

V32(hv): Heavy vehicle modifications – more than 4.5t GVM

Information Bulletin

Introduction

The purpose of this bulletin is to assist Northern Territory (NT) vehicle owners/operators (who meet NT residency requirements) seek modification approval for heavy vehicles over 4.5 tonne Gross Vehicle Mass (GVM) and heavy trailers over 4.5 tonne Aggregate Trailer Mass (ATM) for NT vehicle registration.

Where the vehicle manufacturer has authorised changes, variations, adjustments, equipment or accessories to a vehicle, the approval takes precedence over the modification approval process outlined in this bulletin.

Basic, significant and extensive modifications must be certified to comply with recognised vehicle standards and the vehicle must remain roadworthy. Any approval is specific to a vehicle and does not necessarily set a precedence. Minor modifications do not require any certification.

It is recommended that vehicle owners/operators ensure that proposed modifications must be approved in principle prior to carrying out those modifications. Vehicle owners/operators should also check with their insurance company prior to making any alterations to their vehicle as some modifications may affect insurance cover.

While most heavy vehicle modifications are certified to the same standards, certain modifications may only be acceptable for NT registered vehicles. Vehicle owners/operators must check with relevant jurisdictions prior to seeking registration outside of the NT.

Recognised Standards

[Vehicle Standards Bulletin \(VSB\) 6](#)

VSB 6 is the National Code of Practice for Heavy Vehicle Modifications that outlines minimum design, construction, installation and performance requirements for modifications to heavy motor vehicles and trailers. VSB 6 provides detailed requirements and examples of acceptable practice for a range of common heavy vehicle modifications. It supplements the recommendations of the original vehicle manufacturer in relation to vehicle modification techniques or standards and provides guidelines where manufacturer's standards may not exist.

Certification to VSB 6 can be undertaken by an engineering signatory or from an approved type approval modifier. The department oversees the roadworthiness standards of vehicles for registration and adopts VSB 6 for modification assessment of heavy vehicles.

[Australian Design Rules \(ADRs\)](#)

ADRs are national standards for vehicle safety, anti-theft and emissions and are generally performance-based to cover issues such as occupant protection, structures, lighting, noise, engine exhaust emissions, braking and a range of miscellaneous items.

ADR Applicability Tables outline ADRs that apply to vehicle categories – refer to [National Heavy Vehicle Inspection Manual | NHVR](#)

Classification

Minor modifications

Minor modifications may be carried out without obtaining formal approval. Generally, these modifications may include fitment of optional equipment for a vehicle that would not affect the level of safety, strength or reliability of vital systems such as brakes and steering. Examples may include items within the vehicle manufacturer’s options - e.g. the fitment of an audio system, bull bars, additional lighting, roof racks, wheel and tyre options, etc.

Basic modifications

Basic modifications are common modifications within established criteria. Examples include; engine replacement, alternative wheels and tyres, seating re-configuration, etc.

