When lowering a vehicle, it must continue to comply with the minimum ground clearances and

running clearances specified in ADR 43/... and in the AVSR.

Where changes in vehicle height occur as a result of modifications, the requirements detailed

under *Modified Components* (refer to Code LS3) that are applicable to individual steering and

suspension components continue to apply. Important items such as spline engagement,

operating angles of drive shaft joints and in the case of CV joints, the range of axial movement,

must remain within design limits for the full range of suspension travel. Also other components

such as gear levers, brake hoses etc. may need to be extended depending on the nature of the

lift.

Steering linkages must continue to operate efficiently and sufficient spline contact surface must

be retained for the full range of suspension travel to ensure the safe operation of the vehicle.

Otherwise an appropriate steering shaft extension must be used.

Following the completion of modifications the vehicle attitude must remain as per original

specifications – i.e. the original relationship between the front and rear suspension heights must

not be changed and therefore the front and rear suspensions must be both raised by the same

amount.

Vehicles whose ride height is raised by more than 50mm must meet the requirements specified

in Codes LS7 and LS8 and undergo a lane-change manoeuvre test in accordance with ISO

3888-1 *Passenger Cars – Test Track for a Severe Lane-Change Manoeuvre – Part 1: Double*

*Lane-Change* to ensure its stability has not been compromised. The test procedures and

requirements for the lane change test are detailed in Section LT *Test Procedures* Code LT4.

When lowering a vehicle, **the ride height of an unladen vehicle must not be changed by more**

**than one third of the working travel of the suspension from its original height to a rigid bump or**

**rebound position specified by the manufacturer.** The suspension bump and rebound positions

are measured with any deformable bump or rebound stops removed. The original relationship

between the front and rear suspension heights must not be changed and therefore the front and

rear suspensions must be both raised or both lowered by the same amount.

**If coil springs are lowered, or replacement lower coil springs are used, they must have the same**

**end shape as the original springs. They must retain some pre-tension and not come loose**

**when the suspension is in its lowest position (full rebound). They must have clearance between**

**coils at full bump**.

Lowering blocks used with leaf spring suspensions must be steel, aluminium or metal of

equivalent strength and must be positively located to the axle spigot hole and spring centre-bolt.

Extended or adjustable shackle plates must not be used to raise vehicles on leaf spring

suspensions.

Rubber or other resilient bump stops must be provided where the suspension and/or axle are

likely to *bottom-out* on the body or chassis structure.

Where the vehicle manufacturer has fitted a load-sensing valve to the braking system as

standard equipment, the brake system bias must be checked in both laden and unladen

conditions. This check must confirm that the manufacturer’s specifications are maintained. The

vehicle’s braking system may require re-certification to the ADR applicable to the category of

vehicle at its date of manufacture.

**4 MODIFIED COMPONENTS (custom parts)**

Where modifications of steering components cannot be avoided, the operations employed

should be determined and controlled such that the final properties can be predicted and verified

*on an individual component basis* by a NATA approved materials laboratory, using relevant

Australian or International Standards as a reference. The following post process testing by the

laboratory is a minimum for such components:

 Welded parts should have the weld material identified, a hardness test traversing

across the weld area including the heat affected zone, an X-Ray inspection and a

statement of weld integrity;

 Heated parts should be stress relieved, heat treated to a defined specification and

undergo non-destructive testing such as magnetic particle or ultrasonic;

Parts which have been cold worked (where permitted) must be checked to ensure that

the cold working is not excessive, stress relieved if required and undergo nondestructive

testing such as magnetic particle or ultrasonic.

Section LZ *Appendices* provides further information and guidance on heat treatment and

welding. The mandatory provisions of Section LZ must be complied with.

**Basically forget using any custom parts unless they have been fully tested (and I don’t mean fit to car and drive around)**