

# Queensland Code of Practice: Vehicle Modifications (QCOP)

Code LG4: Non-Standard Brake System Certification

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## CODE LG4

# Light Vehicle Modifications for Non-Standard Brake System Certification

## 1.0 Scope

The LG4 modification code specifies requirements for certifying modifications to the non-standard brake system of light vehicles, that being vehicles having a Gross Vehicle Mass (GVM) rating that does not exceed 4,500 kg.

This code covers modifications to eligible light vehicles under the following Australian Design Rule (ADR) categories: MB, MC, MD1, MD2, MD3, NA and NB1. This code covers fitting of non-standard brake systems or componentry and fitting of a brake system on a vehicle with a wheelbase outside of manufacturer options. This code does not cover the modifications related to light vehicles not specified, substitution with another standard brake system with an equivalent or higher GVM rating and the fitting of an auxiliary brake.

The original vehicle manufacturer (OVM) refers to the entity holding the first stage Identification Plate Approval (IPA). An entity holding the Second Stage Manufacture (SSM) Approval or Registered Automotive Workshop Scheme (RAWS) Approval is not deemed as the OVM.

In cases where the OVM has not specified a GVM rating, the maximum laden mass at which the OVM has shown compliance with the ADRs is to be taken as the original GVM rating. This information must be obtained from a reliable and traceable source.

This code is not to be used for certifying modifications to new light vehicles before being provided to market in Australia. To certify modifications to heavy vehicles, that being vehicles that exceed 4,500 kg GVM or Aggregate Trailer Mass (ATM) refer to the *National Code of Practice for Heavy Vehicle Modifications* (VSB 6).

### 1.1 Modifications permitted under Code LG4

Modifications that may be certified under LG4 code are:

- Fitting of non-standard brake systems or non-standard brake componentry, including a load sensing proportioning valve on a motor vehicle.
- Fitting of a non-standard brake system on a motor vehicle with a wheelbase outside of manufacturer options.

### 1.2 Modifications not permitted under Code LG4

Modifications that must not be certified under LG4 code are:

- Modifications other than those described in Section 1.1.
- Substitution of standard brake system with another standard brake system with an equivalent or higher GVM rating.
- Fitting of an auxiliary brake.

### 1.3 Vehicle categories permitted to be certified under Code LG4

Modifications that may be permitted as described in Section 1.1 must be in one of the vehicle categories as specified by Table LG4-1.

**Table LG4-1 List of permitted vehicles for LG4 modification**

<b>Vehicle Category</b>	<b>Category Code</b>
Forward-control passenger vehicle	MB
Off-road passenger vehicle	MC
Light omnibus up to 3.5 tonnes GVM and up to 12 seats up to 3.5 tonnes GVM and more than 12 seats over 3.5 tonnes and up to 4.5 tonnes GVM	MD1 MD2 MD3
Light goods vehicle	NA
Medium goods vehicle over 3.5 tonnes and up to 4.5 tonnes GVM	NB1

## 2.0 General Requirements

All work must also comply with the requirements contained in sub-section 2 *General Requirements* of Section LG of the *National Code of Practice (NCOP) – Light vehicle modifications* (VSB 14). Specific requirements in this code take precedence over any general instructions in VSB 14.

Extensive modifications to a vehicle may affect the warranty provided by the OVM. It is the responsibility of the certifying Approved Person (AP) to consider the effect of the modification on warranty and clarify this point to the modifier and vehicle operator prior to modification, if affected. Consideration of the effect this modification may have on product warranty is outside the scope of this code.

The provision of this modification code is centred around the application of engineering principles or data and must be performed by appropriately qualified persons. An engineering service is a service which is based on or requires the application of scientific and mathematical principles and data to the design, construction, maintenance and operation of man-made structures, machines, systems and processes.

For audit purposes, sufficient documentary and photographic evidence of the modification must be retained by the certifying AP.