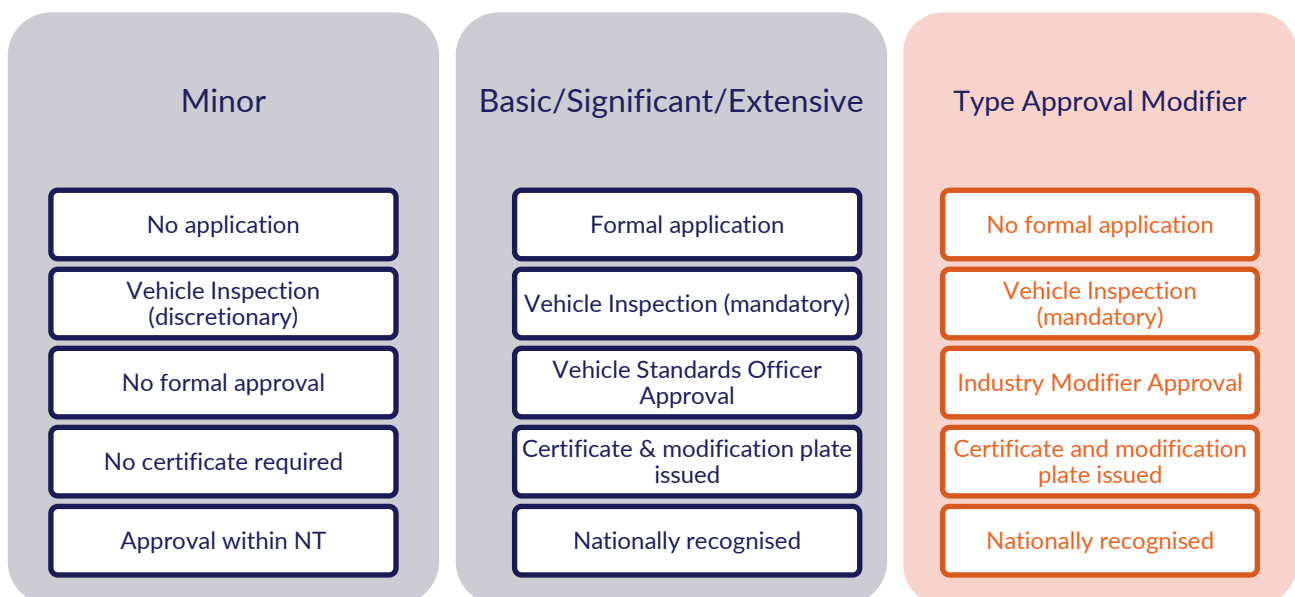
Significant and extensive modifications

Significant and extensive modifications have the potential to seriously affect the safety of the vehicle and may affect the vehicle’s strength, structural integrity and handling characteristics. These modifications require engineering certification.

