

# Regulatory Impact Statement: Land Transport Rule: Passenger Service Vehicles Amendment 2012

## Regulatory Impact Statement

### Land Transport Rule: Passenger Service Vehicles Amendment 2012

#### Agency Disclosure Statement

This Regulatory Impact Statement has been prepared by the Ministry of Transport.

It provides an analysis of options to improve the safety regulatory framework for passenger service vehicles, such as buses and taxis. The Passenger Service Vehicles Amendment Rule 2012 (amendment Rule) will update and clarify the Passenger Service Vehicles Rule 1999 in several important safety areas and make compliance and enforcement of some requirements simpler and more consistent.

For one of these safety areas, fire protection on buses, the evidence is likely to understate the incidence of bus fires because bus fires are not well reported. The potential consequence of a bus fire, however, is catastrophic. The main cause of bus fires is poor maintenance in the engine compartment and there is currently no legal requirement to ensure that engine compartments are kept clean to mitigate the risk of fire.

Most of the proposals will result in cost reductions to the industry. The amendment Rule will not impair property rights, market competition, incentives on business to innovate or invest, or override any of the fundamental common law principles (as referenced in chapter 3 of the Legislation Advisory Committee's *Guidelines on Process and Content of Legislation*). The proposal is consistent with the Government's August 2009 statement *Better Regulation, Less Regulation*.

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## **Status quo and problem definition**

1. The Passenger Services Vehicles Rule 1999 (the Rule) sets out the legal requirements for the design and construction of all passenger service vehicles in New Zealand, such as buses and taxis. The Rule enables the public to be assured that any vehicles offering a passenger service in New Zealand are safely designed and constructed. The scope of the Rule also includes privately owned and operated vehicles that have more than 12 seats or that are heavy motor vehicles with more than nine seats.
2. The Rule has been in place for more than a decade, and although amended several times, its requirements need updating. It was originally intended that a full revision of the Rule be undertaken, but the scale of the work required means that the proposed revision will now be undertaken at a later date.
3. Some aspects requiring review and updating, however, can be addressed now rather than later and are included in the proposed amendment Rule. The amendment Rule will make 26 amendments to the Rule to address relatively minor issues that have arisen and which apply to passenger service vehicles.

## **Objectives**

4. The objectives of the proposed amendments are to ensure that New Zealand's requirements continue to reflect the needs of passenger service vehicle manufacturers, operators and users, are in line with current overseas standards and practice, and are able to accommodate changing technology, while ensuring that vehicles continue to be designed and operated safely. This is achieved by updating provisions in the Rule, and removing redundant or unduly restrictive requirements.
5. To achieve the objectives the amendment Rule:
  - makes changes to the requirements for
    - door dimensions and doors
    - entry and exit steps
    - aisle steps and ramps
    - aisle heights
    - sideways and tilting seats;
    - vision from the driving position
    - emergency exits
    - guard rails and partitions
    - fire fighting and fire protection
    - loading, baggage, freight and pushchairs
    - the carriage of wheelchairs
  - prohibits left hand drive vehicles being used as passenger service vehicles
  - updates cross references and definitions.

## **Regulatory impact analysis**

6. During the preliminary impact and risk assessment of the proposed changes, two proposals were identified as needing a regulatory impact statement. These proposals concern fire protection (Proposal 13) and wheelchair restraints (Proposal 21).
7. Comments on the other proposals are contained in the attached appendix.

## Issue one: Fire protection (Proposal 13)

### Status quo and problem definition

8. In New Zealand bus fires are not uncommon and one bus per annum, on average, is destroyed by a fire that starts in the engine<sup>1</sup>. For example in 2008, a Waikato school bus was totally destroyed by a fire starting in its engine and in 2010 an intercity bus was also destroyed by a fire due to a fault with the electrical wiring in the engine compartment<sup>2</sup>.
9. While bus fires can occur anywhere, a key driver for this proposal is the risk of bus fires occurring on the Milford Road (State Highway 94). Since 2002 there have been five reported fires in rear- and mid-engined buses using State Highway 94. One of these, in a bus carrying Singaporean tourists, occurred within the Homer Tunnel. Four of the five engine fires resulted in the bus being destroyed.
10. State Highway 94 is of strategic importance to New Zealand's tourism industry. It presents distinctive problems for dealing with any vehicle fires because the area in which the buses travel includes a steep grade and is remote. The NZ Transport Agency's risk analysis has identified that the risk of fire while travelling from Milford to the tunnel in the summer is significant because of the steep uphill gradient, high bus numbers and high summer temperatures which exacerbate temperatures within rear bus engine compartments.
11. Recent inspections of buses using State Highway 94 found a number of common areas of concern with fuel and oil leaks (approximately ten percent of buses inspected (28) had oil leaks and five buses had fuel leaks). Even new buses are at risk as the new emissions controls require engines to operate at hotter temperatures than other buses already in the fleet.
12. There have been no fatal bus fires in New Zealand and while the risk might, therefore, be considered low, the potential consequences of a bus fire could be catastrophic. The incidence and severity of the fires that have occurred underline the importance of minimising the risk of fires occurring.
13. Bus fires are also costly events, not just to the bus itself, but also to other property, including the road surface. Costs are also incurred in time and inconvenience for passengers and other road users and the deploying of emergency services.
14. The NZ Transport Agency has been working with New Zealand Police and the Bus and Coach Association in considering workable options for reducing the risk to safety from fires occurring, particularly on buses using the Homer Tunnel.
15. A German review of motor coach fires has found that:

