DRAFT PHILIPPINE NATIONAL STANDARD (PNS) ON VEHICLE TRANSPORT FOR LIQUEFIED PETROLEUM GAS (LPG) IN BULK AND IN CYLINDERS; DISTRIBUTION OF LPG IN CYLINDERS; AND CODE OF SAFETY PRACTICES

DRAFT PHILIPPINE NATIONAL STANDARD (PNS) ON VEHICLE TRANSPORT FOR LIQUEFIED PETROLEUM GAS (LPG) IN BULK AND IN CYLINDERS; DISTRIBUTION OF LPG IN CYLINDERS; AND CODE OF SAFETY PRACTICES

This Standard has been prepared by the Technical Working Group (TWG) under the Technical Committee on Petroleum Processes and Facilities (TCPPF) to offer in response to the policy direction of the Department of Energy-Oil Industry Management Bureau to offer guidance and prepare a document reflective of the local regulations and safety requirements associated with the transportation of Liquefied Petroleum Gas (LPG) in bulk and in cylinders via Tank Trucks, and the distribution of LPG in cylinders.

This Standard also incorporates the Code of Safety Practices expected in the transportation of LPG in bulk and in cylinders, and distribution of LPG in cylinders. Covered in the Safety Practices are the operation of the tank truck, proper maintenance, and the driver qualifications as operators of the tank truck.

The TWG Members are composed of technical representatives from government agencies, downstream oil industries and safety practitioners/organization.

It is anticipated that the user of this Standard and the materials referenced herein would form the basic requirements for a safe, worker-safe, environment-friendly, responsible operation in the vehicular transport of bulk LPG and in cylinders; and delivery of LPG in cylinders to act as the primary and minimum requirements in this sector of the Downstream Oil Industry.

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B. Department of Public Works and Highways (DPWH)
C. Department of Environment and Natural Resources (DENR)
D. Land Transportation Office (LTO)
E. Department of Science and Technology (DOST)

FOREWORD

This Philippine National Standard (PNS) on Vehicle Transport for Liquefied Petroleum Gas (LPG) in Bulk and in Cylinders; Distribution of LPG in Cylinders; and Code of Safety Practices was prepared under the direction of the Technical Committee on Petroleum Processes and Facilities (BPS/TC 68) through its Technical Working Group. This Standard was approved for adoption as Philippine National Standard by the Bureau of Philippine Standards.

This Standard provides for the minimum requirements of vehicle design and specifications to ensure safe, worker-safe, environment-friendly and quality assured transport of LPG in bulk and in cylinders. Additionally, in case of hazardous and similar incidents, emergency response procedures and guidelines are also outlined herewith. Furthermore, this Standard also provides for all existing government regulations and requirements at the time of publication, in the operation and maintenance of vehicle used for the transport and distribution of LPG in bulk and cylinders.

This Standard also incorporates the Code of Safety Practices expected in the transportation and distribution of LPG in bulk and in cylinders, observed by the industry and as required by the relevant government agencies regulating the operation of tank truck haulers.

Where a government regulation is more stringent than the requirements given here, the government regulation shall apply.

In the development of this Standard, the following technical references were considered:

- Department of Energy
  - DC 2013-09-0022 – Directing All Liquefied Petroleum Gas Industry Participants to Observe Minimum Safety Standards in the Transportation and Distribution of LPG in Cylinders
  - DC 2013-09-0029 – Guidelines On Notices And Reportorial Requirements Pursuant To The Downstream Oil Industry Deregulation Act
  - DC 2014-01-0001 – Providing for the Rules and Regulations Covering the Liquefied Petroleum Gas (LPG) Industry
  - DC 2021-09-0029 – Guidelines on Notices And Reportorial Requirements Pursuant To The Downstream Oil Industry Deregulation Act
- Bureau of Fire Protection
  - RA 9514 - Fire Code of the Philippines
- Land Transportation Franchising and Regulatory Board
  - MC No. 2018-007 – Non-Acceptance of applications for truck for-hire services with units more than fifteen years old
  - DO No. 2015-018 – Terms and Conditions of a Certificate of Public Convenience to Operate a Transportation Network Vehicle Service
  - MC No. 92-009 – Defining the Policy Framework for the Regulation of Transportation Services
  - MC No. 2011-014 – Safety Compliance Orders

- Land Transportation Office
  - RA 4136/ RA 10930 – Land Transportation and Traffic Code
- Bureau of Quality and Safety
  - RA 8794 – Anti-Overloading Law
- Environmental Management Bureau
  - DAO 2000-81 – Implementing Rules and Regulation of RA 8749
- United States Department of Transportation Code of Federal Regulations Title 49–(USDOTR CFR Title 49)
- United States Department of Transportation Code of Federal Regulations– 40 CFR National Fire Protection Association NFPA 385 (2000 edition)

ACKNOWLEDGEMENT

This Philippine National Standard (PNS) on Vehicle Transport for Liquefied Petroleum Gas (LPG) in Bulk and in Cylinders; Distribution of LPG in Cylinders; and Code of Safety Practices has been a collaborative effort of the Oil Industry Management Bureau of the Department of Energy (DOE-OIMB) and the Bureau of Philippine Standards of the Department of Trade and Industry (DTI-BPS) with the help, support, and technical assistance of the following:

Government Agencies:

- Department of Environment and Natural Resources – Environmental Management Bureau (DENR-EMB)
- Department of Interior and Local Government – Bureau of Fire Protection (DILG-BFP)
- Department of Labor and Employment – Bureau of Working Conditions (DOLE-BWC)
- Department of Labor and Employment – Occupational Safety and Health Center (DOLE-OSHC)
- Department of Science and Technology – Industrial Technology Development Institute (DOST-ITDI)
- Department of Science and Technology – Metals Industry Research and Development Center (DOST-MIRDC)

Invitees:

- Department of Transportation – Land Transportation Office (DOTr-LTO)
- Department of Public Works and Highways – Bureau of Quality and Safety (DPWH-BQS)
- Department of Transportation – Land Transportation Franchising and Regulatory Board (DOTr-LTFRB)

Downstream Oil Industry Associations:

- Independent Philippine Petroleum Companies Association (IPPCA)
- Philippine Institute of Petroleum (PIP)
- Individual Oil Companies

LPG Industry Associations:

- Liquefied Petroleum Gas Industry Association (LPGIA)
- Liquefied Petroleum Gas Marketers Association (LPGMA)
- Liquefied Petroleum Gas Retailers Association (LPGRA)
- Philippine Liquefied Petroleum Gas Association (PLPGA)

Safety Practitioners/ Organization:

- Safety Organization of the Philippines (SOPI)
- ESA Health, Environment and Safety Services, Engr.Eduardo S. Ajero, President (Invitee/ Technical Expert)

TCPPF Secretariat:

- **Oil Industry Standards and Monitoring Division (OISMD)**

1. SCOPE

This Standard covers the minimum requirements for the transportation and distribution of LPG in Bulk and in Cylinders .

