

Appendix B – Vehicle Modifications

A modification to a heavy vehicle is any change that is made to the vehicle, including by adding or removing a component, which changes the vehicle from the manufacturer's specifications.

The *Heavy Vehicle National Law* (HVNL) creates a system that classifies modifications to heavy vehicles by how complex they are and the type of approval they need. Under this system heavy vehicle modifications fall into three distinct categories:

1. Minor modifications do not require approval provided the vehicle continues to comply with the HVNL and ADRs.
2. Modifications under the *NHVR Code of Practice for the Approval of Heavy Vehicle Modifications* (Section 86 of HVNL) require approval by an Approved Vehicle Examiner (AVE).
3. Complex modifications not covered by the *NHVR Code of Practice for the Approval of Heavy Vehicle Modifications* (Section 87 of HVNL) require approval by the NHVR and an AVE.

Minor modifications

Minor modifications are simple modifications, including the fitment of optional equipment or alterations to a vehicle within manufacturer's specifications, that do not cause the vehicle to be non-compliant with the ADRs or the *Heavy Vehicle (Vehicle Standards) National Regulation* (known as Vehicle Standards).

Minor modifications do not require approval provided the vehicle continues to be within manufacturer's specifications and comply with the Vehicle Standards. Examples of minor modifications include: additional lighting, aerials, air conditioning, alarm systems, plastic shields for lamps and windscreens, and manufacturer's wheel/tyre options (that do not affect the gross vehicle mass or gross combination mass rating of the vehicle).

Modifications under the Code of Practice

These modifications are more complex than minor modifications and can affect the safety of a vehicle, or compliance with the Vehicle Standards, if not performed properly. The standards for modifications included in the *NHVR Code of Practice for the Approval of Heavy Vehicle Modifications* are based on accepted vehicle engineering practices and the requirements of the Vehicle Standards.

These modifications require approval by an AVE who will issue a modification certificate and ensure a modification plate is affixed to the vehicle if it passes inspection.

At the time this manual was published, the modifications shown in Table B.1 were included in the *NHVR Code of Practice for the Approval of Heavy Vehicle Modifications*

The National Code of Practice for Heavy Vehicle Modifications, Vehicle Standards Bulletin 6 (known as VSB6) may be obtained from the NHVR website at www.nhvr.gov.au/vsb6

Complex Modifications

These are modifications not covered by the *NHVR Code of Practice for the Approval of Heavy Vehicle Modifications* that are usually significant or extensive modifications that have the potential to seriously affect the safety of the vehicle and its operation on the road by changing the vehicle's design, strength, structural integrity and handling characteristics. Complex modifications can only be approved by the NHVR.

Approval by the NHVR requires an application to, and assessment by, the NHVR. An engineering analysis (certification) by a suitably qualified person may also be required depending on the extent of the modification and the potential effect of the alterations on the vehicle's safe operation and compliance with the Vehicle Standards.

Table B.1 VSB6 modification codes

Code	Modification	Code	Modification
A1	Engine Substitution	J1	Body Mounting
A2	Air Cleaner Substitution or Additional Fitting	J2	Truck Bus Body Fitment
A3	Turbocharger Installation	K1	Seating Capacity Alteration and Seatbelt Installation
A4	Exhaust System Alteration	K2	Certification of Seat Anchorage and Certification of Seatbelt Anchorage
A5	Road Speed Limiter Installation	K3	Cabin Conversion
B1	Transmission Substitution or Additional Fitting	K5	Installation of Wheelchair Occupant Restraint System
C1	Tail Shaft Alterations	M1	Fuel System Alterations
D1	Rear Axle(s) Installation	P2	Fifth Wheel Kingpin Installation
D2	Differential Substitution	Q1	Installation of Truck Mounted Lifting Systems – Slewing
E1	Front Axle(s) Installation	R1	Goods Loading Device Installation
E2	Steering Alteration	R2	Wheelchair Loader Installation
E3	Fitment of Non-Standard Front Wheel Components	S1	Rating of Gross Vehicle Mass or Gross Combination Mass to S2 or S3 Approved Design or Within the Vehicle Manufacturer’s Specification
F1	Suspension Substitute	S2	Rating of Gross Vehicle Mass Approved Design Certification for Modified Vehicles or for Special Purpose Vehicles e.g. Motorhomes
F2	Trailer Suspension Modifications	S3	Rating of Gross Combination Mass Approved Design Certification for Modified Vehicles
G1	Air Brake System – Relocation of Air Brake Components	S7	Rating of Aggregate Trailer Mass to S12 Approved Design or Within Trailer Manufacturer’s Specification
G2	Installation of Trailer Braking Controls – Air Brakes	S8	Rating of Prime Mover for Use in Road Train
G3	Trailer Brake System Upgrading	S9	Rating of Primer Mover and Trailers for Use in B-Double
G4	Brake System Certification	S11	Rating of Trailers for Use in Road Train
G5	Auxiliary Brakes – Engine, Exhaust or Retarder Type	S12	Rating of Aggregate Trailer Mass – Design Certification for Modified Trailers
G6	Air Operated Accessories	T1	Construction of Tow Trucks
G7	Brake System Substitutions or Wheel Base Extension – Powered Vehicles	T2	Design of Tow Trucks
G8	Trailer Brake System Upgrading – Approved Design Certification for Non-Standard Trailers	Queensland specific codes	
H1	Wheel Base Extension Outside the First Manufacturer’s Option	S10	Concessional Livestock Loading – Vehicle Rating
H2	Wheel Base Reduction Less Than First Manufacturer’s Option	S13	Bus Life Vehicle Rating
H3	Wheel Base Alterations Within First Manufacturer’s Option		
H5	Trailer Chassis Frame Modification		
H6	Certification of Front Underrun Protection on Heavy Vehicles and Certification of Bullbars for Fitting to ADR 84/00 Compliant Vehicles		



For more information

www.nhvr.gov.au

Email info@nhvr.gov.au

Tel 1300 MYNHVR (1300 696 487)

7am to 5pm (AEST), standard 1300 call charges apply
(please check with your phone provider).

Post National Heavy Vehicle Regulator
PO BOX 492, Fortitude Valley Qld 4006

