the emergency exit with fitted film continues to comply with the applicable ADRs.

Push-out and Pull-out

The testing must verify that the exit operates from both inside and outside of the bus. If the ADRs require the exit to operate when a prescribed force is applied, this must also be verified.

Breakable

Testing must verify that the glass can be broken from both inside and the outside of the bus. If the ADRs require the glass to break when a prescribed force is applied, this must also be verified.

Where testing of a film requires destructive testing (break glass exits), type testing is acceptable provided that the range of applicability of the testing can be clearly identified.

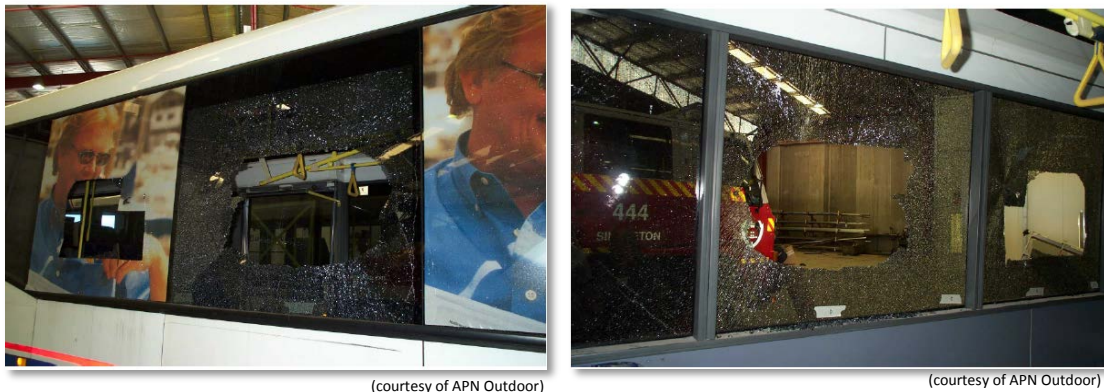


Figure 5 and 6: Comparative break glass exit testing – Testing of a window without film



Figure 7: Comparative break glass exit testing – Testing of a window with film

Type (worst-case) testing

The NHVR accepts that it is not practical to require every emergency exit to be tested. As such, type testing (also known as worst-case testing) is permitted for each emergency exit combination, determined by size, film, glazing material, closing material and type of operation.

For a type test to be acceptable the certifier must:

- identify a range of different size exits which use the same film, type of operation, closing material and any glazing material (as applicable); and
- identify the exit in this range that would be least likely to comply with the requirements of ADR 44/.. and/or ADR 58/.. (as applicable) during operation of the exit under emergency conditions (the worst-case scenario); and
- perform testing, including any necessary destructive testing, on the worst-case scenario.

Certification report

The certification report should include the following minimum information:

- a description of the film that was tested
- a description of the film application or installation requirements
For example, if the applied film requires a gap around the edges and/or to be cut in a grid pattern, this should be stated. Specific instructions such as the location of cuts or dimensions of the grid must be included.
- the certifier's name, company and evidence of their qualifications and suitability for conducting the testing
- a description of the testing procedure used
- if type testing was used:
 - the certifier's justification for why the exit tested was classed as the worst-case scenario; and
 - the range of applicability, including a description of the exit type, sizes, closing material and film combination, covered by the testing. The certification must clearly identify the limits of the exits covered by the certification.
- the date and location of the testing
- signature of the certifier.

Proof of certification

When a bus with emergency exits is inspected, either on-road or at a scheduled vehicle inspection, the operator may be required to prove that any exit fitted with film continues to comply with the applicable ADRs. Given the important safety function of emergency exits, if proof of compliance cannot be provided immediately, the inspection may be failed or the bus prohibited from carrying passengers until proof of compliance is provided.

There are a number of acceptable ways to demonstrate compliance:

1. A copy (paper or electronic) of the film certification report for each emergency exit.
Note: If all exits on a bus are covered by a single certification report, only one copy of the report needs to be carried. If, however, there are different types of exits or films, certification reports for each exit or film must be carried.

2. A label or marking on the film, or affixed between the film and the emergency exit, that :
 - is clearly legible, with characters at least 10mm tall
 - has print sufficiently contrasted to the background colour of the film
 - is positioned to be easily read either from inside the bus or from ground-level outside of the bus
 - includes the following wording:
 - “This film is compliant to ADR44/.. or ADR58/..” (whichever is applicable); and
 - the film manufacturer’s name and qualified independent certifier’s test report number.

Carriage and production of documents

For more information about acceptable methods for carrying documents, see *Compliance bulletin 5 – Carriage and presentation of documents* at www.nhvr.gov.au/ce-bulletins

Complying with national heavy vehicle standards

It is an offence to operate a heavy vehicle on a road if it does not comply with the Section 60 of the *Heavy Vehicle National Law*. Penalties can include on-the-spot fines and/or a defect notice. For more information see *Compliance bulletin 4 – Heavy vehicle defects* at www.nhvr.gov.au/ce-bulletins

About the NHVR

The National Heavy Vehicle Regulator (NHVR) is Australia’s dedicated independent regulator for heavy vehicles over 4.5 tonnes gross vehicle mass.

The NHVR was created to administer one set of rules for heavy vehicles under the Heavy Vehicle National Law, improve safety and productivity, minimise the compliance burden on the heavy vehicle transport industry and reduce duplication and inconsistencies across state and territory borders.

The NHVR has a dedicated Vehicle Standards team to help with modification applications and advise on any technical aspects.

For more information:

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*Standard 1300 call charges apply. Please check with your phone provider

Please note: While every attempt has been made to ensure the accuracy of the content of this Vehicle Standards Guide, it should not be relied upon as legal advice.



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