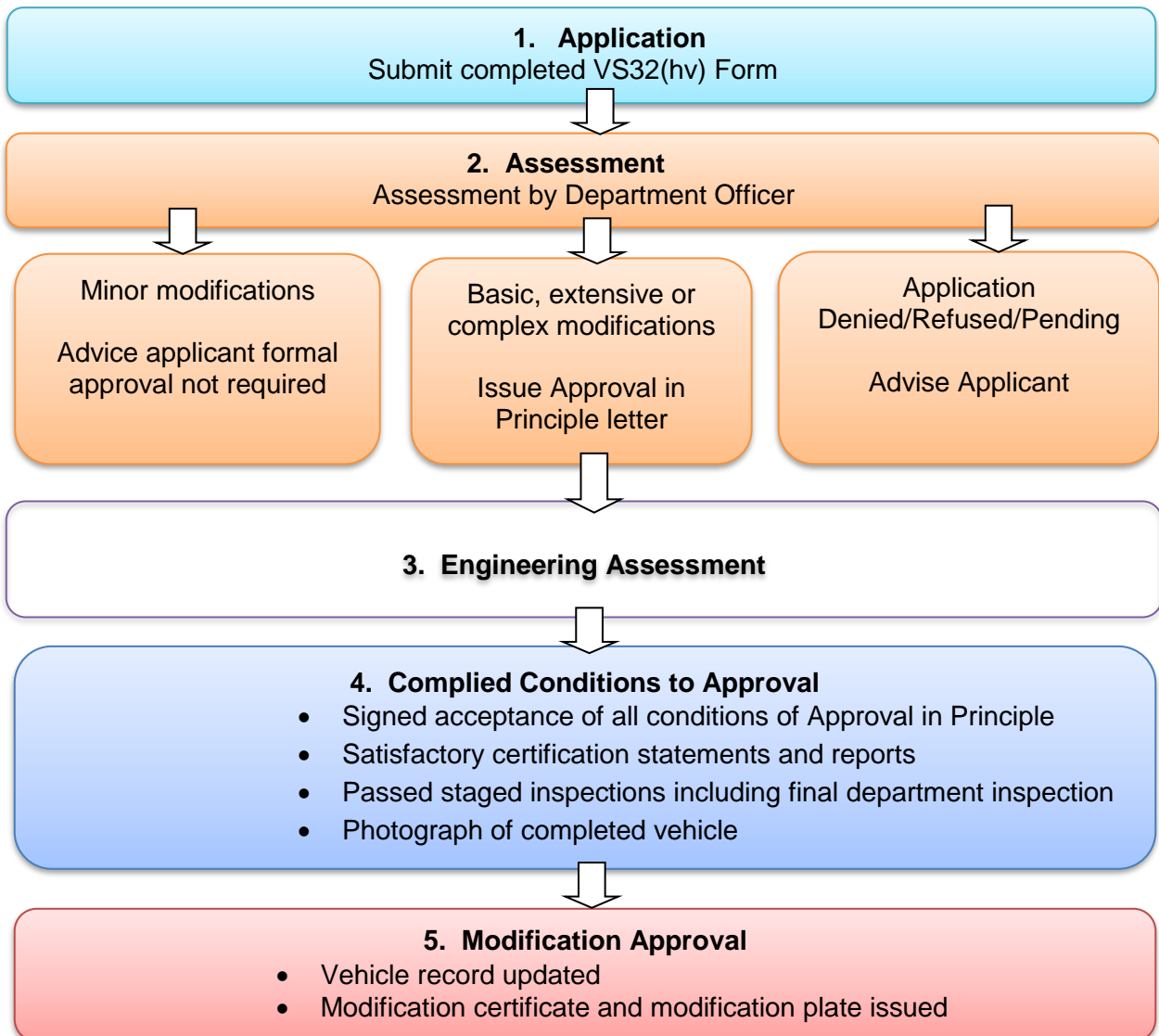
Modification approval pathways

Modification approval may be offered by department officers or by industry type approval modifiers.

1. No formal approval for minor modifications or modifications authorised by the vehicle manufacturer
2. Formal assessment of basic, significant and extensive modifications by department Vehicle Standards Officers
3. Various pre-assessed modifications undertaken by approved industry Type Approval Modifiers



Modified vehicle formal application process



Step 1 Formal applications are required to be completed in full on the approved form (VS32(hv) Application to Modify a Heavy Vehicle – see attached) and must include any additional information which will assist with the assessment of the application.

Examples of additional information include photographs and certification documentation. There is no application fee.

Step 2 Completed applications must be forwarded to the department Vehicle Standards Officer for assessment.

- Email applications to vehiclestandards.mvr@nt.gov.au
- Post to Road Safety and Compliance – Engineering and Vehicle Standards Unit
PO Box 2520
Darwin NT 0801
- Delivered to Road Safety and Compliance – Engineering and Vehicle Standards Unit
Level 2, Energy House
18 - 20 Cavenagh Street
Darwin NT 0800

- Step 3** Applicants will be formally responded to in writing outlining requirements for modification approval (i.e. certification and staged vehicle inspections).
- Department officer will liaise with certifying engineers on certification requirements.
- Step 4 & 5** When all conditions of the Approval in Principle have been met, a modification certificate and modification plate will be issued.

Type approval modifications

Where industry modifiers hold type approval status with the department, vehicle owners/operators may seek the direct assistance of the modifier for pre-assessed and certified types of modifications specific to the modifier. A vehicle inspection is mandatory by the type approval modifier. No final validating inspection of the modified vehicle is required by department officers.

The modifier will liaise with the department when issuing a modification certificate and modification plate.

Engineering Signatory

Vehicle owner/operators and modifiers intending to modify a vehicle in accordance with an Approval in Principle should seek the assistance of an engineering signatory.

A recognised engineering signatory is a person able to assess and certify vehicle modifications for compliance with relevant standards – i.e. VSB 6.

Vehicle owners/operators and modifiers are free to utilise the services of any suitably qualified Chartered Professional Engineer including interstate engineering signatories.

Refer to [Information Bulletin V83 – Northern Territory Recognised Engineering Signatories](#) for a list of engineering signatories who have expressed an interest in automotive work, and may be contacted to provide engineering certification on vehicle modifications carried out in the NT.

Commercial Passenger Vehicles (CPV)

Hire or reward vehicles are known as Commercial Passenger Vehicles.

Where an application form is required, CPV operators are to indicate on the form that the vehicle is intended to be used for “hire or reward”.

