



Environment,
Climate Change
& Water

Managing vehicle noise



Managing noise from vehicles

This brochure is about noise from motor vehicles, ways in which you can avoid having a noisy vehicle and what the law says when noise becomes offensive.

Control of road traffic noise

The results of a survey conducted by the Department of Environment and Conservation in 2004 found 46% of people in NSW think road traffic noise is a problem in their neighbourhood and one in five people in Sydney are exposed to road traffic levels above those recommended by the World Health Organization. Vehicle noise includes noise from exhaust systems, engines, horns, brakes and sound systems.

Operators and owners are responsible for ensuring noise from their vehicles is kept within reasonable levels. The Protection of the Environment Operations (Noise Control) Regulation 2008 (the Regulation) aims to prevent high noise levels from vehicles caused by lack of maintenance, deliberate tampering or inappropriate use. This Regulation may be viewed at: www.legislation.nsw.gov.au.

As well as the offences in the Noise Control Regulation noted in Table 1, police can issue penalty infringement notices for breaches of the following Road Rules related to vehicle noise. These are part of the 2008 Rules made under the *Road Transport (Safety and Traffic Management) Act 1999*

- Road Rule 224 – requires horns not be used unless it is necessary to warn other road users or animals of the vehicle's approach, or if the horn is being used as a part of an anti-theft device.
- Road Rule 291 – requires that a person must not start a vehicle, or drive a vehicle, in a way that makes unnecessary noise or smoke, e.g. unnecessarily revving

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a vehicle when it is stationary or repeatedly opening and closing the throttle when the vehicle is in motion. Police officers can also issue three demerit points for this offence.

- Road Rule NSW, 291-1 – requires that the engine of a stationary vehicle be turned off to prevent noise, other than for stoppages in traffic or examinations due to engine malfunction.

For more information on these rules go to www.rta.nsw.gov.au/rulesregulations/roadrules/ or contact the RTA on 132 213.

The RTA has additional noise control legislation that it can use for noise checks on heavy vehicles at heavy vehicle inspection stations.



Who enforces the noise control regulation

The Department of Environment, Climate Change and Water (DECCW), police officers and in some instances, local council officers, have the power to enforce the Regulation.

Table 1 gives a summary of the offences and the penalties for committing them.

Table 1: Summary of offences

Offence	Penalty – individual/corporation	Enforcing authority
Protection of the Environment Operations (Noise Control) Regulation 2008		
Selling a vehicle that, for example, has noise control equipment that is inappropriately modified, defective or missing (clause 5) (see also 'Defective noise control equipment' and 'Exhaust systems' in this brochure)	\$300/\$600	DECCW
Using a vehicle on a road or road-related area that exceeds the prescribed noise limit (clause 12) by:		
• less than 5 decibels	\$150/\$300	DECCW
• 5 to 14 decibels	\$250/\$500	DECCW
• 15 decibels or more	\$500/\$1000	DECCW
Using a vehicle that emits offensive noise (e.g. trail bikes) in a place that is not a road or road-related area (clause 13)	\$200/\$400	Council/ DECCW/ Police

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Using a vehicle on residential premises (other than for entering or leaving) that can be heard inside a neighbour's residence, between 8 pm and 8 am on a Saturday, Sunday or public holiday or between 8 pm and 7 am on any other day, after a warning by an authorised officer or enforcement officer (clause 14)	\$200/\$400	Council/ DECCW/ Police
Using a refrigeration unit on a vehicle that can be heard inside a neighbour's residence, between 8 pm and 8 am on a Saturday, Sunday or public holiday, or between 8 pm and 7 am on any other day after a warning by an authorised officer or enforcement officer (clause 15)	\$200/\$400	Council/ DECCW/ Police
Causing or permitting offensive noise to be emitted from a motor vehicle sound system (clause 16)	\$150/\$300	Council/ DECCW/ Police
Emitting offensive noise from a vehicle sound system while driving, or while using a vehicle on a road or road-related area (clause 17)	\$150/NA and 2 licence demerit points	DECCW/ Police
Causing or permitting a vehicle to be used when its noise control equipment is defective, not securely in place, is missing, or has temporary noise reduction devices or packing fitted (clause 18)	\$200/\$400	DECCW/ Police
Modifying or repairing a vehicle so that its noise control equipment is made defective, is not securely in place, is missing, or has temporary noise reduction devices or packing fitted (clause 19)	\$200/\$400	DECCW

Table 1: Summary of offences (continued)

Offence	Penalty – individual/corporation	Enforcing authority
Attaching a horn to a motor vehicle or permitting a motor vehicle to be used if it is fitted with a horn that is capable of emitting noise at a level greater than 120 dB(A) for noise at a single non-varying loudness and pitch, or 85 dB(A) in any other case (clause 21)	\$200/\$400	DECCW
Protection of the Environment Operations Act 1997		
Selling a vehicle that emits noise in excess of the level prescribed for that type of vehicle in the Regulation (section 136 of the Act):		
• less than 5 decibels	\$200/\$400	DECCW
• 5 decibels or more	\$400/\$800	DECCW
Selling a motor vehicle horn or intruder alarm that emits noise in excess of the level prescribed in clauses 7 and 9 respectively or having the characteristics prescribed in clause 11 (section 136 of the Act)	\$300/\$600	DECCW
Defect notices		
For most of the above offences, a defect notice can also be issued. If the defect is not remedied, registration can be suspended by DECCW. A vehicle whose registration has been suspended is considered to be an unregistered vehicle under the <i>Road Transport (Vehicle Registration) Act 1997</i> .		