### 2.1 Compliance with applicable vehicle standards

- 2.1.1** The modified vehicle must continue to comply with the applicable ADRs.
- 2.1.2** If different or additional ADRs apply to the modified vehicle due to the modifications, the vehicle must comply with those ADRs that apply to it after modification.
- 2.1.3** A modified vehicle must comply with the applicable in-service requirements of the *Transport Operations (Road Use Management—Vehicle Standards and Safety) Regulation 2021* (the VSS regulation).
- 2.1.4** A pre-ADR modified vehicle must continue to comply with the VSS regulation.
- 2.1.5** Specific requirements, if listed in Section 3.0 of this code, take precedence over the requirements in Section 2.0.
- 2.1.6** Outlined in Table LG4-2 are areas of the vehicle that may be affected by the modifications and may require re-certification, testing and/or data to show compliance of the modified vehicle.

**Table LG4-2 List of items and likely affected ADRs**

<b>DETAIL</b>	<b>REQUIREMENTS</b>
Brake Hoses	ADR 7/.., 42/..
Brake System	ADR 31/.., 35/..
General Safety Requirements	ADR 42/..
Brake Performance	<i>Transport Operations (Road Use Management—Vehicle Standards and Safety) Regulation 2021</i>

**Note:** This is not an exhaustive list and compliance to other ADRs may also be affected.

The ADR applicability is according to the vehicle’s category and date of manufacture. It is the responsibility of the certifying AP to verify compliance to the applicable ADRs. The certification must include the vehicle date of manufacture in addition to the date of modification.

Sections 2.2 to 2.7 relate to the general requirements applying to different areas of the modifications under LG4 code.

## **2.2 Braking system**

- 2.2.1** The original equipment failure warning systems and secondary braking systems must function correctly.
- 2.2.2** The service and parking brake performance of the modified vehicle must meet the relevant vehicle standards or ADR requirements as applicable.
- 2.2.3** All components and devices in the brake system must meet or exceed at least one appropriate and recognised international, national or association standard or the relevant parts thereof, where such standards exist.
- 2.2.4** All brake components must be securely mounted/fastened to the vehicle.

## **2.3 Parking brake system**

- 2.3.1** Ensure that the vehicle continues to meet performance requirements of ADR 35/.. when loaded to its GVM with a uniformly distributed load.
- 2.3.2** For pre-ADR vehicles, ensure that the combined load on all axles fitted with brakes actuated by the parking brake system is not less than one third of the vehicle's GVM.
- 2.3.3** For pre-ADR vehicles, the brake control must be designed to minimise the possibility of inadvertent release of the brake.
- 2.3.4** For pre-ADR vehicles, any modification that changes how the park brake system is applied must be designed to be separate from the service brake control and incorporate a device to retain it in the brake on position.

## **2.4 Anti-lock braking systems (ABS)**

- 2.4.1** Only retrofit vehicles with ABS that are appropriately programmed and certified by the vehicle or braking system manufacturer.
- 2.4.2** Slack adjusters must be of an automatic type, including where ABS is retrofitted to a vehicle.

- 2.4.3** If an axle that is fitted onto a vehicle with ABS requires wheel speed sensors, ensure that the ABS tone/sensor wheel has the same characteristics as the other axles on the vehicle, including the number of teeth.
- 2.4.4** Ensure that the original equipment manufacturer (OEM) recommendations are followed when upgrading an axle to ABS configuration.

## 2.5 Joints and fittings

- 2.5.1** All fittings must be of the correct type, size and compatible thread and all joints must be free from leakage.

## 2.6 Pipes, hoses and wiring

- 2.6.1** All non-standard air or hydraulic lines must be of the appropriate sizing and material.
- 2.6.2** Pipes and hosing must meet appropriate standards as those in table LG4-3.

**Table LG4-3 Pipes and hosing appropriate standards**

<b>Component</b>	<b>Manufacturing Standard</b>
Air Brake Piping	SAE J844 or equivalent
Air Brake Hoses	SAE J1402 or equivalent
Hydraulic Brake Piping	SAE J1047 or equivalent
Hydraulic Brake Hoses	SAE J1401 or equivalent
Flares for Tubing	SAE J5336 or equivalent

- 2.6.3** Components used must be within manufacturer ratings.
- 2.6.4** All air and hydraulic lines that are installed must be protected from exposure to excessive heat, abrasion, movement, stress and impact.