2. DEFINITION OF TERMS

For the purpose of this Standard the following definitions shall apply.

appurtenance
any attachment to a tank truck that has no lading retention or containment function and provides no structural support to the tank truck. Some examples of an appurtenance include ladders, light brackets, hose trays, conduit clips, brake line clips and placard holders, just to name a few

baffle
a non-liquid-tight transverse partition device that deflects, checks or regulates fluid motion in a tank.

calibration
shall refer to the process of checking, adjusting, or determining by comparison with a standard.

cargo truck
a vehicle used to transport or distribute LPG in cylinders

cylinder or LPG cylinder
refer to any portable pressure vessel or container for LPG, with water capacity of one (1) liter to one hundred fifty (150) liters, or as may be prescribed under the Philippine National Standards (PNS), and designed for the sale, transportation, storage or household/commercial/ industrial consumption of LPG

flammable liquids
categorized as "hazardous materials" with which their storage, handling and use will be subjected to applicable standards.

hauler
refer to any person involved in the transport and delivery of LPG in bulk, or in cylinders from one place to another.

loading
means transfer of LPG product from the delivery tank truck to the stationary bulk storage tank.

loading/unloading connection
means the fitting in the loading/unloading line farthest from the loading/unloading outlet to which the loading/unloading hose, pipe, or device is attached.
loading/unloading outlet
a cargo tank outlet used for normal loading/unloading operations.

LPG Cylinder Vehicle
a composite unit consisting of a propelling motor with fixed chassis or similar attachment used in the transport of LPG cylinders. This may also be two-wheeled or three-wheeled vehicle.

pipe
a fitting with internal threads on both ends.

pipeline system
a network pipes or similar conduits used for the conveyance of LPG from the piped LPG provider to consumers

requalification
a process of inspection, examination and testing on LPG Road Transport tank, its instrument, appurtenances and accessories conducted on a specified regular frequency or interval during the life of the tank to ensure it is still safe and fit to continue its service.

shell
circumferential portion of a tank truck defined by the basic design radius or radii excluding the bulkheads.

tank truck
a composite unit consisting of a propelling motor and cab together with one or more tanks fixed to a chassis such that bulk transport of LPG can be done, specifically intended for this guideline.

unloading
means transfer of LPG product from the stationary bulk storage tank to the delivery tank truck.

CHAPTER I LPG VEHICLE DESIGN

3. LPG VEHICLE DESIGN

The following Engineering Design is a consolidated minimum requirement recommended for a vehicle configuration to be used for the transport and distribution of LPG.

3.1. LPG Tank Truck and Cargo Truck

An LPG vehicle truck may be composed of Prime Mover and a Tank Trailer, or a flatbed cargo modified to carry LPG cylinders. The tank trailer consists of tank shell and mounted on a chassis.

Table 1. LPG Tank Truck and Cargo Truck Design Specifications

Item	Description
Physical Characteristics	Compliant to legal dimension limits (height, width, length)
	Compliant to legal age of trucks in the Philippines pursuant to LTFRB MC 2018-007 "Non-Acceptance of applications for truck for-hire services with units more than fifteen years old."
	Compliant to legal weight limits pursuant to of RA 4136 Section 9 - "Permissible Weights and Dimensions of Vehicles in Highways Traffic"
	Must comply with the requirements of the Fire Safety Clearance - Conveyance of Hazardous Materials and Chemicals in cargo vehicles
	The liquid volume capacity of the tank shell must be properly calibrated
	Product Type: LPG (Materials for the tank shell must be compatible to the product type)
Engine	Diesel-powered engine
	Engine must start easily and does not backfire
	Air intake stack pipe has proper top cover and located away from possible ingress of petroleum vapor
	Compliant with the current emission standards
Brakes	No leaks in the system (pipe works, wheel cylinders and master cylinder)
	Hand brake lever is in good working order and can hold the entire truck in non-moving position
	Air pressure gauge is available and in good working order (if truck is equipped with air brakes)
	All braking systems shall be fail-safe in nature (e.g., spring brake boosters)
	Where drum brakes are fitted, they shall have manual or automatic slack adjusters
	Unit may be fitted with an endurance or auxiliary braking system (ex. Jacob brake/exhaust brake)

	Unit may be equipped with ABS/EBS with stability control
Seating	One driver and one passenger seat shall be provided which shall also incorporate head restraints
	Driver seat may be adjustable to accommodate different size of drivers
	A 2-point and 3-point manual/ automatic safety belts are provided for driver seat and passenger seat pursuant to PNS 1892:2000 Amd. 01:2002 Road Vehicles/ Safety Belts and Restraints Systems Specification
Cabin	Steps and grabs for easy access for driver and passenger
Mirrors	All trucks shall be equipped with heavy-duty wide angled fully adjustable rear vision mirrors on both driver and passenger sides of the vehicle
	Passenger side shall also have a wide-range (convex) mirror/s to give driver vision of passenger side blind spot
	Trucks with a conventional (bonnet/hood) cabin shall be equipped with a rear-view passenger side mirror mounted at the front of the bonnet/hood
Windscreen / Windows	Front windscreen should be fitted with laminated glass
	Toughened/tempered safety glass in all other windows
Horn	Unit shall be equipped with a good functioning horn
Pedals	Non-slip pedal pads to be fitted for brake, clutch and accelerator pedals
Interlocks	Trucks are to be fitted with an interlock system to prevent driving away while connected to loading rack or during discharge process (e.g., brake interlock, wheel chock, handbrake/ maxibrake)
Lighting	All trucks shall be equipped with front and rear auxiliary driving lights or fog lights
	All trucks shall be fitted with hazard warning lights
	Two operational reversing lamps mounted at the rear end of the unit, one on the left side and one on the right side
	Vehicles longer than 9.3 m shall have side lights positioned each 1/3 of the overall length from the front of the truck in conformance to local country lighting regulations pursuant to LTO MC 2020-2240
	Only amber colored lights are permitted along the sides of the truck pursuant to LTO MC 2020-2240
Visibility	Unit shall have horizontal reflective high visibility (conspicuity) strips running continuously along each side and at the rear of the rigid tank body
Front bumper height	Height from the underside of the front bumper to the road surface shall not exceed 440 mm. Additional structure must be installed if the gap is greater
Side Under-run	Unit shall be equipped with side under-run protection bars / underride guards to deflect other road users from going underneath the trailer wheels.

Protection / Underride guards **Rear Under-run Protection / Underride guards (See also Visibility Item)**	Unit shall be equipped with strengthened rear under-run protection bar / underride guards. Note: In the annual registration of truck of the DOTr/LTO, it is recommended that the installation of rear and side under-run protection / underride guards is ensured.
Reversing Alarms	Unit may be fitted with an audible reversing alarm on the rear most point of the entire truck.
Tires	No visible signs of tire side wall damage, bulges, tear/cracks.
	Load temperature and speed rating identified on the tire to be applicable for the actual operating conditions.
	The tires shall be maintained such that the minimum tire tread depth across 75% of the surface of the tire is at least 2mm and tires shall be proactively changed- out before these limits are breached.
	No tires shall be permitted to have re-treaded or re-grooved tires on the steering axle.
	No tires shall be permitted to have re-treaded or re-grooved tires on the spare tire position.
Wheel nut	No broken studs/no missing nuts. All nuts must be tight.
	Wheel nuts to be provided with visual indicator that gives a visual alert should a nut become loose or starts to rotate.
Manholes	Tank truck manhole cover is provided with locking mechanism and in good working order.
Equipment Stowage	Unit shall be equipped with sufficient stowage boxes (or storage lockers) required to store all required equipment. All storage boxes and lockers must be capable of being locked by a key operated lock (or padlock).
Pumping Equipment	Tank trucks fitted with pumps shall ensure that the pump is suitable for use with the intended cargo at the required pumping flow rates and pressures.
	The pumping system shall be provided with an automatic means to ensure that the design pressure of any component is not exceeded.
Working at Heights	For trucks with top-mounted liquid level gauges, the drivers and/or helpers should be provided with fall protection PPE (full-body harness + lanyard), which they will anchor to appropriate anchor points in the in the LPG terminals they visit.
Speed Limiter	Unit shall be equipped with a method to limit the maximum vehicle speed to the lower of either the national speed limit or the Company maximum speed limit. The speed limiter shall be configured such that the driver of the vehicle cannot modify this setting (specified in R.A. 10196 – The Road Speed Limiter Act of 2016)

Electrical Systems Requirements	Have vapor-proof electrical systems which includes all light housings. Wire splicing outside of vapor proof junction boxes are prohibited.
	Shall be equipped with a clearly labelled and externally accessible battery isolation switch that interrupts all vehicle electrical circuits.

