



# RESTRICTED ACCESS VEHICLE INFORMATION BULLETIN

## 6.5 TONNE STEER AXLE MASS LIMIT FOR HEAVY VEHICLES

### Background

South Australia is facilitating the adoption of the latest environmental and safety technologies in trucks by implementing a national reform that increases the allowable mass on steer axles. These technologies include exhaust emission technology, front underrun protection devices and stronger, safer cabins. These technologies may add weight on the steer axle. Hence, the mass limit on steer axle has been increased sufficiently to accommodate this additional weight.

From **2 April 2007**, trucks fitted with all these technologies are able to have an additional 0.5 tonne on the steer axle, increasing the steer axle mass limit up to 6.5 tonnes.

This initiative provides significant benefits to the community, truck drivers and other road users. It will provide cleaner air, and better protection for truck drivers and other road users in the event of a crash.

### Conditions of Operation for 6.5 Tonnes on Steer Axles

Trucks are able to operate up to 6.5 tonnes on the single steer axle if the trucks have all of the following:

- 1) An engine complying with the emission control requirements of ADR 80/01 (Euro 4 engine) or later version of ADR 80;
- 2) A front underrun protection device that complies with UN ECE Regulation No. 93;
- 3) A cabin that complies with UN ECE Regulation No. 29;
- 4) Appropriately rated tyres, axle, and suspension, to allow 6.5 tonnes on the steer axle; and
- 5) A Gross Vehicle Mass (GVM) of 15 tonnes or more.

### Access

Vehicles operating at the increased steer axle and vehicle mass may travel on the same roads that they were approved to travel on before the 0.5 tonne increase. However, a vehicle must not travel on a road or bridge if its mass would exceed the signed mass limit. That is, vehicles that had general access to the road network continue to have general access. Those vehicles restricted to specific approved networks, such as B-Doubles and semi-trailers with tri-axles at Higher Mass Limits, must only travel on those approved routes.

### Emission Standards

From January 2007, it will be mandatory for all new model trucks to meet ADR 80/01 and ADR 80/02 and from 2008 this will apply to all new trucks. These ADRs introduce stricter exhaust emission requirements for trucks, equivalent to European emission standard Euro 4 and the corresponding United States EPA 2004. The new emission standards are expected to reduce air pollution, including hydrocarbons, oxides of nitrogen (NOx) and particulate matter (PM10), created by trucks. Examples of technologies fitted to trucks to meet the new standard are Selective Catalytic Reduction (SCR) or Exhaust Gas Recirculation (EGR).

## **Front Underrun Protection Devices**

Currently only 26 metre B-doubles are required to have Front Underrun Protection Devices (FUPDs) and stronger cabins, however this will be extended to trucks operating above 6.0 tonnes and up to 6.5 tonnes on the steer axle. Under UN ECE Regulation No. 93, FUPDs are designed to ensure that the safety features of passenger cars, such as air bags and crumple zones, are activated during a head-on collision. It also aims to minimise injury by preventing cars, if struck from behind, from going underneath the front of trucks.

UN ECE Regulation No. 93 requires that the FUPD must:

1. Have a smooth face at least 120mm high and ground clearance of no more than 400mm; and
2. Be the full width of the vehicle, specifically that:
  - It is not more than 100 mm from the outermost points of the steer axle tyres; or
  - It is not more than 200 mm from the outermost points of the steps to the driver's cabin.

A front underrun protection device can either be:

- Integrated into the vehicle body;
- Integrated into the body with a complying bullbar attached; or
- A specially designed complying bullbar.

It is important that bullbars or protrusions do not compromise the full functionality of Front Underrun Protection Devices. Any truck with FUPD that is modified by the fitting of an additional device (such as a bullbar) that is not an approved FUPD is not eligible for the steer axle mass increase.

In practice, it is not feasible to fit a bullbar to a vehicle with FUPD in a manner that is compatible with the FUPD. The prescriptive nature of the ECE regulation 93 means that the bullbar itself must be approved by the vehicle manufacturer, competent entity, or a Recognised Engineering Signatory, as complying with FUPD requirements and plated to identify that it does, in order to qualify for the axle mass increase.

## **Stronger, Safer Cabins**

The cabin strength requirement is intended to provide a safer environment for truck drivers and passengers. A truck manufactured with a cabin that complies with UN ECE Regulation No. 29 is able to withstand a series of impact tests against the front, rear and roof of the cabin.

## **Compliance Plate**

Trucks meeting the conditions to operate at 6.5 tonnes on the steer axle must have a compliance plate installed by the manufacturer confirming that the truck complies with the exhaust requirements of ADR 80/01 and ADR 80/02, and cabin strength and front underrun protection requirements. Where a truck is manufactured and compliance plated for meeting ADR80/01 and the ECE 29 cab strength requirement, but not with the ECE 93 front underrun protection, it is not entitled to exceed 6.0 tonnes on the steer axle. If an approved ECE 93 front underrun protection device is subsequently fitted and approved by a Competent Entity, and fitted with a compliance plate to identify it as meeting the ECE 93 requirement for FUPD, the truck would then be entitled to carry up to 6.5 tonnes on the steer axle. The compliance plate must be attached in a position that is easily accessible to, clearly visible and readable by, a Police Officer or an authorised officer.

## **Ineligible Vehicles**

Buses, Coaches and Twin-steer trucks may have an ADR 80/01 engine, a FUPD and stronger cabins, but are not included in this initiative.

## **Future Developments**

The current increase in steer axle mass is intended to accommodate all vehicle safety and environmental technologies required in the short to medium term. These include Australian Design Rule 83/01, which requires a mandatory reduction of heavy vehicle noise in 2008, exhaust emissions requirements that supersede ADR 80/01 and ADR 80/02, and the safety improvements of FUPDs.

The increase in mass limit will result in increased road wear and higher road maintenance costs. These costs may be factored into future heavy vehicle charges.

## **Documentation**

You must carry in the driving compartment of your vehicle a legible and current copy of the South Australian Gazette Notice *6.5 Tonne Steer Axle Mass Limit for Heavy Vehicles*.

Depending on the nature of your operation and vehicle type, other Gazette Notices or Permits may be relevant and it is the responsibility of the driver to carry all the applicable documentation and comply with all related operating conditions.

## **Additional Information**

- Copies of Gazette Notices can be obtained from DTEI's website at  
[www.transport.sa.gov.au](http://www.transport.sa.gov.au)  
**by selecting freight / road freight / vehicle config. & notices from the menu**
- or, from DTEI's Vehicle Services Section, Vehicle Permits Team  
Telephone: 1300 882 249  
Facsimile: (08) 8348 9551
- or, alternatively, from Customer Service Centres (Motor Registration) throughout the State.
- Information and advice on this issue can be obtained from the Vehicle Permits Teams specified above.

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