



Transport Operations Level-4.

TOPIC: TRANSPORTING ABNORMAL LOADS

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Module 7 & 8: Legislative framework & abnormal loads: operations,
risks and handling

SUBJECT OUTCOMES

(SO 3.1,3.2,3.3-LO 3.1.1,3.2.1,3.2.2,3.3.1)

SUBJECT OUTCOMES

- Describe the aim and the purpose of Chapter 9 of the National Road Traffic Act no 93 of 1996, that deals with the transportation of abnormal loads
- Define an abnormal load in freight logistics
- List the documents that were developed by the Abnormal Loads Technical Committee to give effect to NRTA and NRTR requirements for the transport of abnormal loads

SUBJECT OUTCOMES

- List the principles of the exemption permit system
- List the requirements relating to permits for operating vehicles with abnormal loads
- Describe the requirements relating to escort services when transporting abnormal goods
- Describe the incorporation of the SABS Code of Practice with regard to abnormal loads

SUBJECT OUTCOMES

- Describe the operations involved when transporting abnormal loads
- Identify and discuss with examples the risks associated with the transportation of abnormal loads
- Describe the measures taken to minimise the risks associated with the transportation of abnormal loads
- Describe the handling of abnormal loads

The aim of chapter 9 and the definition of an abnormal load

- ✓ Chapter 9 aims to prescribe the road signs applicable to abnormal loads, as well as speed limits that may apply (page-160)
- ✓ An abnormal load it's an indivisible mass feature of goods that exceeds limitations or mass of a vehicle/vehicles as described by the National Road Traffic Act, 2000

The (two) documents developed by the abnormal Load Technical Committee

- ✓ The following (two) documents were developed by the Abnormal Load Technical Committee to give effect to NRTA and NRTR requirements for the transport of abnormal loads namely;
 - **THE TRH 11:** Dimensional and Mass Limitations and other requirements for abnormal Load Vehicles
 - **The Administrative Guidelines** for Granting of Exemption Permits for the Conveyance of Abnormal Load

Principles of the exemption permit system

- ✓ An exemption permit will only be issued where there's no alternative way to transport the load in a legal manner
- ✓ The carrier must pay for any damage caused to the road by the mass of the abnormal load
- ✓ The risk of other road users must be equally reduced like in non-transported abnormal load conditions
- ✓ The conditions of the exemption permit system must take into account the socio-economic interest of the country and the public at large

Requirements relating to permits for operating vehicles with abnormal load

- ✓ Abnormal vehicles must have flags to identify extremities
- ✓ Amber flashing lights must be on top of the vehicle
- ✓ Marker lamps and reflectors must be available to demarcate extremities
- ✓ Abnormal warning board must be at the front and rear with red retro-reflective letters on a white background
- ✓ Speed restriction board must be at the rear above the warning board for the vehicle limited to 60km/h or less

Requirements to escort services when transporting abnormal goods

- ✓ Abnormal load vehicles may be escorted by an operators own staff, or by official traffic officers
- ✓ An escort vehicle must travel 10m-50m from the abnormal vehicle
- ✓ When two own escort vehicles are used one vehicle should be at the front with the other at the back of an abnormal vehicle
- ✓ Private escort personnel can't control traffic unless authorised by the relevant authority

N.B*The incorporation of the SABS Code of Practice with regard to abnormal loads require:

- ✓ Operators to comply with NRTA , its regulations , TRH 11 document and the South African National Standards of handling and transporting abnormal loads

Operations involved when transporting abnormal loads

- ✓ Loading and offloading
- ✓ Monitoring of abnormal loads
- ✓ Security permits
- ✓ Determining routes
- ✓ Conveyance of abnormal loads

Risks associated with the transportation of abnormal loads

- ✓ Risk during loading and offloading could be accidents with fatal effects to workers and damage to loads, equipment, vehicle and other related assets.
- ✓ Risk during transport could be damage to roads and infrastructure
- ✓ Financial, administrative and insurance risk could be expensive penalties for late deliveries and overtime payments of staff members

Measures taken to minimise the risks associated with the transportation of abnormal loads

- ✓ **Risk assessment must be done** to investigate the number of people that could be exposed to risk and the capacity, skill and experience of workers doing the job
- ✓ **Risk assessment must be done** to investigate the layout of loading and offloading areas
- ✓ **Safety measures during loading and offloading** must ensure careful housekeeping of loading and unloading areas in the warehouse and the yards must be well lit and free of slipping and tripping hazards

Measures taken to minimise the risks associated with the transportation of abnormal loads

- ✓ **Safety measures during transportation** involve the registration and licencing of the vehicle, licensing and certification of the driver, keeping to prescribed speed limit, marking and lighting of vehicles.
- ✓ **Safety measures in terms of financial loss** include acquiring the right exemption permit, vehicle and equipment maintenance, providing the right PPE to staff members and implementing safety measures as identified the assessment etc.

Handling of abnormal loads (acceptance and storage)

- ✓ **Acceptance and storage:** Abnormal loads come in a range of sizes and weight of huge challenges for transportation and storage. It is important to plan the most appropriate routes to storage facilities for abnormal cargo. It is also important to follow appropriate procedures for the receipt and storage of abnormal loads. Indoor storage facilities may need to be custom-built, insulated or provided with overhead cranes. The operation must avoid the expensive-cost of taking longer to accept the abnormal loads that need specialised vehicles and equipment for offloading and storage

Handling of abnormal loads (Inspection and approval)

- ✓ Inspection and approval takes place at the manufacturing site or at the point of entry for imported goods. 3D modelling must be used as the guidelines for the demands and requirements of an abnormal load project. The size of abnormal loads and the extent of moving and positioning operations must be inspected for approval. Sketches of the details of the side –view and profile of the equipment and parts, maximum dimension in centimetres and projecting parts must be sent to the contractor months prior to the shipment date

Handling of abnormal loads (packing and stowing)

- ✓ Packing and stowing: Proper packing and stowing and securing of abnormal loads are necessary elements for maximum protection of goods against all forms of stress. Sketches and specifications for inspection and approval of abnormal loads such as, heavy equipment must also indicate how and where goods must be handled, packed, transported and stored. Acceleration and deceleration during road transportation exerts horizontal pressure on the side of the cargo which may damage improperly packed and stowed goods.

summary

- The National Road Traffic Act (NRTA) Act No 93 of 1996 and the National Road Regulations (2000) prescribe certain limitations on vehicle dimensions and axle and vehicle masses to which a vehicle using the public road should comply. However certain vehicles and loads cannot be moved on public roads without exceeding the prescribed limitations in terms of dimensions and /or mass.
- In line with the definition of an abnormal load, vehicles or loads that cannot be dismantled, without disproportionate effort, expense or risk of damage are then classified as abnormal loads or vehicles
- These are only allowed to travel, or be transported, on the public roads under an exemption permit.

summary

- Module-8 examines the operations and risks that characterise the transport of abnormal loads. It pays special attention to operational aspects abnormal load transport, such as loading and offloading, monitoring of the operation, securing the necessary exemption permits and the conveyance of abnormal loads to the customer. It further looks at the marking of vehicles and the use of escorts to mitigate dangers that the load may pose to other road users.
- To facilitate sufficient abnormal load transport operations, business do not only require the appropriate lifting equipment and transport vehicles, but also well trained employees with relevant experience and expertise. This module provides a cursory introduction to this specialised field of transportation.