CPV vehicles may require additional conditions for hire or reward use – refer to CPV In-service maintenance standards - [Vehicle standards for CPVs | NT.GOV.AU](#)

More information

For more information, contact the department on 08 8924 7157 or email vehiclestandards.mvr@nt.gov.au

Application to Modify a Heavy Vehicle (more than 4.5t GVM)

Fields marked with asterisk (*) are mandatory

VS32(hv)

Office use only^	Vehicle Id^	File Reference^	Date received^
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Section 1 - Owner/Applicant details

Owner/Applicant*	NT Residence (✓) Yes <input type="checkbox"/> No <input type="checkbox"/>
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Address*

Postal address*

Contact Person
(owner/authorised representative)

Name	Phone	Email*
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Notes for guidance

- (1) This application form should be read in conjunction with Information Bulletin V32(hv) – Heavy Vehicle Modifications
- (2) NT vehicle modification scheme is only available to vehicle owners/operators who meet NT residency requirements for vehicle registration
- (3) Please attach any drawings, sketches, engineering approvals, kit approvals, photographs or any other information that you consider will assist in assessing this application. The more information you supply with this application, the less likelihood of delays
- (4) Applicants should NOT commence work until they receive written approval in principle to proceed with modifications
- (5) "tick" the appropriate box as required
- (6) Where an agent/contact person is the representative of the vehicle owner, written authorisation of authority is required from the owner
- (7) Modern production vehicles approved for use in Australia will be issued a Commonwealth vehicle approval number known as an Identification Plate Approval (IPA) or Compliance Plate Approval (CPA) or Vehicle Type Approval (VTA). This number is required in Section 2, if known

Type of modification - as appropriate

Prime Mover <input type="checkbox"/>	Trailer/Dolly Converter <input type="checkbox"/>	Motorhome/Campervan <input type="checkbox"/>	Commercial Passenger Vehicle <input type="checkbox"/>
Rigid Truck/Bus <input type="checkbox"/>	Driver Training/Adaptive System Controls <input type="checkbox"/>	Wheelchair Accessible <input type="checkbox"/>	Special Purpose Vehicle <input type="checkbox"/>
Road train rating <input type="checkbox"/>	GVM/GCM/ATM rating <input type="checkbox"/>	Livestock rating <input type="checkbox"/>	

Section 2 - Vehicle details

Registration Plate Number*	State*	Yes <input type="checkbox"/> No <input type="checkbox"/>	Registered*	CPA/VTA*
Make*	Model*	Vehicle Identification/Chassis/Serial Number*		
Body Style*	Date of Manufacture*(mm/yyyy)	GVM/ATM*	GCM*	Engine Number*

Manufacturers safety options – is the vehicle fitted with any of the following features?

<input type="checkbox"/> ESC (Electronic Stability Control)	<input type="checkbox"/> SRS (Supplementary Restraint System)	<input type="checkbox"/> EBS (Electronic Brake Distribution)
<input type="checkbox"/> ABS (Anti-lock Braking System)	<input type="checkbox"/> Other (Please specify)	

Adaptive hand/foot/electronic controls – driver training/specialised driving equipment

Adaptive hand/foot controls	Dual controls	Operation	Additional information
<input type="checkbox"/> Push/pull hand control	<input type="checkbox"/> Accelerator	<input type="checkbox"/> Cable
<input type="checkbox"/> Spinner knob	<input type="checkbox"/> Brake	<input type="checkbox"/> Mechanical
	<input type="checkbox"/> Clutch	<input type="checkbox"/> Hydraulic
<input type="checkbox"/> Other		<input type="checkbox"/> Electronic

Section 3 – Vehicle rating/category

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed	
Tare				
GVM/ATM				
GCM				
ADR category				
Other rating				
Comments	_____ _____ _____			

Section 4 - Engine

(✓ as appropriate)	Original <input type="checkbox"/>		Unknown <input type="checkbox"/>		Proposed			
Capacity/Cylinders	ml		cyl		ml		cyl	
Make								
Year of manufacture								
Type (inline, v8, rotary)								
Fuel type								
Fuel induction (<i>circle</i>)	Naturally Aspirated	Turbo charged	Supercharged	Fuel injected	Naturally Aspirated	Turbo charged	Supercharged	Fuel injected
New engine number	N/A							
Engine weight (kg)								
Comments	_____ _____ _____							

Section 5 – Transmission

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed	
Type				
Comments	_____ _____ _____			