'Most analyzed fires started in the engine compartment and spread...very fast. The extinguishing attempts of the bus drivers and persons passing by

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<sup>1</sup> As it is not mandatory to report non-injury fire incidents, information about bus fires either come from the NZ Transport Agency or the media, or the incident goes unreported.

<sup>2</sup> 'Hamilton School Bus Goes Up in Flames', Waikato Times, 27 November 2008, 'Fires destroy two buses in two days', The Press, 22 March 2010

have been unsuccessful in the majority of the incidents. Nearly all fires started while the bus was being driven...<sup>3</sup>

16. A meeting in 2010 of the NZ Transport Agency, NZ Police and the Bus and Coach Association identified a need to re-introduce the requirement for clean engine compartments back into the Rule. Bus and Coach Association representatives said that removing the requirement to have clean engine compartments in buses had increased the build-up of oil, fuel and roadside dirt around engine compartments, resulting in increased risk of an engine compartment fire<sup>4</sup>.
17. The lack of a strict requirement and responsibility for a passenger service vehicle operator to ensure engine bay cleanliness and maintenance to mitigate the risk of fire is a gap in the safety regulatory framework. Currently, the Rule's fire protection requirements concern the design and materials of a passenger service vehicles engine compartment.
18. The requirement in the Compliance Rule<sup>5</sup> that a vehicle must be safe to be operated is too general to effectively address the risk of an engine compartment fire and is likely to lead to disputes. Similarly, operator responsibility in the Rule is to comply with the Rule<sup>6</sup>, but the Rule does not make operators responsible for maintaining a clean engine compartment.
19. Engine maintenance is one of the more important factors in preventing bus fires<sup>7</sup> and keeping engines and engine compartments clean should be routine maintenance. However, recent inspection evidence shows that basic safety requirements are not being met in this area. A NZ Transport Agency investigation commented "...as with the last three [bus fires]...there have been issues with vehicle maintenance that, if improved, may have stopped or not caused the fires".
20. Although the Vehicle Inspection Requirements Manual<sup>8</sup>, used for in-service certification of buses, reproduces the provision of the Rule that refers only to design and materials, it also includes as a reason for a Certificate of Fitness rejection, "fuel, oil or other combustible materials have accumulated or dripped on to a high temperature surface within the engine compartment"<sup>9</sup>. Due to this error, some vehicle inspectors may take account of engine bay cleanliness; however, there is no legal support for rejection on this basis as the Rule does not include engine maintenance.
21. If the engine maintenance reason in the manual is used for a Certificate of Fitness rejection, disputes are likely to occur in future because legally correct

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<sup>3</sup> "Motor Coach Fires - Analysis and Suggestions for Safety Enhancement", National Highway Traffic Safety Administration, <http://www-nrd.nhtsa.dot.gov/pdf/nrd-01/esv/esv19/05-0094-O.pdf>

<sup>4</sup> The Passenger Service Vehicle Construction Regulations 1978 contained maintenance and cleanliness provisions. When these regulations were superseded by the Passenger Service Vehicle Rule 1999, the maintenance and cleanliness provisions were not carried forward into the Rule.

<sup>5</sup> Compliance Rule Section 7.4

<sup>6</sup> Passenger Service Vehicle Rule, Clause 10.1

<sup>7</sup> See, for example, 'Bus Fire Safety', Section 4.2.3: Maintenance, SP Report 2008:41, SP Technical Research Institute of Sweden, 2008, 113pp

<sup>8</sup> Commonly known as the 'VIRM'

<sup>9</sup> Sections 13-1 Engine and transmission: Reasons for rejections

Certificate of Fitness failures will be more important to operators due to the pending Operator Safety Rating scheme<sup>10</sup>. Legally, a vehicle inspector may not fail a vehicle due to maintenance issues, but can only make a recommendation.