For details about offences relating to vehicle intruder alarms see the DECCW brochure *Managing noise from intruder alarms*.

Prescribed noise levels for exhaust noise

Exhaust noise from vehicles should not exceed the prescribed noise levels referred to in clause 4 of the Regulation. The levels depend on whether the vehicle is certified to Australian Design Rule (ADR) 83/00 (which came into force progressively from 2005), or to earlier ADRs.

For vehicles certified prior to ADR 83/00, Schedule 1 of the Regulation specifies the prescribed noise levels. For cars built before January 1983, the maximum noise level is 96 decibels and for newer cars the level is 90 decibels. For motorcycles built on or after 1 March 1984, and designed or manufactured for use on a road, the level is 94 decibels. The noise level for other motorcycles is 100 decibels.

For vehicles certified to ADR 83/00 and with compliance plate dates of 1 September 2011 or earlier, the prescribed noise level is the higher of either the level in Schedule 1 **or** the ADR 83/00 signature level plus 5 decibels. For vehicles with compliance plate dates after 1 September 2011, the prescribed noise level is the ADR 83/00 signature level plus 5 decibels.

ADR83/00 signature noise levels can be found on the federal Department of Infrastructure, Transport, Regional Development and Local Government's website at www.infrastructure.gov.au/roads/environment/noise.aspx.

When the prescribed noise limits are exceeded, authorised officers from DECCW can issue penalty notices for offences. There is a tiered scale for fines—the louder the exhaust noise from vehicles, the greater the penalty (see Table 1).

You can ensure that the exhaust noise from your vehicle is acceptable by regularly maintaining your exhaust equipment (i.e. mufflers) and avoiding non-standard parts.

Defective noise control equipment

Vehicle owners and operators should ensure that their vehicles are not fitted with defective 'noise control equipment' (Clause 18 of the Regulation). Noise control equipment covers both exhaust systems and engine components. Defective equipment is defined as equipment that:

- allows gas to escape from a place other than the intended exhaust outlet
- allows the emission of more noise than the original noise control equipment fitted by the vehicle manufacturer and, if the equipment is part of the exhaust system, an authorised officer reasonably believes its noise level is above the prescribed level, or
- has been modified in a way that an authorised officer reasonably believes makes it less effective than it would have been if it hadn't been modified, and, if the equipment is part of the exhaust system, an authorised officer reasonably believes its noise level is above the prescribed level.

Clause 18 of the Regulation also makes it an offence if a vehicle's noise control equipment is not securely in place or is removed and not replaced. This means exhaust system components (such as mufflers and baffles) and engine equipment (such as air filters) must be properly fixed in place and not be missing.

Exhaust systems

Listen to the exhaust system when buying a vehicle. If the vehicle sounds noisier than unmodified vehicles of the same make and model, the exhaust system may have been altered. If in doubt, make inquiries. The system should be replaced with a quieter system when, for example:

- the exhaust system has been replaced with an excessively loud system such as a sports system, or
- the baffles have been altered or removed from the muffler so the vehicle is noisier.

Get the noise level checked by a licensed muffler repairer. Remember that more noise does not mean more power but it does mean more annoyance, which could result in you being fined.

When your noise control system is being repaired or modified you could ask for a statement in writing from the repairer that the repaired or modified system complies with the Regulation.

The Regulation also makes it an offence to use temporary noise reduction devices or packing in vehicle exhausts. This includes items such as baffles in the exhaust system that have not been welded/riveted in place, or items that are adjustable such as valves, or materials introduced into the exhaust system, such as steel wool. These items must not be used to defeat a noise test.

However a defence is provided for any:

- vehicle that, at the time of manufacture, had items such as baffles that were not welded or riveted in place or an adjustable device in the exhaust system, or a replacement that is equivalent to that fitted by the manufacturer
- motorcycle that has items such as baffles that are bolted or otherwise securely fastened in place.

Engine components

The following engine components can produce significant noise unless properly managed.

Filters

Avoid fitting your vehicle with a pod-type air filter. This filter increases engine induction noise and may also increase exhaust gas pollution.

Blow-off and waste gate valves

Blow-off valves that vent directly into the atmosphere should not be fitted. Blow-off valves that vent back into the induction system are quieter. Waste gate valves are pressure release valves for turbochargers.



These devices increase the noise from engines. If you are fitting these valves, ensure they do not vent directly into the atmosphere but into the exhaust system upstream of the catalytic converter and/or mufflers.

Gear drives and belts

Care should be taken when fitting engine gear drives or non-standard engine and auxiliary belt drives such as alternator belts. Non-standard gear and belt drives that result in increased noise levels should not be fitted.