Section 6 – Driveline

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed	
Type				
Comments	_____ _____ _____			

Section 7 – Front axle and suspension

	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed	
Axle type				
Suspension Type				
Comments	_____ _____ _____			

Section 8 – Rear axle and suspension

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed	
Axle type				
Differential ratio				
Suspension type				
Comments	_____ _____ _____			

Section 9 - Brakes

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed	
Master cylinder make				
Type (circle)	Dual	Single	Dual	Single
Brake booster make				
Front brakes (circle)	Disc	Drum	Disc	Drum
Rear brakes (circle)	Disc	Drum	Disc	Drum
Braking system compressor output (l/sec)				
Handbrake type				
Proportioning valve				
Comments	_____ _____ _____			

Section 10 – Steering

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed	
Type (circle)	Box	Rack	Box	Rack
Column				
Comments	_____ _____ _____			

Section 11 – Front wheels and tyres

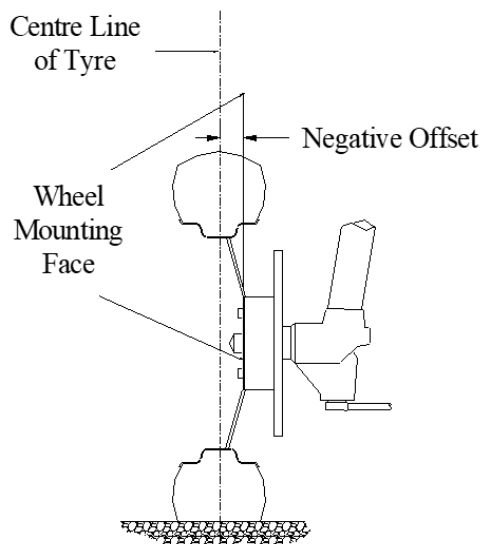
(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed
Wheel diameter			
Rim width			
Rim offset (-neg/+pos)			
Wheel material			
Tyre size/rating			
Construction (radial/x ply)			
Comments	<p>.....</p> <p>.....</p> <p>.....</p>		

Section 12 – Rear wheels and tyres

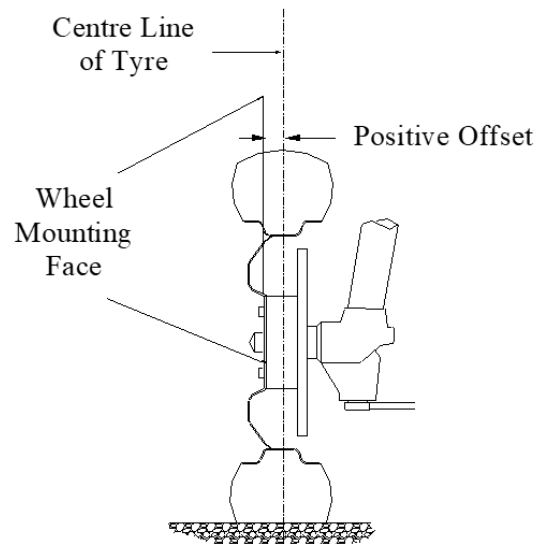
(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed
Wheel diameter			
Rim width			
Rim offset (-neg/+pos)			
Wheel material			
Tyre size/rating			
Construction (radial/x ply)			
Comments	<p>.....</p> <p>.....</p> <p>.....</p>		

Wheel Rim Offset

Negative Offset



Positive Offset



Section 13 – Wheel track

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed
Front (mm)			
Rear (mm)			
Comments	<hr/> <hr/> <hr/> <hr/>		

Note:

- Wheel Track is measured from the centre of the tyre to the centre of the opposite tyre on the same axle
- Wheelbase is measured from the centre of the front axle to the centre of the rear axle (rear overhang line)
- Rear Overhang is the distance measured from the rear overhang line to the rearmost part of the vehicle
- Overall height is measured from the ground to the highest rigid point of the roof (excluding vehicle accessories)
- Minimum ground clearance dimensions apply
- For further information on vehicle dimension limits including load, refer to Information Bulletin V13 Vehicle Dimension Limits - https://nt.gov.au/_data/assets/pdf_file/0007/374335/v13-vehicle-dimensional-limits.pdf