22. If the Rule remains unchanged, the Vehicle Inspection Requirements Manual will have to be amended by removing “fuel, oil or other combustible materials have accumulated or dripped on to a high temperature surface within the engine compartment” as a reason for a Certificate of Fitness rejection. This would undermine advice to the industry that maintaining a clean engine compartment is important in mitigating the risk of an engine fire.
23. Moreover, Certificate of Fitness inspections only occur twice a year. They do not cover the rest of the year when the operator’s maintenance effort is what determines a vehicle’s condition and safety. On-road vehicle inspections do occur, but legally, New Zealand Police are not able to require operators to keep engine compartments clean. Only recommendations can be made with no penalty if they are not followed.
24. The NZ Transport Agency has tried to mitigate the risk of bus fires in the Milford area by disseminating information to all known tourist coach operators that use State Highway 94. It sent a letter in December 2011 providing advice for drivers and operators intending to use the highway over the summer tourist season. The NZ Transport Agency and New Zealand Police subsequently conducted roadside inspections in the Milford area in December 2011, January, February and March 2012. As mentioned previously, the inspections found a number of issues with some passenger vehicles.
25. The need to mitigate the risk of bus fires, however, is not restricted to the Milford area. Bus fires also occur in cities. For instance, a bus was extensively damaged by an engine fire on Auckland’s Northwestern Motorway in April 2012<sup>11</sup>. The problem is a national issue rather than just a regional one.
26. The options for addressing the risk of bus fires, particularly on State Highway 94, have been considered at two Bus and Coach Association conferences which the previous Minister of Transport attended. The Minister’s office has been regularly briefed by the NZ Transport Agency on progress towards an agreed solution. The NZ Transport Agency’s Chief Executive has also discussed the bus fire problem and the direction being taken with the Prime Minister in a tourism capacity.

### Objective

To make bus travel safer by reducing the incidence of bus fires.

### *Options:*

- Require that the engine compartments of heavy rear- and mid-engined buses be kept clean and well maintained and introduce additional measures to reduce the risk of electrical fires resulting from the short-circuiting of battery terminals or leads

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<sup>10</sup> The Operator Safety Rating scheme, as set out in Land Transport Rule Operator Safety Rating 2008, encourages and recognises compliance with land transport legislation, is public, and enables enforcement efforts to be targeted at operators with poorer records of compliance with legislation and who constitute a greater safety risk.

<sup>11</sup> ‘Bus Catches Fire in Auckland’, Bus News, 16 April 2012

- Mandate fire suppression equipment on heavy rear- and mid-engined buses
- Fit all road tunnels with fire suppression equipment
- Retain the status quo

*Option one: Require that the engine compartments of heavy rear- and mid-engined buses be kept clean and well maintained and introduce additional measures designed to reduce the risk of electrical fires resulting from the short-circuiting of battery terminals or leads – preferred option*

27. This option will permit more effective enforcement of maintenance and address the risk of bus fires by making an explicit obligation on operators to ensure there is no build-up of combustible material in the engine compartments. Any build-up of fuel, oil or other combustible material will have to be cleaned away and the clearance space between any hot engine parts and the fire-resistant lining of the engine compartment (often stipulated as a minimum distance by the engine manufacturer) will have to be maintained to ensure that the clearance distance is not reduced<sup>12</sup>.
28. Adding these clean engine bay requirements into the Rule will reduce the risk of a fire starting in the engine bay, assist with vehicle inspections (by allowing other faults to be seen more easily) and enable more effective in-service and roadside enforcement.
29. The option targets rear and mid-engined buses because they are identified as the buses at risk, from reports about bus fires.
30. The Rule requires insulation of electrical cables<sup>13</sup> but does not address two other known causes of electrical fires. These are short-circuits resulting from damaged battery cables connected to a battery that is able to move around and items falling across battery terminals. The option, embodying good engineering practice, protects against electrical fires by requiring that all batteries must be well secured<sup>14</sup> and easily accessible, and that battery terminals and leads must be protected against the risk of short circuit.
31. The option permits maintenance requirements to be specifically included in the Vehicle Inspection Requirements Manual with robust legal backing, which is necessary for enforcement purposes.
32. The option is supported by the Bus and Coach Association because it is relatively inexpensive for bus operators to comply with the requirements to maintain clean engine compartments and bus operators can see the economic benefits in maintaining clean engine compartments.
33. For passenger service vehicle operators who maintain clean engine compartments, the option does not impose any additional costs. Operators who currently do not clean their vehicles' engines will incur a cost. However, there will

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<sup>12</sup> Over time, linings can absorb combustible material, may sag or work loose and can come into contact with heat sources.

<sup>13</sup> Passenger Service Vehicles Rule Clause 6.4(3) relates to electrical cables, not battery terminals. It is not mandatory to insulate battery terminals.