3.1.1. Emergency Equipment

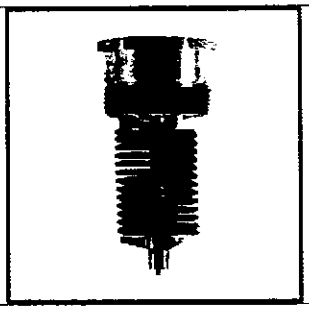
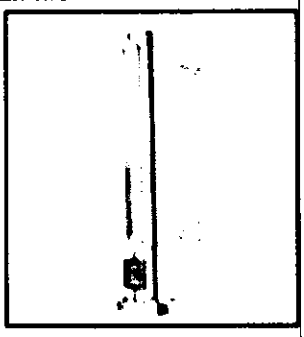
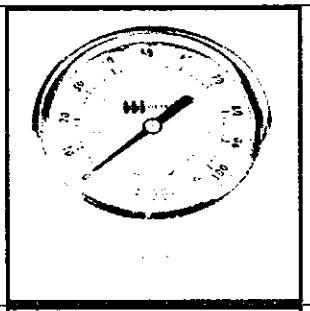
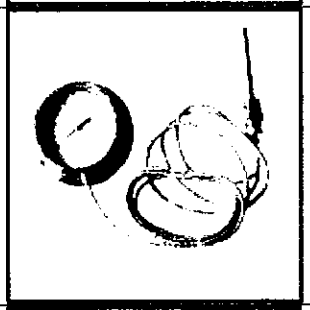
- **Fire Extinguisher** – fully charged and sealed dry chemical fire extinguisher.
- **Wheel Chock** – at least two plastic or wooden wheel chocks shall be in placed under the rear wheels to prevent movement of trucks or trailer while loading or unloading.
- **Early Warning Device and Cones** – one (1) set of early warning device and four (4) pieces of warning cones with at least two feet high.
- **Medical First Aid Kit** – a set of materials and tools used for giving emergency treatment to a sick or injured person e.g., cotton, bandages, medicine etc.
- **Jack Wrench** – tire wrench with extension handle (pipe)
- **Explosion Proof Flashlight**

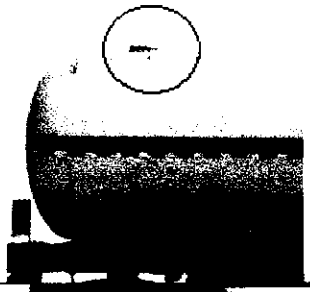
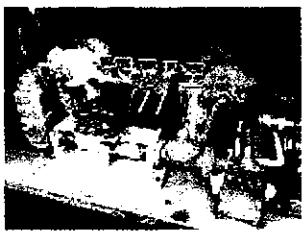
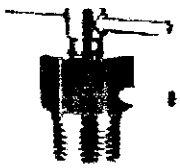
3.1.2. LPG Tank Truck Appurtenances

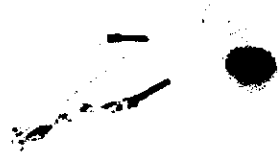
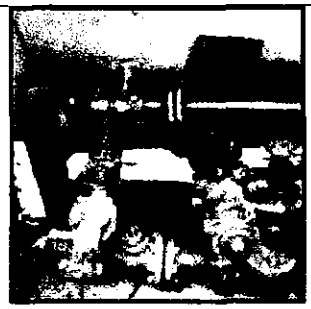
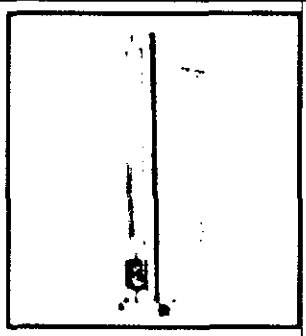
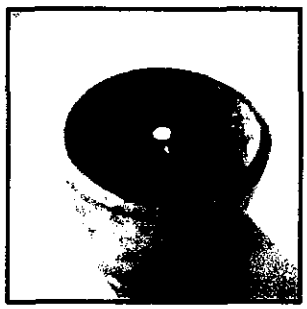
The following tank shell appurtenances are applicable for both rigid and articulated tank truck. See Table 2 LPG Tank Truck Appurtenances.

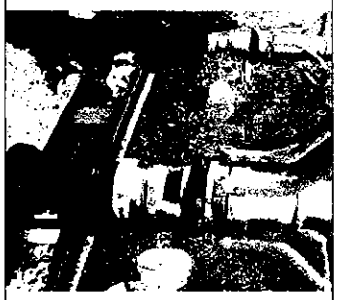
Table 2. LPG Tank Truck Appurtenances

Item		Description
Liquid Inlet line +		Liquid Spray Fill or Liquid Splash Fill, colored blued
Vapor Return line+		led to the manifold where a connection is provided to connect to the shore vapor collecting line, colored yellow
Pressure Relief Valve (PRV)		-an automatic spring-loaded pressure relieving device. - It will open further if there is an increase of flammable LPG vapor inside the LPG storage vessels or Lorry LPG tanks.

		
Liquid Level Gauge		- sensing and measuring instruments that are used to detect the level of the fluid or gas in the tank.
Pressure Gauge *		-measuring instruments used to measure the actual pressure of LPG lorry tank -0 to 21.1kg/cm2 (0 to 300PSIG)
Temperature Gauge *		-measuring instruments used to measure the actual temperature of LPG liquid inside the lorry tank (e.g. bi-metal, dual range) -Temperature range of -20 to 60 C or -4 to 140 F
LPG pump**		-Used to transfer flammable LPG liquid from truck-mounted tank to other LPG storage tanks. Optional for tank trucks used as delivery vehicle.
LPG Volume or Mass Flowmeter**		-Composed of register (head), vapor release, flowmeter, and differential valve. -Used to determine the total LPG liquid quantity being transferred, in liters or kilograms. -Optional for tank trucks used as delivery vehicle

Manhole		Manhole cover is provided with locking mechanism and in good working order. Access through the manhole shall only be done when the vessel needs to be repaired/ requalified.
Emergency shut-off levers for Internal Shut-off Valve (ISV)		- manually actuated designed valve used to control or stop the flow of the flammable LPG liquid and vapor. - installed on rear right side of tank and left side landing gear (can be manual wire cables or pneumatically operated)
Compartment or valve box	 	- should include the liquid and vapor line valves and the mas flow meter, as well as the hose reel
Bleeder or vent valve		-installed on each of 3 pipelines to release vapor on top of tank during disconnection of hoses after discharging or loading.
Grounding or earthing cable		-at least 6M long with alligator clip at the end. Multi strands cable, continuous no splicing.

