

Management Summary

Guide to Good Industry Practices for LPG Bulk Road Tanker Management

GOOD
INDUSTRY
PRACTICES



The *WLPGA* Guide to Good Industry Practices for Bulk Road Tanker Management applies to transporting pressurised bulk LPG in rigid and articulated road tankers

Managing bulk LPG road tankers is usually a major activity of any LPG business whether this is outsourced or managed in-house. To achieve a safe and efficient road tanker operation, one critical factor is to have the correct fleet of road tankers. This includes selecting road tankers that:

- Are suitable to the operating environment
- Have the appropriate fleet capacity
- Have the best total cost of ownership

This guide addresses the necessary features to ensure the fleet operates safely and reliably under all operating conditions anticipated including knowledge of the climatic conditions, type of terrain and type of roads and type of operation.



LPG road tankers should always be designed to the maximum capacity allowed in public roads to lower the unit distribution cost. They should comply with local/regional regulations with respect to the vehicle maximum laden weight as well as the maximum axle loads. Site accessibility and road conditions should also be considered when selecting road tanker type and capacity to ensure they can be maneuvered safely while on the road or within the customer premises. The size of the road tanker fleet should be planned based on current demand (including seasonal fluctuations) and projected future volumes to be transported. Fleets should be planned with each truck running at least one full load a day. Downtime for truck maintenance should be taken into consideration to ensure there is enough fleet capacity to meet delivery demand when trucks are withdrawn for planned maintenance.

LPG road tankers should be selected on the basis of total cost of ownership. This includes the initial capital cost of the vehicle, the operating cost of the vehicle and the residual value on disposal over the whole life of the vehicle.

The *WPGA Guide to Good Industry Practices for Bulk Road Tanker Management* includes advice on vehicle design

This Guide applies to articulated, rigid, or rigid with a drawbar trailer design, LPG road tankers selected to meet the operational needs of transferring LPG in bulk. This can be between two plants—where loading/unloading operations are normally conducted using plant facilities, or for making customer deliveries—where small volume drops are carried out using a vehicle-mounted pump and metering systems.

There is a chapter covering the design of the tanker which includes advice on engine, exhaust system, electrical system, chassis and chassis equipment, fuel system, braking system, speed limitation devices, vehicle cab equipment, lighting and miscellaneous equipment.

The guide stresses the need for LPG road tankers to comply with local design and constructional regulations taking into account operational limitations, e.g. axle weights, gross laden weight, overall length/width, etc.

It suggests that where local regulations do not exist, or are not sufficiently comprehensive, the requirements of recognised alternative legislation, combined with limits of design offered by vehicle manufacturers, must be adopted i.e. ADR, UK LPG COP2, etc.

All vehicle LPG storage tanks and tank equipment must be manufactured and approved to appropriate international standards, or where necessary regional or national standards. Any repairs, additions or modifications should be carried out in compliance with the original manufacturer's standards.

The guide recommends that only tank manufacturers that can demonstrate their capability to comply with the requirements of the design code and manufacturing specifications should be selected.

It is important to appoint an acceptable independent inspection authority during and post manufacturing to verify compliance.

The *WLPGA Guide to Good Industry Practices for Bulk Road Tanker Management* also includes details on the requirements for labelling and some useful checklists

Road tankers carrying dangerous goods are required to be clearly marked or labelled visibly with emergency information to aid fire services and/or emergency response teams to manage any incident involving the truck.

In the absence of any local or regional regulations, the guide contains advice on labelling and emergency warnings and identification of the contents of the vehicle.

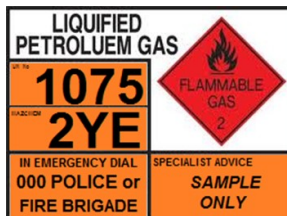
The guide includes details on the steps to take when acquiring a new bulk road tanker including the need to fully purge of air before the first load of LPG.

A 'start of shift' checklist is included in the guide and detailed procedures for loading and unloading the road tanker.

The important subject of journey management is covered with some recommendations for driver hours and monitoring the performance of the fleet.

There is a chapter in the guide describing information about road tanker maintenance, emergency response and driver training.

In the Appendices of the guide are some typical diagrammatic layouts for piping and equipment and some examples of checklists to be used for weekly vehicle checklists, bulk customer pre delivery checklists and a series of vehicle maintenance guidelines. Finally there is a list of vehicle emergency response equipment with advice on regular maintenance.



The complete *Guide to Good Industry Practices for Bulk Road Tanker* and all other WLPGA publications, can be found here: www.wlpga.org/publications

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WLPGA, 182 avenue Charles de Gaulle, 92200 Neuilly sur Seine, France
www.wlpga.org