## 2.7 Modification criteria

- 2.7.1** The modification must be performed in accordance with the manufacturer's guidelines if applicable.

# 3.0 Specific Requirements

The following specific requirements apply.

## 3.1 Brake system

- 3.1.1** For vehicles that were previously ADR certified for braking, foundation brakes fitted on additional axles fitted must be the same as those use on another ADR compliant vehicle.

## 3.2 Air/Hydraulic brake system

- 3.2.1** All compressed air reservoirs must be provided with a means to allow the removal of water and other foreign matter.

**3.2.2** The brake system reservoir capacity must meet one of the following:

- for ADR vehicles, as specified in ADR 35/...
- for pre-ADR vehicles –
  - as specified in ADR 35/...; or
  - using an air brake system, 12 times the volume of the service brake chambers at maximum travel of pistons or diaphragms; or
  - using a vacuum brake system charged by a vacuum pump, a volume sufficient to provide eight applications of the brake after the engine is stopped with four applications before the low vacuum warning light is activated; or
  - using a vacuum brake system charged by engine manifold vacuum, a volume sufficient to provide four applications of the brake after the engine is stopped with two applications before the low vacuum warning light is activated.

**3.2.3** The brake system recharge capability must be suitable to recharge the vehicle at one of the following:

- for ADR vehicles, as specified in ADR 35/...
- for pre-ADR vehicles –
  - as specified in ADR 35/...; or
  - using an air brake system, from 85% to 100% of the average operating pressure in less than  $\frac{\text{Actual stored energy capacity}}{\text{Required stored energy capacity}} * 25$  seconds; or
  - using vacuum brake system vacuum supply can build vacuum from fully used up to the level when the warning signal no longer operates within 30 seconds, and to the normal working level within 60 seconds.

### **3.3 Brake systems with mixed method of application**

**3.3.1** A comparison must be evaluated between the response times for the application and release of the braking torque for each of the differing brake assemblies.

**3.3.2** The pressure within the brake chamber on each axle fitted to the vehicle must reach at least 65% of the average operating pressure within 600 milliseconds immediately following the rapid and complete application of the foot-operated control.

**3.3.3** Do not allow response times for both brakes application and release to vary by more than 200 milliseconds between axles.

### **3.4 Load sensing proportioning valves (LSPV)**

**3.4.1** LSPV that are added to a brake system must be installed in accordance with the manufacturer's recommendations.

**3.4.2** A vehicle fitted with LSPV must have permanent markings in accordance with Table LG4-4.

**Table LG4-4 Load sensing proportioning valves permanent markings**

<b>LSPV consisting of:</b>	<b>Must have permanent marking advising of:</b>
a device mechanically controlled by suspension travel, that is, in applications with mechanical spring suspension	<ul style="list-style-type: none"> <li>• the useful travel (recommended units of mm)</li> <li>• inlet/outlet pressures (in kPa) of the device between the positions corresponding to the unladen mass and GVM</li> <li>• any further information to enable the setting of the device to be checked in-service</li> </ul>
a device that modulates air pressure in the brake transmission based on the air pressure from the suspension, that is, in applications with air bag suspension	<ul style="list-style-type: none"> <li>• the axle loads (in kg) corresponding to the unladen mass and GVM for the axles that control the device</li> <li>• corresponding nominal inlet and outlet pressures (in kPa) of the device</li> <li>• any further information to enable the setting of the device to be checked in-service</li> </ul>

**3.4.3** Instructions must be supplied to the vehicle operator illustrating how to correctly set or adjust the LSPV for use during service.

### **3.5 Wheel guards**

**3.5.1** As changes to ventilation may affect operating temperature and braking performance, ensure that the body configuration provides adequate ventilation, and that adequate air flow is maintained.