		
ACME Adapter	 	-bridging connection between the loading bay LPG transfer hose and TT for loading/unloading of LPG
Liquid Level Gauge: Slip Tube Roto Gauge	  	- measuring instrument used to measure the actual level of LPG liquid inside the tank truck.

Breakaway Coupling	 Mann-Tek Dry Gas & LPG Couplings | Arm-Tex	- Safety valve that will close automatically when each end is detached from each other to prevent pull away accidents, protect terminal and loading/unloading equipment, and eliminates unwanted product release.
Hose and Filler Gun		-industrial type of LPG hose preferably one (1) inch size and equipped with filler gun. -used to transport LPG fluids from tank truck to customer LPG tank.

+ Each line shall be provided with a primary valve "ISV"; a secondary valve (ball valve); a brass ACME hose adaptor (for hose connection) with brass cover, rubber seal and a chain.

* Each instrument shall be calibrated by a Laboratory accredited by PAB and issued or holding a BPS Certificate 17025.

**This equipment shall be calibrated and serviced by a trained technician, with experienced and expertise under licensed by manufacturer.

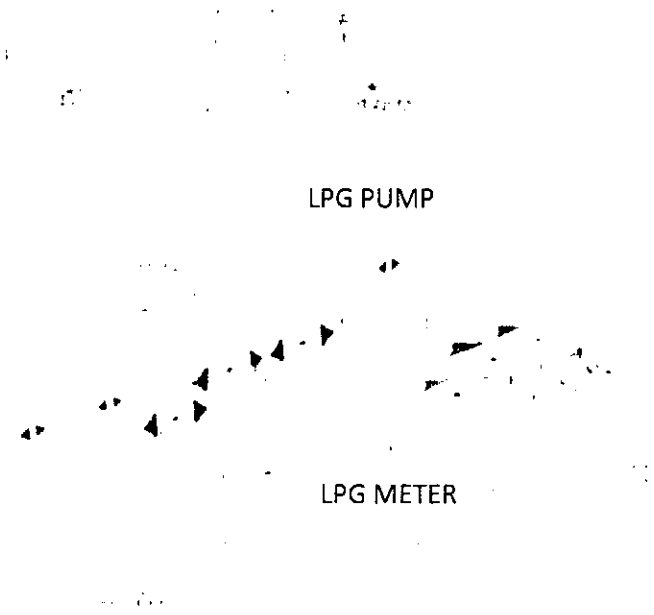


Figure 1. LPG Tank Truck Layout

3.1.3 Cargo Truck Body

Cargo trucks used for the transportation and distribution of LPG in cylinders, particularly to and from the refilling plant and other storage locations/ facilities, shall conform to the following design and can safely carry LPG cylinders up to its rated maximum cargo load capacity:

a. The main body of the vehicle shall be of metal cage.
b. The use of closed vehicles in transporting filled or used empty cylinders is strictly prohibited. A vehicle is deemed closed if it has side or back walls, or a roof
c. The cargo space of the vehicle must be isolated from the driver's compartment, engine, and its exhaust system, and must have substantially flat floors
d. The vehicle shall be equipped with suitable racks and belts to hold the cylinders securely in a position that shall minimize the possibility of movement, tipping and physical damage.

3.2. Other LPG Vehicle Type

All vehicles used in the distribution of LPG in cylinders such as four wheeled, three wheeled, and two wheeled vehicles are subject to conveyance permit of the BFP.

Maximum load limits for the following vehicles are as follows:

- 2 wheeled – 2 x 11 kg cylinders or 4 x 2.7 kg cylinders
- 3 wheeled and 4 wheeled – 2 stacks load of 12 x 11 kg cylinders or its equivalent for smaller sizes of cylinders

3.2.1. Four-wheeled Vehicle

Four wheeled vehicles used for the distribution of LPG in cylinders, particularly from the refilling plant to dealers and customers, shall conform to the specifications of the vehicle and can safely carry LPG cylinders up to its rated maximum load capacity.

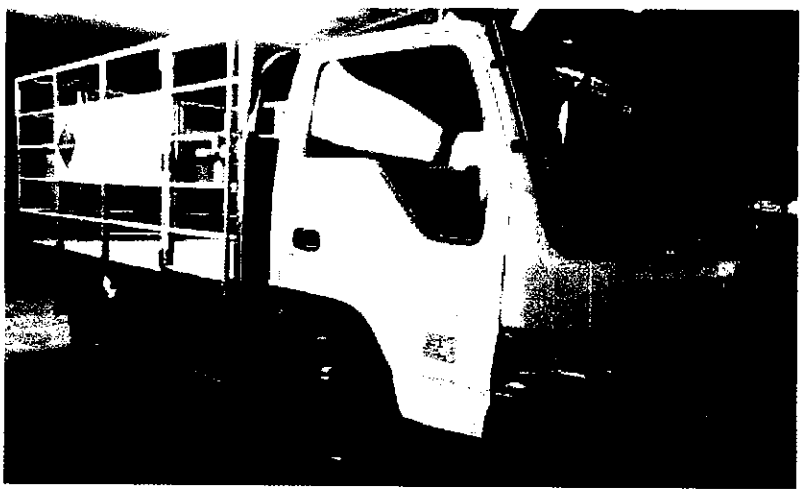


Figure 2. Four-wheeled Vehicle Sample Image

3.2.2. Three-wheeled Vehicle

A motorcycle with fixed steel cage side-car that can safely carry a load of LPG cylinders.

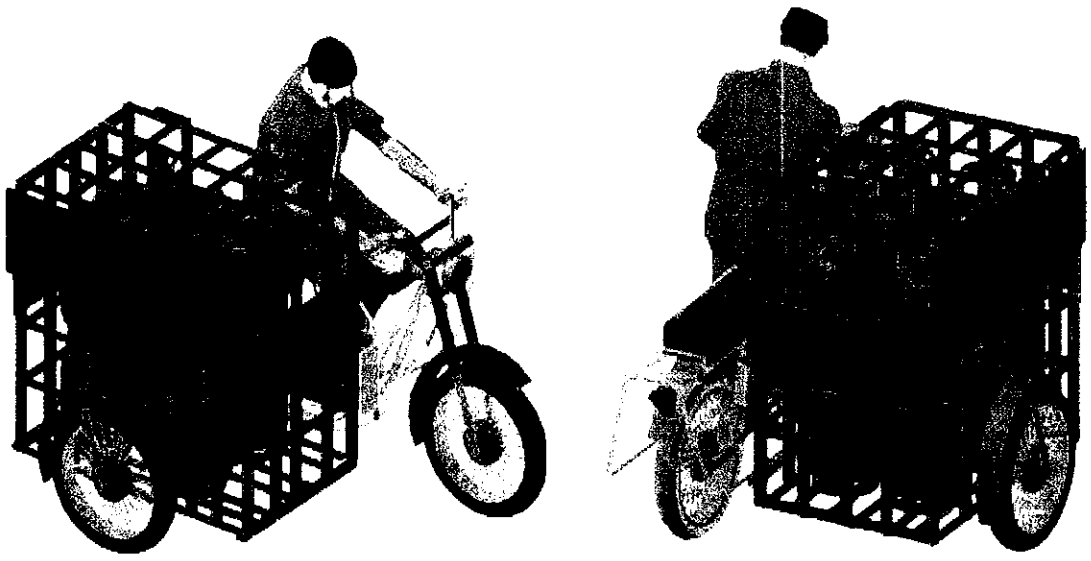


Figure 3. Three-wheeled Vehicle Sample Layout

3.2.3. Two-wheeled Vehicle

A motorcycle with fixed steel cage that can safely carry a maximum of two (2) 11kg LPG cylinders. In all cases, the steel cage should not obstruct the view of the side mirror.