<sup>14</sup> Currently, the Rule does not require a battery to be secured nor is a loose battery a reason for a Certificate of Fitness rejection.

be cost savings from preventative maintenance in a key vehicle cost area (engine and transmission) as opposed to more costly maintenance at less frequent intervals and in some cases rebuilds after fires have occurred. There will also be cost savings for the operators affected by the option because engines in a clean engine compartment run cooler. The level of the benefits is impossible to estimate with any accuracy, but will be positive.

34. The requirement for protection against electric fires has a lead time and has not been made retrospective as the requirement for easy accessibility may be a problem for some existing vehicles and require them to be modified, which would be an additional cost.
35. The option also enables the NZ Transport Agency to manage residual risks of bus fires without significant infrastructure investment at a time when funding is significantly constrained.
36. The proposed implementation date of 1 October 2012 provides a three-month lead-in time for operators to adopt, if they have not already, what is essentially good engineering practice.
37. Without this explicit requirement, the Rule does not support enforcement, either in-service at Certificate of Fitness assessments or during roadside inspection by the Police Commercial Vehicle Investigation Unit.

*Option two: Mandate fire suppression equipment on heavy rear- and mid-engined buses*

38. It is possible to mandate fire suppression equipment on heavy rear- and mid-engined buses. Estimated to cost approximately \$7,000 per vehicle, this option is not considered to be feasible due to the cost, although it could be a solution, perhaps for specific routes such as State Highway 94, in the long term.

*Option three: Fit all road tunnels with fire suppression equipment*

39. While some tunnels have fire suppression equipment, the main problem tunnel, the Homer tunnel, does not and this would be an expensive installation costing in the order of several million dollars. This option is ruled out on the basis of cost and the fact that fires also occur elsewhere on the roading network.

*Option four: Retain the status quo*

40. The status quo does not adequately address the risk of fires on passenger service vehicles. Many operators currently do not take essential safety measures in this area of fire risk mitigation, which is acknowledged by the Bus and Coach Association.

## **Issue two: Wheelchair restraints (Proposal 21)**

### **Status quo and problem definition**

41. Currently, there is no mandatory requirement to fit wheelchair restraint systems on passenger service vehicles that carry wheelchair users. Where wheelchair restraints systems are fitted in New Zealand into a passenger service vehicle, the vehicle must meet safety criteria set out in the Rule.

42. It is current practice for passenger service vehicles that carry wheelchair passengers to provide head supports for rearward-facing wheelchairs, although it is not a requirement<sup>15</sup>. Light passenger service vehicles<sup>16</sup>, such as taxi vans, may be fitted with equipment to transport wheelchair passengers either forward-facing or rearward-facing. At present heavy passenger service vehicles<sup>17</sup>, such as buses, are designed to only carry rearward-facing wheelchair passengers.
43. Modifications carried out in New Zealand must be certified in accordance with an approved vehicle standard, which specifies that wheelchair restraints must be fitted. However, the standard, as part of the Low Volume Vehicle Code<sup>18</sup>, does not apply to imported vehicles that are fitted with wheelchair restraint systems overseas.
44. The risk of having unrestrained wheelchair passengers in passenger service vehicles needs to be addressed<sup>19</sup>. In the event of a crash or even heavy braking, movement of the wheelchair could cause easily preventable injuries to the wheelchair passenger or other passengers. As seats for other passengers are fixed to the floor of the vehicle, the status quo does not afford wheelchair passengers a similar level of safety.

### Objective

To make the carriage of wheelchair users safer in passenger service vehicles.

### *Options:*

- Require wheelchair restraints to be provided in all passenger service vehicles that are designed to enable passengers in wheelchairs to travel facing forward and in light passenger service vehicles that are designed for rearward-facing wheelchairs and require spaces designed for rearward-facing wheelchairs to be fitted with headrests
- Retain the status quo

*Option 1: Require wheelchair restraints to be provided in all passenger service vehicles that are designed to enable passengers in wheelchairs to travel facing forward and in light passenger service vehicles that are designed for rearward-facing wheelchairs, and require spaces designed for rearward-facing wheelchairs to be fitted with headrests – preferred option*

45. This option will require light passenger service vehicles, which are designed to carry wheelchair users to have restraint systems that comply with the Rule,

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<sup>15</sup> Head supports are required if a restraint system for a wheelchair is fitted and the passenger's head would otherwise be against a window, bulkhead or partition.

<sup>16</sup> A light vehicle is defined as having a gross vehicle mass of 3500 kg or less.

<sup>17</sup> A heavy passenger service vehicle is defined as having a gross vehicle mass exceeding 3500kg.

<sup>18</sup> The Low Volume Vehicle Code provides the ability to modify vehicles already in New Zealand to standards developed by Low Volume Vehicle Technical Association and the NZ Transport Agency without the prohibitive costs of laboratory testing and/or certification to prove compliance with international standards referenced in the Rule.