### **3.6 Fitting of lazy axle**

**3.6.1** The fitment of an additional rear axle must be certified using the LB2 modification code.

**3.6.2** If the lazy axle is fitted with full air brakes, ensure that the air reservoir capacity has additional air reservoirs fitted with a minimum capacity 12 times the volume of the brake chamber consumption of the additional axle and the brake reservoir has a charging time of the revised air tank capacity system in accordance with Section 3.2.3.

**3.6.3** A lazy axle with hydraulically actuated vacuum or air assisted brakes must have displacement of the master cylinder greater than total displacement at maximum stroke at the wheel cylinders that it services, possibly needing extra master cylinders to be filled to service the additional axle. It must also have mechanical advantage of the entire brake system, including hydraulic, and assistance must be approximately the same as that for the original vehicle, within  $\pm 5.0\%$ .

### **3.7 Alternative axles**

**3.7.1** If the brake equipment is identical to that fitted to the original axle, then substitute the axles on the vehicles without having to re-certify the brake system.

**3.7.2** Front-to-rear load distribution and GVM must not be altered.

**3.7.3** The installation of the axle must be certified through the LB2 modification code.



**3.7.4** If substitute axles will result in a change of GVM, this must be certified through the LS11 and LS15 modification codes.

### **3.8 Additional axles**

**3.8.1** When upgrading a braking system with additional axles, the vehicle should be modified so that its specifications are identical to that of another model offered by the manufacturer. The combination of components and dimensional properties must be the same as the selected model.

**3.8.2** If an equivalent or higher rated braking/suspension combination is not available from the manufacturer, then the new brake system must be tested and certified to the relevant ADRs or a complete ADR tested brake system from a similar vehicle with equivalent or greater GVM and similar suspension can be adapted.

**3.8.3** The fitment of additional axles must allow for braking of all wheels on each axle.

**3.8.4** The installation of additional axles must be certified through the LB2 modification code.

**3.8.5** The braking equipment fitted to the axle must be compatible with the braking system of the base vehicle.

**3.8.6** If the brake specification on the additional axle differs from the original adjacent axle, the following requirements must be met.

- Brake response time on the additional axle must be within 200 milliseconds of the adjacent axle response time.
- The brake-torque characteristics of the additional axle must be similar to any adjacent axle within a  $\pm 10.0\%$  tolerance.
- An allowance for variations in axle load between the axles must be made.
- The response time to the slowest re-acting air booster in the overall brake system must not exceed 600 milliseconds.
- If the original axles have automatic slack adjusted fitted, these must also be fitted to the additional axles.
- New axle assemblies substituted for an axle/group that was provided as original equipment must have the above characteristics of Section 3.8.6 the same before and after conversion.

**3.8.7** To achieve the requirements of Section 3.8.6, the hydraulic/air systems may need to be upgraded or replaced.

### **3.9 Removal of an axle**

**3.9.1** If the axle removed is likely to affect parking brake capability, the modified vehicle must be verified to meet the requirements in this code.

**3.9.2** Any changes to the wheelbase must be certified through the LH3 and LH4 modification codes.

**3.9.3** If the axle configuration is available as an option from the manufacturer, the brake system of the modified vehicle must still be re-certified to this code.

**3.9.4** The GVM rating of the modified vehicle must not exceed the rating for which the brake system has been certified.

**3.9.5** If a load sensing valve or other controlling device is normally fitted for the proposed axle/wheelbase configuration, install the valve correctly and adjust it in the modified vehicle.

### **3.10 Compounding of spring and service brakes**

**3.10.1** An anti-compounding valve system should be fitted into the service brake system to prevent the risk of compounding.

**3.10.2** If both the service and park brake systems of the vehicle are modified, or the park brake system only, incorporate anti-compounding into that modification.

## **4.0 Limitations**

Section 1.2 of this code provides information about which types of modifications are not permitted to be certified under the LG4 code. In addition, the following limitations apply.