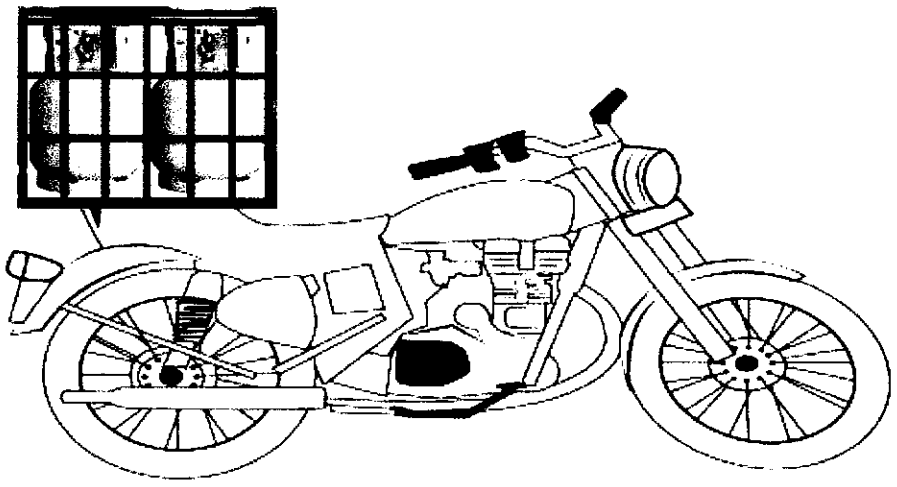


Figure 4.Two-wheeled Vehicle Sample Conceptual Layout: Back Ride Type

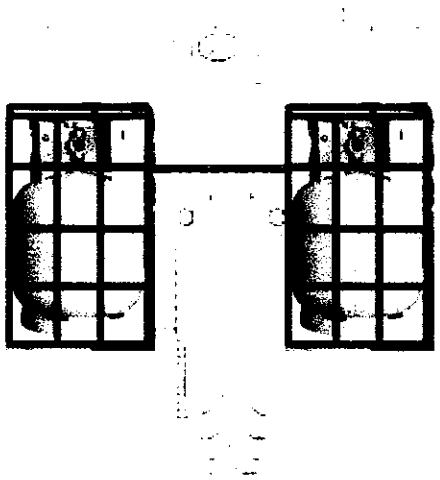


Figure 5. Two-wheeled Vehicle Sample Conceptual Layout: Saddle Type

4. LPG VEHICLE MARKING AND SIGNAGE REQUIREMENT

4.1. LPG Tank Truck Marking Requirements

Every Tank Truck used for the transportation of LPG regardless of quantity, or whether loaded or empty, should be conspicuously and legibly marked.

4.1.1. Bulk LPG Tank Markings

a. The bulk LPG tank trucks should display as a minimum, the following markings:

Name of Product:
Manufacturer's serial no.:
Date of Manufacture:
Volume:
Design Pressure:
Requalification Date:

b. These markings should not be modified, obstructed, made inaccessible or unreadable by paints or any fixtures.
c. The installation of any plate with these markings onto the tank body should not compromise the safety of the tank.
d. Means of attachment or display by such markings should not comprise the integrity of the tank.

4.2. LPG Tank Truck, Cargo Truck, and Other Vehicle Type Appearances

a. Tank Truck/ Cargo Truck Body

- Tank body must be painted with light color (white).

- Front bumper must be painted with standard scheme, if required.
- Hauler's/ Owner's name on both doors as requirement for hired vehicles pursuant Department of Transportation - Land Transportation Franchise and Regulatory Board (DOTr-LTFRB)
- Emergency telephone number for driving complaints at rear for hired vehicles

b. DOT C2 Conspicuity Tape

- Reflective tapes or DOT C2 conspicuity tape must be installed at the side of the semi-trailer at least 15 to 60 inches above the road.
- For tank trucks, conspicuity tape must cover 50% to 100% length of the semi-trailer starting from the front to the rear.
- Whole length of the rear impact guard and the width of the vehicle must be covered by reflective tapes.

4.3. Warning Signages/ Flammable Sign

4.3.1. Tank Truck Flammable Sign

Warning signs should measure at least 273mm (10.8 inches) on both sides and have a 12.7mm (0.5 inches) solid line inner border and be conspicuously sited as required by the Department of Interior and Local Government – Bureau of Fire Protection (DILG-BFP). The text indicating the hazard and the hazard class should be at least 41mm (1.6 inches) in height for both. The background color on the "FLAMMABLE" placard must be red. The symbol, text, class number and inner border must be white. As maybe required by the BFP, a warning sign indicating "NO SMOKING WITHIN 50 FEET" should be marked on the LPG vehicle.

Figure 6. Flammable Sign

4.3.2. Tank Truck Product Label

The LPG vehicle used for transportation and distribution of blk LPG and in cylinders should have a placard which indicates the Product Identification Number, Emergency Response Guide (ERG) Number, and Emergency Telephone Number.

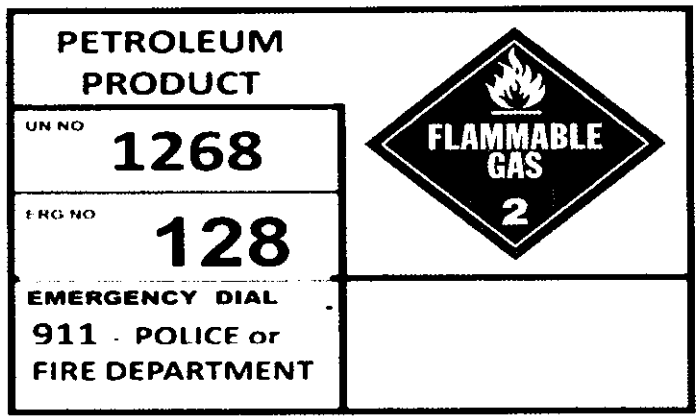


Figure 7. Sample Product Label

4.3.3. Cargo Truck and Other LPG Vehicle Type Warning Signs

Prescribed signage shall be placed 12 inches above floor level in the mid part on both sides of the cargo compartment of the vehicle and not more than 25% of the wall area where the signage is to be mounted.