<sup>19</sup> The risk applies primarily to light passenger service vehicles as restraints are not required in heavy passenger service vehicles as long as adequate head support is provided and the wheelchairs are positioned rearward-facing.



whether the passenger faces forwards or backwards. In addition, designs in which the wheelchair user faces backwards must provide a backrest head support.

46. Heavy passenger service vehicles designed to carry wheelchairs with the passenger facing forwards must also have restraints fitted. It remains optional to fit a wheelchair restraint system where the passenger faces backwards. However, in this case a backrest head support is required. Any restraint system fitted will still have to comply with the Rule.
47. Currently, heavy passenger service vehicles are not being designed to carry passengers in wheelchairs facing forward. Should this occur in future, this option will ensure that a wheelchair restraint system will need to be provided<sup>20</sup>. If a forward-facing wheelchair space is provided, the cost of a wheelchair restraint system is estimated to be no more than \$1,500 per vehicle. This cost is small relative to the income earned per vehicle, which ranges between \$30,000 and \$140,000 per annum. Provision for forward-facing wheelchairs is not a desired option, however, as this affords a lower level of safety for the wheelchair passenger than a rearward-facing position and increases the likelihood of injury.
48. The option will ensure that any new vehicles, including any imported buses, entering the passenger services fleet which are intended to carry rearward-facing wheelchair passengers must also provide head supports.
49. Privately owned and operated vehicles that have a wheelchair restraint system are not affected by this option, unless they are passenger service vehicles containing more than 12 seats<sup>21</sup> or are heavy vehicles with more than nine seats.
50. This option will also ensure that any imported heavy vehicle already equipped to carry wheelchair passengers will meet the same safety standards as vehicles manufactured or modified in New Zealand. It is estimated that fewer than 10 percent of imported fully built-up heavy vehicles (about 35 vehicles), will require modifications and be affected by this option.
51. Funding implications have been considered. There are no additional costs for passenger service vehicle operators for their current vehicles as the new provisions will not be applied retrospectively<sup>22</sup>. The proposed requirements are also unlikely to significantly affect the cost of a new vehicle, whether it is fitted out in New Zealand or overseas.
52. The wheelchair restraint provisions in the option are similar to those in Australia, Europe and United States of America.

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<sup>20</sup> Some wheel chair passengers may prefer a forward-facing position. For example, wheelchair users with limited upper body movement may find it easier to anticipate upcoming bus stops, or view an on-board information system if they are facing forward.

<sup>21</sup> Fitting light vehicles with more than 12 seats, such as jumbo vans, with a wheelchair restraint system is done in accordance with the Low Volume Vehicle Code.

<sup>22</sup> Light passenger service vehicles that have a wheelchair restraint system fitted in New Zealand must currently meet the approved standard and hence comply with the option. The current practice for heavy passenger service vehicles is also consistent with this option.

53. The following table summarises the current situation and the preferred option:

<b>Restraints</b>		
	Current	Option 1
<i>Heavy vehicles</i>		
Forward-facing	Optional but, if fitted, must comply with Rule	Mandatory
Backward-facing		Optional, but, if fitted, must comply with Rule
<i>Light vehicles</i>		
Forward-facing	Optional but, if fitted, must comply with Rule	Mandatory
Backward-facing		
<b>Head supports</b>		
	Current	Option 1
<i>Heavy vehicles</i>		
Forward-facing	Must be fitted under certain conditions <sup>23</sup> , if a restraint is fitted	Must be fitted under certain conditions <sup>23</sup>
Backward-facing		Mandatory
<i>Light vehicles</i>		
Forward-facing	Must be fitted under certain conditions <sup>23</sup> , if a restraint is fitted	Must be fitted under certain conditions <sup>23</sup>
Backward-facing		Mandatory

54. The option ensures all future passenger service vehicles carrying wheelchair passengers will have the same level of safety as the current passenger service vehicles providing this service. The benefits over time in terms of injuries prevented are expected to exceed costs<sup>24</sup>. Other feasible options to provide a similar level of safety for wheelchair passengers as for other passengers are unknown. The preferred option is low cost and has been accepted by the New Zealand bus and coach industry.

*Option 2: Retain the status quo*

55. The status quo does not provide wheelchair passengers with a similar level of safety to that of other passengers on passenger service vehicles. It is also likely that in the event of a crash or even heavy braking, movement of the wheelchair could cause easily preventable injuries to the wheelchair passenger and/or other passengers.

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<sup>23</sup> If a restraint system for a wheelchair and passenger is fitted, a head support is required if the back of the wheelchair passenger's head would be against a window, bulkhead or partition.