### **4.1 Electronic Stability Control**

If the vehicle is fitted with Electronic Stability Control (ESC) by the OVM, the following conditions must be met:

**4.1.1** The ESC system must not be disabled.

**4.1.2** It must be ensured that the modifications being certified do not reduce the effectiveness of the ESC system.

**4.1.3** The effect of the modification on the ESC system should be considered and recertified if deemed required.

## **5.0 Additional Modifications and Changes to Vehicle Category**

**5.1** If additional modifications are made that may or may not be essential for any modification to the brake system, all such modifications must be assessed separately and certified using appropriate codes or specific approvals. For example, modifications to the rear axle assembly would require certification under the LB2 modification code.

**5.2** If the vehicle's ADR category has changed due to a change in seating capacity or GVM, the vehicle must comply with the vehicle standards that apply to it in its new category. Certification under such compliance using the appropriate additional code(s) must be provided, for example, certification to the LO1 code, unless specific exemption has been granted for this purpose.

## Checklist LG4

### CODE LG4: Modification for Non-standard brake system certification

Form No: LG4

Provide an answer to each of the following (N/A=Not Applicable, Y=Yes, N=No)

<b>Modification Certificate Number:</b>	_____	
<b>1</b>	<b>Braking system</b>	
1.1	Do the original equipment failure warning systems and secondary braking systems function correctly?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
1.2	Does the service and parking brake performance of the modified vehicle meet the relevant vehicle standards or ADR requirements as applicable?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
1.3	Do all the components and devices in the brake system meet or exceed at least one appropriate and recognised international, national or association standard or the relevant parts thereof, where such standards exist?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
1.4	Are all compressed air reservoirs provided with a means to permit the removal of water and other foreign matter?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
1.5	Are all brake components securely mounted/fastened to the vehicle?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
1.6	Is the brake system reservoir capacity at least: <ul style="list-style-type: none"> <li>• for ADR vehicles, as specified in ADR 35/..?</li> <li>• for pre ADR vehicles –               <ul style="list-style-type: none"> <li>○ as specified in the ADR 35/..; or</li> <li>○ using an air brake system, 12 times the volume of the service brake chambers at maximum travel of pistons or diaphragms; or</li> <li>○ using a vacuum brake system charged by a vacuum pump, a volume sufficient to provide eight applications of the brake after the engine is stopped with four applications before the low vacuum warning light is activated; or</li> <li>○ using a vacuum brake system charged by engine manifold vacuum, a volume sufficient to provide four applications of the brake after the engine is stopped with two applications before the low vacuum warning light is activated?</li> </ul> </li> </ul>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A

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1.7	<p>Is the brake system recharge capability suitable to recharge the vehicle:</p> <ul style="list-style-type: none"> <li>• for ADR vehicles, as specified in ADR 35/..?</li> <li>• for pre ADR vehicles – <ul style="list-style-type: none"> <li>○ as specified in the ADR 35/..; or</li> <li>○ using an air brake system, from 85% to 100% of the average operating pressure in less than <math>\frac{\text{Actual stored energy capacity}}{\text{Required stored energy capacity}} *</math> 25 seconds; or</li> <li>○ using vacuum brake system vacuum supply can build vacuum from fully used up to the level when the warning signal no longer operates within 30 seconds, and to the normal working level within 60 seconds?</li> </ul> </li> </ul>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
1.8	For a pre-ADR vehicle, does the vehicle comply with the relevant brake system requirements (including performance requirements) of the applicable in-service vehicle standards regulation?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
1.9	For an ADR vehicle, has the modified vehicle been shown to comply with the requirements of the relevant ADR?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>2</b>	<b>Parking brake system</b>	
2.1	Does the ADR vehicle meet the performance requirements of ADR 35/.. when loaded to its GVM with the load uniformly distributed?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
2.2	Does the pre-ADR vehicle meet the requirements as stated in <b>Section 2.3?</b>	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>3</b>	<b>Joints and fittings</b>	
3.1	Are all fittings of the correct type, size and compatible thread?	<input type="checkbox"/> Y <input type="checkbox"/> N
3.2	Are all joints free of leakage?	<input type="checkbox"/> Y <input type="checkbox"/> N
<b>4</b>	<b>Pipes, hoses and wiring</b>	
4.1	Are all non-standard air or hydraulic lines of appropriate sizing and material?	<input type="checkbox"/> Y <input type="checkbox"/> N
4.2	Do the pipes and hosing meet the appropriate manufacturing standards as those in <b>Table LG4-3?</b>	<input type="checkbox"/> Y <input type="checkbox"/> N