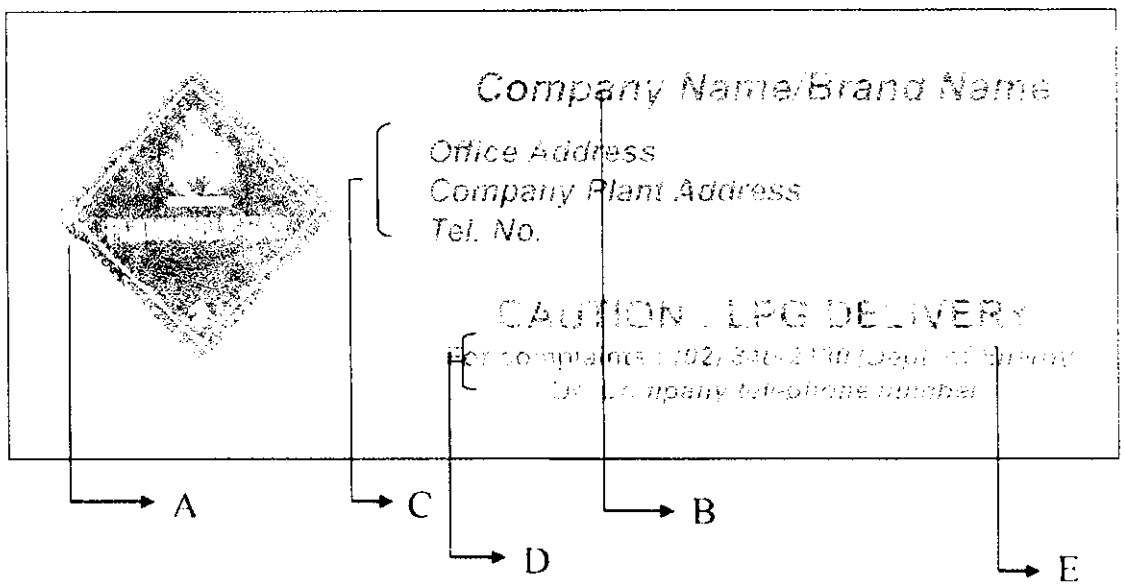


Figure 8. Prescribed Signage

Legend:

A. Diamond (square-on-point) logo background color, international red.
- measurement = 10 % in. H x 10 % in. W
- words "flammable gas", number "2" and "flame" color, white
- white border distance from tip of logo, 0.5 inch

B. Specific LPG brand name I names that it represents I services or sells
- Font Color, royal blue

C. Address and telephone no. of letter "B"
   - Font Color, royal blue
   - Caution signage and Department of Energy Hotline Telephone Number
   - Font Color, international red

E. Board background color, white

SPECIAL LABEL PROTECTION:

All labels must be resistant to oil, grease, solvent, detergents, and water and must be capable of withstanding extreme weather conditions so that all entries are clearly readable at all times.

CHAPTER II CODE OF SAFETY PRACTICES

5 PERSONAL PROTECTIVE EQUIPMENT

The driver shall wear appropriate Personal Protective Equipment (PPE) at all times during operations. See Table 3 Personal Protective Equipment (PPE).

Table 3. Personal Protective Equipment

Activity	Uniform	Hard Hat	Safety Shoes	Appropriate Gloves
				
Procedure for Operations				
A. Tank Truck Loading	✓	✓	✓	✓
B. Tank Truck Unloading	✓	✓	✓	✓

6 PRODUCT SECURITY

6.1 Global Positioning System

The fleet operator or company may consider a Global Positioning System (GPS) installed in the LPG Tank Truck to ensure driver safety and product integrity during transit .

6.2 Tank Truck and Cargo Truck Inspection

6.2.1 Vehicle Pre-Entry/ Pre-Departure Safety Inspection

Inspection checklist for tank trucks prior to loading queuing at terminal or refilling plant. See Annex I Sample Pre-Entry / Pre-Departure Tank Truck Checklist.

a. Frequency : Prior to Entry / Prior to Departure
b. Performer : Gate guard / Safety Officer
c. Reference : LPG Lorry Safety Inspection Checklist/ Pre- Loading Checklist

6.2.2 Transport Vehicle Testing and Maintenance Checklist

A comprehensive checklist used for truck safety, security and standards inspection as defined by Transport and Safety Policy of the Company.

a.	Frequency	:	As company defined
b.	Performer	:	Transport Safety Officer Duly Authorized personnel e.g., Fleet Mechanic
c.	Reference	:	See Annex 3 for the sample of Testing and Maintenance Checklist

7 TANK TRUCK RE-QUALIFICATION

The process of inspection, examination and testing on LPG Road Transport tank, its instrument, appurtenances, and accessories conducted on a specified regular frequency or interval during the life of the tank to ensure it is still safe and fit to continue its service.

- The tank, its pressure containing pipes shall undergo a thorough inspection and examination or Re-qualification every (5) years. This may include replacement of all or some valves and accessories such as internal safety valves (ISV); pressure relief valves (PRV); ball valves; level gauge, pumps, flowmeter; pipes and fittings. However, even before the 5 year-period has been attain, re-qualification shall be conducted if there is reasonable evidence of damage to the tank, such as severe corrosion, pits and other abnormalities or if the tank was involved in an accident.
- Replace all gaskets in flanged connections using "metallic" spiral wound "graphite filled" stainless steel.
- Replace all corroded, pitted and worn-out stud bolts and hex nuts.
- Transfer hoses and end fittings shall likewise be subjected to thorough inspection and testing.
- Conduct thorough inspection on tank external and internal surfaces, its welds, appurtenances and accessories. Special attention to tank surface and weld conditions such as corrosions, pits and other abnormalities.
- Empty the tank of its liquid content. Take precautionary and safety measures.
- Degas the tank, Take precautionary and safety measures,
- Remove the stenched odor (ethyl mercaptan) by soaking inside of tank with soap and water solution for days.
- Drain water from tank. Take precautionary and safety measures. Do not discharge LPG contaminated water to unprotected canal or waterways.
- Once odorant had been dissipated, open manhole, all nozzles and remove pipes, valves, instrument and fittings.
- Conduct gas test to ensure inside of tank was completely gas-free prior to entry.
- Implement required precautionary and safety measures in entering confined space.
- Clean inside of tank using soap and water. Wash and brush inside surfaces of tank using non-sparking brushes. Remove all residues and unwanted

materials inside the tank.

- Conduct inspection on internal surfaces, pipes, valves and baffles.
- Conduct non-destructive test such as RT, UT and MT of tank and its pipelines.
- Calibrate the tank and its liquid level gauge by Industry accepted Surveyor,
- Calibrate instrument (PG and TG) by DTI-BPS PAB accredited laboratory with ISO 17025 Certificate.
- Secure BFP inspection and issuance of FSC on Conveyance of Flammable Liquid.
- Check all electrical and mechanical parts of the vehicle. These shall be performed by competent and experienced automotive electrician and automotive mechanics.
- Test all valves for leak and "passing". Replace all defective valves.
- After tank passed thorough inspection, non-destructive tests (RT, UT, MT) and test of all valves, install or re-install all valves, instrument and accessories.
- Conduct hydro static test (HT) on the tank using 1.3 x MAWP.
- Ensure all safety equipment and accessories are present, available and installed on the tank lorry.
- Commission the tank by purging water and air from inside of tank by nitrogen "pushing"" followed by LPG vapor pushing. The tank shall be in "LPG vapor atmosphere" to complete the Re-qualification process.
- Complete the Re-qualification Inspection Report and required Attachment papers.

8 TESTING AND MAINTENANCE

All vehicle appurtenances, associated piping, hoses, and ancillaries should be periodically inspected and maintained in good condition while in service. Key to this process is the maintenance of accurate records on commissioning and subsequent periodic inspections.

8.1 Periodic Testing

Inspections should be carried out annually (or semi-annually as the need arises). Please see Annex II Sample Testing and Maintenance Checklist.

8.2 Tank Truck Records Maintenance

Tank truck owners should maintain specific records of all shipments, maintenance, tests/inspections, and repairs. These records will enable the fleet to identify and track changes or problems with a tank truck over time (e.g., corrosion, fatigue, etc.). Designating someone to be in charge of keeping these records is recommended. This record among others shall contain the following:

- Tank Truck's manufacturer serial number
- Name of the Tank Truck manufacturer
- Type of test or inspection performed

- Date of test or inspection (month and year).
- Location of defects found and method of repair.

