



Frontal impact requirements

A few issues ago, we outlined the requirements for modifications that affect a vehicle's frontal impact-compliance. That article was focused on the fitment of front-mounted intercoolers and similar accessories. However, the requirement for Warrant of Fitness (WoF) Inspectors to assess vehicles for any frontal impact modifications is not strictly limited to these types of modifications. The VIRM Modification threshold for frontal impact modifications has recently been updated and includes important changes Inspectors should be aware of.

As outlined in section 3.1 of the VIRM, different frontal impact requirements are in place depending on the vehicle's age and class. While LVVTA recommends that Inspectors become familiar with the wording of the VIRM, the brief overview is if a light vehicle, which is required to meet a frontal impact standard, has been modified in such a way that its frontal impact occupant protection system may have been affected (including by adding or removing an object, fitting or component), the vehicle may require LVV Certification.

Bull Bars and Nudge Bars

- Under the updated wording of the Tables and Images tab of the VIRM, light vehicles, including Class MC and Class NA, do not require LVV certification for auxiliary bars (including bull bars, nudge bars, external roll cages and winches) if either:

The vehicle is not required to comply with a frontal impact occupant protection standard; and

the auxiliary bar:

- presents no pedestrian traps [a pedestrian trap is any part of a vehicle that may hook, catch or pull/push a pedestrian into or under a vehicle]; and
- is not angled forward except where necessary to clear the contours of the vehicle; and
- presents no sharp edges or an external radius of less than 3mm, and;

The winch either:

- does not protrude forward of the front face of the bumper; or
- does project forward of the bumper line but is fitted with 'pedestrian-friendly' shrouds to reduce trapping risk and present a larger forward-facing surface area.



Frontal impact exempt vehicles must still meet external projection requirements, as found in section 2.1 of the VIRM. Assuming these requirements are met, and the vehicle has no above-threshold modifications, external roll cages can be permitted without the need for LVV Certification.

Or:

The vehicle is required to comply with a frontal impact occupant protection standard* (see below for explanation); and

the auxiliary bar:

- is a vehicle manufacturer-supplied component for that vehicle; or
- has been certified by the auxiliary bar manufacturer as frontal impact-compliant (as may be indicated by a label).

Note: an auxiliary bar that does not meet the above minimum requirements is unlikely to meet LVV requirements and so cannot be certified.

All modifications that are not expressly outlined above will always require LVV certification.

* The following vehicles with a GVM of 2,500kg or less must comply with a frontal impact occupant protection standard:

- Class MA motor vehicles manufactured on or after 1 March 1999
- Class MA motor vehicles that were less than 20 years old when they were first registered in New Zealand on or after 1 April 2002
- Class MB and MC motor vehicles manufactured on or after 1 October 2003.



Frontal impact-compliance

The requirement for auxiliary bars to be compliant is to ensure that occupant protection airbags fitted to vehicles which are equipped with auxiliary bars still function as the vehicle manufacturer intended. Frontal impact-compliant accessories are most commonly fitted with ADR (Australian Design Rules) approval stickers to indicate their compliance. The downside of this requirement for the vehicle modifier is that no custom/home-made bars can be fitted to vehicles that are required to meet frontal impact standards, as the bars will not have been proven to meet an applicable standard. It's also worth noting that any modification for the purposes of law enforcement (eg Police cars), or the provision of emergency services, are not required to meet these standards, nor undergo LVV certification.

Exclusion from requirements

Vehicles that aren't required to meet frontal impact standards (vehicles not outlined in the breakout box above) may be fitted with auxiliary bars that simply need to meet external projection



Vehicles required to meet frontal impact occupant protection standards (see breakout box on previous page), can only be fitted with frontal impact-compliant accessories. Home-made or custom auxiliary bars cannot be accepted.

requirements (see section 2.1 of the VIRM). This includes vehicles fitted with external roll cages, which are designed to protect the vehicle in the event of a rollover. Vehicles fitted with these accessories do not require LVV certification, unless other modifications to the vehicle are above the VIRM Modification Threshold. Auxiliary bars must not impact the vehicle's ability to meet all other applicable standards, such as lighting visibility angles.

A-frames

A-frames have now been separated from auxiliary bars in the VIRM Modification threshold and can be fitted to frontal impact-compliant vehicles.

The updated VIRM Modification threshold states that LVV Certification is not required for the fitment of an A-frame, if the A-frame meets all of the following requirements: is attached to the chassis by means other than welding; and

- the components are fit for purpose; and
- the brackets remaining on the vehicle when the A-frame is removed are recessed behind the forward surface of the bumper by no less than 20mm; and
- the brackets are fitted so that they do not bridge the vehicle's crumple zones; and
- the brackets are fitted so that they do not significantly stiffen the front of the vehicle.

Note: An A-frame that does not meet the requirements above is unlikely to meet LVV requirements, so is unlikely to be LVV certified.

If you are unsure if a vehicle undergoing WoF inspection requires LVV certification, WoF Inspectors are encouraged to contact the LVVTA Tech Team on 04 238 4343 or tech@lvvta.org.nz.



Vehicles fitted with A-frame attachments welded to the chassis require inspection from an LVV Certifier, although they are unlikely to meet LVV requirements.