<sup>24</sup> Over the life of the vehicle (25 years) there is an estimated benefit of \$1,500 against an initial cost of \$500 for backrest head support for rearward-facing wheelchair passengers.

## Consultation

56. The NZ Transport Agency publicly notified and consulted on the two proposals, which are included in the amendment Rule in accordance with section 161(2) of the Land Transport Act 1998. Prior to completing a consultation draft of the proposals, the NZ Transport Agency consulted with several stakeholder groups, including the Bus and Coach Association and other interested industry groups, the Low Volume Vehicle Technical Association Incorporated, CCS Disability Action and other disability interest groups.
57. The NZ Transport Agency published a notice of the Minister of Transport's intention to make the proposed amendment Rule in metropolitan daily newspapers in Auckland, Hamilton, Wellington, Christchurch and Dunedin on 24 September 2011 and in the Gazette on 29 September 2011 inviting submissions by 4 November 2011. The submission period was six weeks.
58. The NZ Transport Agency also published the public consultation (yellow) draft amendment Rule on its website and sent notification of the availability of copies to about 800 groups and individuals who registered an interest in the amendment Rule, relevant stakeholder organisations, government organisations, government departments and agencies, libraries and transport organisations.
59. The NZ Transport Agency analysed and took into account the nine submissions received from public consultation, including those from NZ Bus, Man Automotive Imports NZ and the Bus and Coach Association, which supported the two proposals. No submissions were received from disability interest groups and no submissions opposed the two proposals.

## Conclusions and recommendations

60. The recommendation is to implement the preferred options for resolution of the two issues identified and as set out above. Those options are:
  - Fire protection: Require that the engine compartments of heavy rear- and mid-engined buses be kept clean and well maintained and introduce additional measures designed to reduce the risk of electrical fires resulting from the short-circuiting of battery terminals or leads
  - Wheelchair restraints: Require wheelchair restraints to be provided in all passenger service vehicles that are designed to transport forward-facing wheelchair occupants and in light passenger service vehicles that are designed to transport rearward-facing wheelchairs; and require spaces designed to transport rearward-facing wheelchair occupants to be fitted with headrests.

## Implementation

61. The proposed changes will come into force on 1 October 2012. This provides a three-month lead-in time from the *Gazette* notification for operators to meet the new rule requirements.
62. The NZ Transport Agency will advise the vehicle industry (manufacturers, importers, operators) and other interested groups of the signing and availability of

the amendment Rule. A factsheet and questions and answers will be published, along with the amendment Rule, on the NZ Transport Agency's website.

63. For the fire protection proposal, the NZ Transport Agency and NZ Police will continue to conduct roadside inspections on State Highway 94 during next summer's tourist season for engine compartment maintenance and cleanliness. A lack of compliance with the proposed change to the Rule will be taken to indicate a likely wider issue than just State Highway 94. Should this occur, the NZ Transport Agency and NZ Police will undertake planned inspections elsewhere, in addition to routine roadside inspections, specifically targeting engine compartment maintenance and cleanliness.

#### **Monitoring, evaluation and review**

64. The change in the Rule for the fire protection proposal will be monitored by noting the number of reported fires on heavy rear- and mid-engined buses, which are expected to be eliminated.
65. For the wheelchair constraints proposal, the measure to be monitored will be the number of passenger injuries due to unrestrained wheelchairs, which is expected to be zero. The NZ Transport Agency will be requesting information from the Accident Compensation Corporation and disability groups.
66. The NZ Transport Agency will review the proposed changes one year after implementation. If there are no reported bus fires on heavy rear- and mid-engined buses or passenger injuries due to unrestrained wheelchairs, the next review will be conducted by the NZ Transport Agency after two years.

**Problem definition and cost and benefit comments of the other proposals**

No.	Proposal	Problem definition	Costs	Benefits
1	Extend the scope of an exception that allows some passenger service vehicles to have a lower minimum door entry height than is otherwise required by the Rule.	Currently, the Rule does not allow standees on these mass produced buses which have a minimum door height of 1650 mm, not more than 25 passenger seats and a gross vehicle mass not exceeding 7000 kg. The Rule requirement relates to door entry height and not aisle space so the requirement for no standees is not relevant.	This is a relaxation of an existing requirement and will not impose any costs upon industry or society.	The amendment would allow bus operators to better utilise these buses for example, as school buses.  The amendment would also remove the need to issue individual exemptions to allow standees.
2	Quantify requirements for power-operated doors in passenger service vehicles to address the risk of the door trapping or injuring passengers.	The current performance based requirement has not been interpreted or checked consistently. Reports of passengers being injured and trapped have come to the NZ Transport Agency's attention.	There may be small additional maintenance cost associated where problems are found with more consistent testing.	Improved safety of passenger service vehicle power-operated doors.