Maintain detailed records on each tank so that issues with a particular tank can be tracked over time. Establish accountability for maintaining records on all of the Tank Trucks. Use records from past years to help identify problems (such as thinning over time).

8.3 LPG Vehicle Maintenance

- Ensure that the engine is receiving the basic maintenance needed for long life and maximum efficiency.
- Comply with vehicle Manufacturer's Suggested Preventive Maintenance Schedule

8.4 Garaging

Adequate and sufficient garaging space shall be provided for all LPG Vehicle.

9 DRIVER'S QUALIFICATION AND REQUIREMENTS

Drivers should possess a valid driver's license pursuant to the requirements and classification of DOTr- LTO with Driver's License (DL) Codes C & CE and must possess the following qualifications and requirements:

- Physically and mentally fit
- No unsettled traffic violation
- Attended and passed the practical driving course, as required by the LTO or company policy.

10 EMERGENCY RESPONSE

10.1 Tank Truck Incidents

Terminal / plant personnel, fleet operators, and tank truck drivers must be able to respond immediately and must be trained to any leakage and fire to prevent property damages and fatalities.

Terminal / plant personnel, fleet operators, and tank truck drivers should understand and apply the Emergency Response Guide (ERG) adapted by the Bureau of Fire Protection as their guide in responding to chemical or hazardous material incidents.

In responding to tank truck fire and chemical leak incidents, the DILG-BFP has recommended the following response protocol:

- Assemble the resources and extinguish the fire with Class B foam. Be sure an adequate foam and water supply is available before initiating the attack.
- Protect adjacent exposures and allow the LPG to burn itself out. If the

incident occurs in a rural area, obtaining sufficient water can be a problem. Develop plans for sustaining water supplies with fire department vehicles or large-diameter hose relays along major roads and expressways.

- Un-ignited leaks/ flammable vapor should be immediately controlled. Remove all ignition sources.

10.2 Initial Response Operations

It may take time to assemble the proper resources for a tank truck on fire or leaking. Focus on your size-up and scene management skills to begin to bring order to what may be a complicated incident involving multiple vehicles and people. It might be helpful to remember the following steps of managing a multiple casualty incident and adjust accordingly depending upon your circumstances.

10.2.1 Safety

- The first arriving unit's priority is scene safety.
- Stay back and check out the situation slowly and carefully before doing anything.
- Position apparatus uphill and upwind.
- Stay away from wet areas or spills.
- If vapors are suspected, maintain a safe distance-the invisible cloud is usually much larger than the visible cloud.
- If no release is detected, look for people who are ill or unconscious. If people are down, maintain a safe distance until the situation and product is identified.
- Some flammable/combustible liquids and vapors are toxic and can be absorbed through the skin and standard protective clothing and have no odor.
- Do not approach unless product is identified. Treat unidentified products as a highly toxic, violently reactive, or explosive substance.
- Mitigate Immediate Dangerous to Life or Health (IDLH) if appropriate.

10.2.2 Size-up

- Ascertain type of incident: fire, spill, fire with spill.
- From a distance (500 feet) use binoculars to look for placards or other warnings and the product name or number on the tractor or trailer.
- Get information from people on the scene (driver, eyewitnesses, shipping papers or other identifying paperwork).
- Determine scope of incident: number of involved vehicles and/or people affected.
- Determine best scene access.

- Determine water supply.
- Pay extra concern to exposures. Allow the tank truck to bum and assign units cool/protect the exposures.
- Remember that the tractor or uninvolved portion of a multi-unit (tractor trailer or multiple trailers with a single tractor) is an important exposure. It may be necessary to disconnect the tractor or unhitch a trailer and remove it from exposure. Diking around the vehicle or damming a drainage ditch may be required to limit a running-spill fire.
- Use master streams or other unmanned heavy caliber streams to keep suppression resources remote.
- Attack from high ground with the wind at your back, checking for any overhead wires and coordinating streams so they do not oppose each other. Flush the fire away from exposures and into less hazardous areas. If agent is limited, use it to protect exposures. Agent that runs off is wasted. Do not wash away foam blankets with water streams.

10.2.3 Send

- Give a situation report to communications.
- Request additional resources as needed (such as hazardous material, foam).
- Initiate evacuations as needed: request law enforcement to assist.
- Warn any incoming units of hazards.

10.2.4 Set-up

- Establish and maintain command until relieved.
- Declare an operational mode: offensive, defensive, non-intervention.
- Establish a staging area.
- Set up scene access and egress.
- Set up a perimeter using fire line tape or other means.
- Establish an isolated holding area for personnel or victims who become contaminated.

10.2.5 Patient Triage

- Consider both the patients for triage as well as vehicles and any other problems which may be occurring or have occurred.
- Assign units to triage people or problems you may have to step back from the incident and send in a reconnaissance team in appropriate PPE to check the situation. The team should go in slowly. It should use combustible gas indicators, explosion proof lights and radios and must stay out of observed spills.

CHAPTER III GOVERNMENT REQUIREMENTS

11 OTHER GOVERNMENT REQUIREMENTS

The owner/operator of LPG vehicles shall secure the following certificates/permits/licenses and follow government regulations prior to operation.

Table 4. Government Requirements

Government Agencies	Type of Permits or Clearances Issued	Applicable RA, DC, Rules	Validity Period
DOE-OIMB	Acknowledgement Letter as Registered Hauler	DC 98-03-0004 *"Rules and Regulations Implementing RA 8479"*	One time registration
	Acknowledgement Letter as Registered Hauler	DC 2021-09-0029 "Guidelines On Notices And Reportorial Requirements Pursuant To The Downstream Oil Industry Deregulation Act"	One time registration
DOTR- LTO	Certificate of Registration of Vehicle	RA 4136 / RA 10930 *"Land Transportation and Traffic Code"*	Annually
	Driver's License		Five (5) years or Ten (10) years
	Certificate of Registration of Vehicle	RA 10916 "Road Speed Limiter Act of 2016" (An act of requiring the mandatory installation of speed limiter in public utility and certain types of vehicles)	Annually
DOTR-LTFRB	Certificate of Public Convenience	DO No. 2015-018 *(Terms and Conditions of a Certificate of Public Convenience to Operate a Transportation*	Five (5) years

		Network Vehicle Service) MC No. 92-009 (*Defining the Policy Framework for the Regulation of Transportation Services*) Mc No. 2011-014 *(Safety Compliance Orders)*	
DPWH- Load Limits	Shall comply with the maximum allowable gross weight	RA 8794 "Anti-overloading Law"	N/A
DENR-EMB	Certificate of Conformity for new vehicles	Philippine Clean Air Act of 1999 DAO 2000-81 *IRR of RA 8749 - Section 7 & 11 of Rule XXXI*	Six (6) years validity from the date of issue, unless sooner cancelled or suspended
DOST/ITDI	Calibration Certificate	DOE-DC 2003-11-010 *(Providing for the Rules and Regulations Governing the Business of Retailing Liquid Liquid fuels)*	Annually
DILG-BFP	Fire Safety Clearance (Conveyance of Hazardous Materials and Chemicals in cargo vehicles)	*IRR of RA 9514 "Fire Code of the Philippines"*	Annually