Vehicle noise testing

DECCW has introduced a Noise Testing and Anti-tampering Scheme with DECCW Approved Inspection Stations. If the police reasonably believe that a vehicle is noisy, they can refer the vehicle to DECCW. The department may then require that the vehicle be presented at an Approved Inspection Station for noise testing and inspection of the noise control and pollution control equipment. The test will indicate whether the vehicle complies with the prescribed noise level for that vehicle (and whether the noise control equipment is defective, missing or has been modified). Penalties for exceeding prescribed noise levels are shown in Table 1.

Selling your vehicle

Under clause 5 of the Regulation it is an offence to sell a motor vehicle with:

- an exhaust system or engine components that contravene clause 18 of the Regulation (refer to all the items under the heading 'Defective noise control equipment')
- a horn or intruder alarm that exceeds noise limits prescribed in the Regulation.

Modifying or repairing vehicles

Under clause 19 of the Regulation it is an offence to repair or modify a motor vehicle so that the exhaust system or engine components contravene clause 18 of the Regulation that deals with vehicles with defective or modified noise control equipment.

Noise from off-road vehicles

Off-road motorcycles and other vehicles often have mufflers that are not as effective as those on road vehicles. The noise from off-road vehicles can annoy pedestrians and residents where trails pass near residential areas. Schedule 1 of the Regulation specifies a noise limit of 100 decibels for motorcycles operating off-road. There is an additional requirement under clause 13 of the Regulation that makes it an offence if off-road vehicles produce offensive noise.

Offensive noise is defined as noise:

- (a) that by reason of its level, nature, character or quality, or the time at which it was made or any other circumstance:
 - (i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or
 - (ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.

It is important to operate trail bikes and four-wheel drive vehicles quietly when near properties and residential areas. Unregistered trail bikes should never be used on:

- roads
- footpaths
- nature strips
- areas open to the public and designated for use by cyclists or animals

- shoulders of roads
- areas that are not roads that are open to the public for driving, riding and parking of vehicles.

Owners of offending vehicles who receive a penalty notice in the mail will need to nominate the driver in control of the vehicle at the time of the alleged offence.

Noise from motor vehicle horns

Horns cannot be installed or used if they are louder than the level in clause 21 of the Regulation. This level is 120 decibels for noise made up of a single non-varying loudness and pitch or 85 decibels in any other case.

Police and Emergency Service vehicles are exempt.

Horns should be used as traffic warning devices only and not as a means of relieving driver stress or frustration.



Noise from vehicle sound systems

Sound systems that can produce very high levels of sound are often fitted to vehicles. Of particular concern are the low frequency noise levels generated when music is being played. Low frequency noise (or booming noise) can penetrate buildings and other vehicles more easily than high frequency or mid-frequency noise and this can annoy surrounding residents, vehicle drivers and pedestrians.

Clauses 16 and 17 of the Regulation contain penalties for offensive noise produced by vehicle sound systems. As a guide, if the sound can be clearly heard outside the vehicle and contains low frequency noise, it is likely to be offensive.

Under clause 17, a person who causes a motor vehicle sound system to emit offensive noise when driving or using a motor vehicle on a road or road-related area can lose two demerit points and also be issued with a \$150 penalty notice by DECCW or the police.

Owners of vehicles who receive penalty notices and who were not driving the vehicle at the time of the alleged offence, may nominate the driver.

Noise from vehicle refrigeration units

Vehicle refrigeration units can cause disturbance when trucks are parked overnight in residential streets (clause 15 of the Regulation).

Refrigeration units fitted to vehicles such as trucks should not be able to be heard inside certain rooms of a home (regardless of whether windows are open or closed) before 8 am or after 8 pm on any Saturday, Sunday or public holiday, or before 7 am or after 8 pm on any other day. Drivers contravening this rule may be warned about the noise and may be issued with a penalty notice if they do not heed the warning.

Noise from engine or compression brakes

Noise from engine or compression brakes can be intrusive, especially at night. Heavy vehicle drivers should avoid using exhaust brakes, engine compression or 'jake' brakes near residential areas and noise sensitive areas such as hospitals and schools, unless they are necessary for safety reasons.

A national scheme is being introduced which will impose noise limits from engine compression brakes. The scheme will use roadside noise 'cameras' as an aid to enforcement. These cameras are being located in areas where engine compression brake noise is affecting nearby communities. The RTA is implementing this scheme in NSW.

Ten ways to avoid having a noisy vehicle

- Ensure that your exhaust system is in good order and maintained regularly.
- Use exhaust systems that are the same as those originally designed for the vehicle.
- Seek advice from reputable suppliers before purchasing aftermarket components.
- Don't fit non-standard belt drives or gears, pod-type air cleaners, or vented-to-atmosphere waste gates or blow-off valves to your engine.
- Be aware of the noise sensitivity of the areas you are passing through.
- Limit exhaust and compression braking, and the use of truck refrigeration units, in residential and sensitive areas (like schools and hospitals).
- Use horns for collision avoidance only.
- Avoid excessive acceleration and unnecessary sudden braking.
- Use car sound systems responsibly.
- Avoid making offensive noise when operating off-road motor vehicles.

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