Section 14 – Wheelbase and overall height

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed
Wheelbase (mm)			
Rear overhang (mm)			
Overall height (mm)			
Comments	<hr/> <hr/> <hr/> <hr/>		

Section 15 – Chassis and body

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	
Details of proposed changes and materials	<hr/> <hr/> <hr/> <hr/>		
Grade of original steel	<hr/> <hr/> <hr/> <hr/>		
Grade of new steel	<hr/> <hr/> <hr/> <hr/>		
Size of material compared with original	<hr/> <hr/> <hr/> <hr/>		
Attachment method	<hr/> <hr/> <hr/> <hr/>		
Weld details	<hr/> <hr/> <hr/> <hr/>		

All welding of major or structural components should be carried out in accordance with manufacturer's specifications or Australian / New Zealand Standard 1554.1 (Structural steel welding, Part 1: Welding of steel structures). A welding certificate will be required if major components are welded unless specifically covered in the Engineering Certification provided.

Section 16 – Seating

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed
Seat type (front)			
Seat manufacturer (front)			
Seat attachment method (front)			
Seat type (other)			
Seat manufacturer (other)			
Seat attachment method (other)			
Comments	<hr/> <hr/> <hr/>		

Section 17 – Seatbelts

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Proposed
Seat belt type (front)			
Seatbelt manufacturer (front)			
Seatbelt compliance /approvals (front)			
Seatbelt attachment method (front)			
Seatbelt type (other)			
Seatbelt manufacturer (other)			
Seatbelt compliance /approvals (other)			
Seatbelt attachment method (other)			
Comments	<hr/> <hr/> <hr/>		

Section 18 – Tow coupling

(✓ as appropriate)	Original <input type="checkbox"/>	Unknown <input type="checkbox"/>	Size/D Value	Proposed	Size/D Value
5th Wheel					
Turntable (fixed)					
5th Wheel King Pin					
Tow coupling					
Tow eye					
Comments	<hr/> <hr/> <hr/>				

Section 19 - Applicant declaration

*I/we,

.....
(name of vehicle owner/s)

of

.....
(address)

Solemnly and sincerely declare that:

- All information contained in this application is true and correct to the best of my/our knowledge by virtue of the *Oaths, Affidavits and Declarations Act 2010*; and
- I/we have read and understood the information contained in this application; and
- I/we am/are 18 years or older; and
- I/we know that it is an offence to make a declaration that is false in any material particular.

*This declaration is made at

.....
(location)

on

.....
(date)

.....
(applicant/s signature)

Note: Under the *Oaths, Affidavits and Declarations Act 2010* a person wilfully making a false statement or altering a statement in a statutory declaration is guilty of a crime and is liable to a penalty or imprisonment, or both.

Section 20 –Authorisation of representative

As the applicant/s, I/we hereby grant the following person authorisation to act on my/our behalf for the purpose of this application - *“Contact person” to be noted on the front page of this application form.*

.....
Name of authorised representative

.....
Signature of authorised representative

.....
Date

Section 21 –Submit application and enquiries

1. Email completed application form to vehiclestandards.mvr@nt.gov.au
2. Postal address – Vehicle Standards and Compliance Officer
Road Safety and Compliance - Department of Infrastructure, Planning and Logistics
PO Box 2520
Darwin NT 0801
3. Office address - Vehicle Standards and Compliance Officer
Road Safety and Compliance - Department of Infrastructure, Planning and Logistics
Level 2, Energy House
[18 - 20 Cavenagh Street](#)
Darwin NT 0800
4. Vehicle Standards and Compliance Officer - telephone (08) 8924 7157
5. Monthly meeting assessments of modified vehicle applications on first Wednesday of every month – except January
6. Applications received less than 7 days prior to monthly meeting will be deferred to next meeting
7. See “Notes for guidance” on form

Section 20 - Privacy statement

Privacy statement: The Registrar of Motor Vehicles is required to collect information for registrations, licenses and permits under section 92 of the *NT Motor Vehicles Act 1949*. The Registrar adheres to the department’s privacy statement and the *Information Act 2002*. Further information on privacy can be found at www.dipl.nt.gov.au