No.	Proposal	Problem definition	Costs	Benefits
3	Allow all passenger service vehicles to be equipped with speed-sensitive locks that prevent doors opening while the bus is travelling above a certain speed.	Speed-sensitive or other automatically operating central-locking devices are not permitted to be used on passenger service vehicles. This technology is now available and appropriate for passenger service vehicles as an additional safety feature.	This equipment will be not be required but may be optionally fitted at a cost to bus operators.	This equipment is an additional safety feature which will lower the risk of passengers falling from a moving bus.
4	Replace the term "non-slip" with "slip resistant" in relation to the requirement for the surfaces of steps, aisles and ramps in passenger service vehicles.	Steps and ramps are currently required to have a non-slip surface finish. The 'non-slip' terminology is not aligned with local and overseas standards which makes it difficult for constructors to obtain an assurance that a surface complies with the Rule.	This change in terminology will have no cost.	The terminology change will better specify the requirement and thereby assist compliance.
5	Correct an error in the Rule relating to the use of extending steps for access to passenger service vehicles, and require a driver-warning system to indicate if the steps are extended when the vehicle is moving.	The current Rule provides for manually operated extending steps on the side of a passenger service vehicle but, due to an error, limits the extension of the steps to 20 mm. The intention is that steps should extend no further than 20 mm when the vehicle is moving.	There will be a relatively small cost associated with the driver-warning system, if required.	The Rule amendment will give effect to the intended provision for manually operated extending steps.

No.	Proposal	Problem definition	Costs	Benefits
6	Allow heavy vehicles to be fitted with sideways-facing seats that do not comply with requirements for armrests, if the seats are designed to fold away to allow wheelchairs or pushchairs to be carried.	It is not practical for sideways-facing folding seats to meet the requirements for armrests. Folding seats allow some areas of the vehicle to accommodate either seated passengers or wheelchairs or pushchairs.	The provision imposes no cost.	This would allow more flexible vehicle configurations which can better accommodate the needs of passengers.
7	Allow tilting seats as an alternative to folding seats.	Some seats are designed to tilt, rather than fold, and are suitable where folding seats are now permitted.	No cost.	This would allow more flexible vehicle configurations.
8	Better specify the vision from the driving position so that a driver must have a clear view of the interior of the vehicle. Remove provisions that may restrict the use of cameras to assist this.	Current requirements specify the view that the driver must have of passengers inside and outside the vehicle but do not specify that the view must be clear. Conditions on the use of cameras are redundant or unnecessarily restrictive.	This refinement clarifies the intent in the Rule and should not impose any additional costs.	Better specification would ensure safe design and assist compliance.
9	Amend the emergency exit signage requirements that apply to passenger service vehicles.	The Rule requires specific signage for every exit used in an emergency. This is an error, as the signage requirement was only intended to apply to power-operated doors and dedicated emergency exits.	No costs are expected to be incurred apart from the routine Vehicle Inspection Requirements Manual updating costs.	The requirement for less signage is expected to lower compliance costs.

No.	Proposal	Problem definition	Costs	Benefits
10	Relax the requirement that specifies the wording for emergency signage.	The Rule contains a prescriptive wording requirement for emergency exit signage which prevents the use of commercially available products that otherwise meet the objective of the Rule.	No costs are expected to be incurred apart from the routine Vehicle Inspection Requirements Manual updating costs.	The use of widely available products is expected to lower compliance costs.
11	Specify a threshold of 150 mm for the gap between an emergency exit window and the rear of the seat in front of it before a permanent shelf must be fitted to cover the gap.	The Rule requires any gap between the emergency exit window and the rear of the seat in front of it to be covered by the fitment of a permanent shelf. Where the gap is too small to affect the safe egress of passengers in an emergency, this requirement is not necessary.	There are no costs associated with this proposed amendment.	Unnecessary shelves will not have to be fitted, and this will reduce compliance costs.
12	Clarify the requirements for fitting partitions or guard-rails in front of seats for occupant protection. Provide two exceptions from this requirement: for seats fitted with a seatbelt and where the seat is at the rear of a heavy vehicle and facing an aisle.	A forward barrier is required for all forward-facing seats. No measurement is specified in the Rule for the distance in front of a seat that the barrier must be positioned, leading to inconsistent application of the Rule.	There are no costs associated with this proposed amendment.	The removal of unnecessary requirements and clarification of interpretations.



