Appendix B - VehicleModifications

B1. 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.

B2. 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).

B3. 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 Modification*s 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 Modification*s

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

B4. Complex Modifications

These are modifications not covered by the *NHVR Code of Practice for the Approval of Heavy Vehicle Modification*s 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
A1	Engine Substitution
A2	Air Cleaner Substitution or Additional Fitting
A3	Turbocharger Installation
A4	Exhaust System Alteration
A5	Road Speed Limiter Installation
B1	Transmission Substitution or Additional Fitting
C1	Tail Shaft Modification
D1	Rear Axle(s) Installation
D2	Differential Substitution
D3	Fitting of Non-Standard Rear Wheel Components
E1	Front Axle(s) Installation
E2	Steering Alteration
E3	Fitting of Non-Standard Front Wheel Components
F1	Suspension Substitute
F2	Trailer Suspension Modifications
G1	Relocation of Air Brake Components
G2	Installation of Trailer Braking Controls
G3	Trailer Brake System Upgrade
G4	Motor Vehicle Brake System Certification
G5	Fitting of Auxiliary and Endurance Brakes
G6	Fitting of Air Operated Accessories
G7	Brake System Substitutions/Wheelbase Extension
G8	Trailer Brake System Upgrade (design)
H1	Wheelbase extension outside original equipment manufacturer's option
H2	Wheelbase reduction less than original equipment manufacturer's option
H3	Wheelbase Alterations Within Original Equipment Manufacturer's Option
H4	Chassis Alteration
H5	Trailer Chassis Modifications
H6	Install Approved Front Underrun Protection
H7	Design or Manufacture of Aftermarket Front Underrun Protection
J1	Body Mounting
J2	Fitting of Truck Bus Body
J3	Fitting of Roll-Over or Falling Object Protection System
K1	Seating Capacity Alteration, Seat, Seatbelt and Anchorage Installation
K2	Certification of Seat Anchorage and Certification of Seatbelt Anchorage
K3	Cabin Conversion
K5	Installation of Wheelchair Occupant Restraint System
K6	Child Restraint Anchorage Installation
M1	Fuel System Alterations
P1	Towbar and Coupling Installation Other Than Fifth Wheels and Kingpins
P2	Fifth Wheel Kingpin Installations
R1	Goods Loading Device Installation
R2	Wheelchair Loader Installation
S1	Gross Vehicle Mass/Gross Combination Mass Re-rating
S2	Gross Vehicle Mass Re-rating
S3	Gross Combination Mass Re-rating
S7	Aggregate Trailer Mass/Gross Trailer Mass Re-rating
S8	Motor Vehicle Road Train Rating
S9	Prime Mover B-Double Rating
S11	Road Train Trailer Rating
S12	Aggregate Trailer Mass/Gross Trailer Mass Re-Rating (design)
T1	Construction of Tow Trucks
T2	Design of Tow Trucks
S10	Concessional Livestock Loading – Vehicle Rating
S13	Bus Life Vehicle Rating