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4.3	Are installed air and hydraulic lines protected from exposure to excessive heat, abrasion, movement, stress and impact?	<input type="checkbox"/> Y <input type="checkbox"/> N
4.4	Are components used within manufacturer ratings?	<input type="checkbox"/> Y <input type="checkbox"/> N
<b>4</b>	<b>Brakes with the same method of actuation additional axles</b>	
4.1	Are all additional wheels braked?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
4.2	Have all applicable components of the brake system been upgraded to accommodate the additional brakes?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>5</b>	<b>Brake system with mixed method of actuation</b>	
5.1	For air brakes, does the pressure within each brake chamber reach at least 65% of the average operating pressure within 600 milliseconds immediately following the rapid and complete application of the foot operated control?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
5.2	Is the variation in response times for application and release of the brakes less than 200 milliseconds between axles?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>6</b>	<b>Additional or alternative axles</b>	
6.1	Has the installation of the axle been certified through the LB2 modification code?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>7</b>	<b>Removal of axle</b>	
7.1	If a load sensing valve or other controlling device is normally fitted for the proposed axle/wheelbase configuration, is the valve or device correctly installed and adjusted on the modified vehicle?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>8</b>	<b>Load sensing proportioning valves</b>	
8.1	If a load sensing valve is installed, has it been fitted in accordance with the manufacturer's recommendations?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A

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8.2	If a load sensing valve is installed, are there permanent markings advising in accordance with <b>Table LG4-4</b> ?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
8.3	If a load sensing valve is installed, does the vehicle's braking system continue to meet the appropriate brake performance requirements of ADR 35/.. or the relevant vehicle standards as applicable?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
8.4	For vehicles modified to include a load sensing proportioning valve, have instructions been given on how to set the valve operation correctly?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>9</b>	<b>Wheelbase alteration</b>	
9.1	If the wheelbase is extended beyond the maximum offered by the manufacturer for the model, do the brakes at the new pipe lengths meet the required application response times of ADR 35/.. or the relevant vehicle standards as applicable?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
9.2	If the new wheelbase is reduced to less than the minimum offered by the manufacturer for the model and the vehicle is certified to ADR 35/..., does it meet the requirements of the lightly loaded test for ADR 35/..?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
9.3	Is the wheelbase alteration certified through the LH3 and LH4 modification codes?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>10</b>	<b>Electronic Stability Control (ESC)</b>	
10.1	If fitted, is it ensured that the ESC system is not disabled?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
10.2	If fitted, is it ensured that the ESC system is not made less effective due to modifications carried out under this code?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A
<b>11</b>	<b>Modification details</b>	
11.1	Has the modification been performed in accordance with the manufacturer's guidelines?	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> N/A

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<b>12</b>	<b>ADR compliance</b>	
12.1	Does the modified vehicle continue to comply with all affected Australian Design Rules (ADRs)?	<input type="checkbox"/> Y <input type="checkbox"/> N
<b>13</b>	<b>Workmanship</b>	
13.1	Is the quality of the workmanship to a satisfactory industry standard?	<input type="checkbox"/> Y <input type="checkbox"/> N

**Note:** If the answer to any question is **N (No)**, other than 11: Modification details, the design cannot be certified under LG4 code.

CERTIFICATION DETAILS																
<b>Make</b>						<b>Model</b>						<b>Year of Manufacture</b>				
<b>VIN</b>																
<b>Chassis Number (If applicable)</b>																
<b>Brief Description of Modification/s</b>																
<b>Vehicle Modified By</b>																
<b>Certificate Number (If applicable)</b>																
<b>Vehicle Certified By (<i>Print</i>)</b>																
<b>Signatory's Employer (If applicable)</b>																
<b>Signatory's Signature</b>											<b>Date</b>	_____				