No.	Proposal	Problem definition	Costs	Benefits
14	Reduce the risk of theft of, or interference with, fire extinguishers carried in passenger service vehicles, without decreasing the level of fire preparedness.	The current requirement for the fire extinguisher to be clearly visible to passengers risks vandalism and tampering. The amendment gives the option of signage, rather than the extinguisher itself, being clearly visible, and allows the extinguisher to be stored in a container.	Expected to be cost neutral. Any costs incurred by taking up the options should be offset by a reduction in vandalism and theft.	Lower fire extinguisher vandalism and tampering costs for bus operators.
15	Remove the requirement specifying the percentage of mass that must be carried on the front axle.	The Rule requires a minimum of 25 percent of the vehicle mass to be carried on the front axle. This requirement is specified in the Vehicle Dimensions and Mass Rule as 20 percent for heavy rigid vehicles. There is no need for a different requirement for heavy vehicles in the Rule, and no need to specify this figure for light vehicles. The Rule currently restricts passenger service vehicle design options.	There are no costs associated with the change.	More flexibility available for passenger service vehicle designs.
16	Clarify the requirements for the restraint of baggage and freight.	The current requirements for the restraint of baggage and freight are unclear and duplicated. This creates confusion and makes compliance and enforcement difficult.	There are no expected costs with this change.	The clarification is expected to improve the level of compliance and simplify enforcement.

No.	Proposal	Problem definition	Costs	Benefits
17	Open up the use of the pushchair area, where provided, and not required by pushchairs, to other users.	The Rule currently requires that a passenger service vehicle intended to carry a pushchair have a dedicated area for this purpose. There is no reason that this area should not be available for other use when it is not required for pushchairs.	There are no expected costs with this change.	This will allow better utilisation of space and aligns the Rule with what is happening in practice.
18	Clarify that the requirements for passenger service vehicle tow-bars apply to light passenger service vehicles.	The provision refers to 'motor vehicles', so overlaps with requirements for heavy passenger service vehicle tow-bars in the Heavy Vehicle Rule.	No additional costs are expected from this change.	The rules will be clearer and requirements for heavy passenger service vehicle tow-bars will be in one place.
19	Clearly state that left-hand-drive vehicles may not be used as passenger service vehicles.	A passenger service vehicle must not have a seat to the right of the driver's seat. However, it would be possible for a left-hand drive vehicle to comply with this if a seat were removed, which is an unintended loophole.	There are no costs associated with this change.	The amendment will give operators certainty and support enforcement of this condition as it is applied to left-hand drive vehicle permits under the Steering Systems Rule.
20	Replace the terms 'certifier' and 'authorised' with the terms 'vehicle inspector' and 'appointed', as used in the Vehicle Standards Compliance Rule.	Outdated terms are used in the Rule, which make it inconsistent with the Vehicle Standards Compliance Rule and may cause confusion.	There are no costs associated with this change.	The Rules would use consistent terms, which would avoid uncertainty or doubt.

No.	Proposal	Problem definition	Costs	Benefits
22	Give heavy passenger service vehicles, carrying only seated passengers, the option of having their Certificate of Loading information displayed as a combination of adult passengers and primary or intermediate school pupils.	The Rule currently only provides this option for light passenger service vehicles. The option is also of value for some heavy passenger service vehicle operations.	There are no costs associated with this change.	Heavy passenger service vehicle operators transporting school groups which include adult supervisors will benefit from this loading calculation.
23	For vehicles entering service from 1 December 2012, exclude standing passengers from an area extending at least 300 mm inboard of the area swept by a door. This area is to be marked and signposted, and taken into account in the Certificate of Loading calculation of standing passengers.	Current requirements refer to the 'stairwell'. There is some confusion about what this means for low floor buses, and the bus building industry has asked that it be clarified.	There are not expected to be any costs associated with this clarification.	Removing uncertainty when calculating area for Certificate of Loading will benefit bus builders and operators.
24	Include the driver and any other crew of a passenger service vehicle when calculating its loading.	The Rule currently does not include the driver and any other crew in the Certificate of Loading calculation. Their inclusion is necessary to ensure the vehicle's gross vehicle mass and axle loadings are not exceeded.	There are not expected to be any additional costs associated with this change.	Calculated passenger loadings will be more accurate.

No.	Proposal	Problem definition	Costs	Benefits
25	Exclude passenger service vehicles with nine or fewer seats from the requirement to apply the occupant loading calculation.	Passenger service vehicles with up to nine seats are accepted based on the number of seats fitted by the vehicle manufacturer. It is therefore unnecessary to establish a chassis rating for these vehicles.	There are not expected to be any additional costs associated with this change.	Cost savings from not requiring gross vehicle masses to be established for passenger service vehicles with nine or fewer seats.
26	Include the weight of a wheelchair when calculating the maximum deemed passenger loading of passenger service vehicles with dedicated wheelchair positions.	Special mobility vehicles for persons with disabilities have no loading masses for wheelchairs to work to for the purposes of Certificate of Loading calculation, which may lead to loading exceeding safe limits.	There are not expected to be any additional costs associated with this change.	The amendment will improve Certificate of Loading information for special mobility vehicles.