ANNEX I Sample Pre-Entry / Pre-Departure Tank Truck Checklist

Company: _____
Address: _____

Destination _____ Date: _____
Plate Number _____
Driver's name _____

ITEM	LPG Lorry Safety Inspection Checklist	YES	NO	REMARKS
1	Is Driver and Helper familiar with Terminal Safety Rules and Regulations?			
	Product knowledge & Safety Awareness Seminar is conducted with Certificate			
2	Is vehicle safety compliance certificate issued - Write Certificate Number			
3	Is Job Hazards Analysis is done monthly and available on file - Write JHA number			
4	Tires are roadworthy? (No damage/bulges, at least 2mm groove depth)			
5	Spare tires available and in good condition?			
6	Handbrakes or Maxi-brakes functioning well?			
7	Seat belts working properly? (3 points set belt)			
8	Fire extinguishers available & in good condition.Check pressure gauge			
9	Are tire wedges/chocks available?			
10	No leakage from fuel tank/lines and roto gauges/Slip Tube - Packing Gland			
11	Check Calibration Certificate and Conveyance Permit (Fire Permit) if valid?			
12	Check Interior and Exterior ☐ Cab ☐ Valve Box ☐ Tool Box ☐ Meter Box ☐ Under chassis ☐ Hose Box ☐ Fuel Tank **REMARKS :**			
13	Electrical System ☐ Head lights ☐ Signal lights ☐ Brake Lights ☐ Grounding Clamp ☐ Hazard lights ☐ Backing horns & Lights ☐ Battery cut-off switch ☐ All wires are insulated and covered			
14	Driver and helper Required PPE's ☐ Long Pants ☐ Safety shoes ☐ Safety helmet **REMARKS :** ☐ Jacket ☐ Goggles ☐ Gloves			

ITEM	PRE-LOADING CHECKLIST	YES	NO	REMARKS
1	Battery safety "master cut-off" is engaged			
2	Handbrakes applied			
3	Wooden Chocks applied			
4	Grounding Cable			
a	Check grounding cable clamp if working properly			
b	Connect the grounding cable			
5	Ready fire extinguishers in-place for easy access near the lorry			
6	Driver/helper wearing proper PPE			
7	Secure connection of loading hoses			
8	Check Roto Gauge / SLIP TUBE Gland Packing for leak - Check gland number of turns			

Loading Parameters	Before Load / Unload	After Loading/Unloading	REMARKS
Level (cm)			
Pressure (kg/cm^2)			
Temperature (C)			
Source Tank			
Density (kg/Li)			
Start UnLoading			
Finish UnLoading			

Checked by: Witnessed by: Conformed by: Evaluated by:

_____ _____ _____ _____

Checker *Guard* *Driver* *LPG Supervisor*

Annex II Sample Testing and Maintenance Checklist

	A. General Appearance	PASSED	FAILED
1	Body chasis on reasonably good condition		
2	Paint condition conform standard. No major crack, bubble, chipped or peeled off		
3	Side guards/railings provide on all site		
4	Date last requalification painted on the tank		
5	Valve manifold located at side of tank not at the track. Provided with closed compartment and lock		
6	No major dents on tank that may affect calibration		
7	No excessive corrosion.		

	B. Cab Interior	PASSED	FAILED
1	Dashboard		
a	No crack damage that may expose wirings.		
b	Instruments, gauges, dash board and cab lights working and safely secured		
2	No cab cigarette lighter (condemned/not installed)		
3	Instrument installed and working condition		
a	Oil pressure		
b	Temperature Gauge		
c	Air pressure		
d	Odometer		
e	Fuel Gauge		
f	Ampere Gauge		
4	Handbrake/Gear shift and others levers accessible to drive and condition.		
5	Fire Extinguisher		
a	2x10 lbs. fire extinguishers located on chasis or cabinet.		
b	Securely fixed with inspection tag.		
6	Side Mirrors Condition		
a	Provided on drivers and passengers sides.		
b	Adequate in size, properly positioned and fastened		
c	Front view mirror is provided		
7	Seats condition		
a	Correctly positioned with support		
8	Flooring and Ceiling are leak proof and isolated		
9	Door and Windows		
a	Hinges/locks/handles in working condition.		
b	Side paddings provided		
c	Clear door, windows and ,mechanism working		
10	Seat belts		
a	Two seats belts (3 point type) provided.		
b	Rigid anchor points.		
11	Distracting Items		
a	Windows curtains, posters not required removed		
12	Windshield		

a	Clear, clean and no cracks.		
b	Wipers/washers in good working condition		
13	Access footholds to and from cab are rigid, non-slip and properly positioned		

	C. Engine	PASSED	FAILED
1	Exhaust System		
a	No leaks on piping and not excessively corroded		
b	Mounting brackets/joints firm.		
c	Exhaust does not pass under tank.		
d	Exhaust pipe does not contact with tank		
e	Exhaust pipe guarded where physical contact possible		
2	Starts Easily		
3	No leaks on fuel lines/tank		
4	No leak in radiator		
5	No excessive engine vibration due to defective engine supports		
6	Air intake		
a	Stack pipe type air intake capped		
b	no leak in suction pipe/hose		

	D. Steering	PASSED	FAILED
1	Steering wheel play not extending 1/5 steering wheel diameter		
2	Stable steering on excessive wiggle, vibration and noise.		
3	Good condition of power steering hoses.		
4	Power steering reservoir full and no leak in the system		

	E. Clutch/Gearbox	PASSED	FAILED
1	No slipping/noise when shifting gears		
2	Engages smoothly in all gears		

	F. Brakes	PASSED	FAILED
1	No leaks in brake system pipe works		
2	Low pressure warning device is working		
3	Handbrake lever hold "ON" position		
a	Brakes holds when tested in an inclined (10.95 degrees) position		
b	Lever not reaching maximum permitted level		
4	Holds well evenly when applied		
5	No excessive pedal movement		
6	Pedals with non slip pads		
7	Brake fluid reservoir is full		

	G. Suspension	PASSED	FAILED
1	U-bolts, brackets holding leaf spring complete, no missing nuts and no cracks		
2	Manage well on uneven rough roads		

	H. Tires	PASSED	FAILED
1	Treads depth no less than 2mm		
2	Piles intact, no wide tear, holes, bulges and no visible separation		
3	Recapped tires not installed at the front.		
4	No broken studs/ no missing nuts		
5	Lock rings fits well/no advance corrosion		
6	Good spare tire provided		
7	Sufficient air in tire		

	I. Fifth wheel (for tractor/trailers only)	PASSED	FAILED
1	Mounting bolts, bracket pins, bushing, lock pins in good condition		
2	Turntable, lock pins in good condition		
3	No crack/ damage on 5th wheel		

	J. Permits/License	PASSED	FAILED
1	Updated conveyance permit from BFP		
2	Other permits and papers required OR, CR		
3	Driver's license		
4	Alternative driver or helper available		

	K. Electricals	PASSED	FAILED
1	Lights		
a	Park lights left and right		
b	Head lights/dimmer		
c	Left and right signal lights @ both rear and front		
d	Brake/stop light left and right		
e	Backing lights left and right		
f	Emergency/Hazard lights		
g	No exposed light bulbs due to cracked or broken lens		
h	Emergency light (no exposed light bulb)		
2	Battery		
a	Covered with rigid plastic or rubber insulation		
b	Isolating switch provided to entirely cut-off		
c	Battery connection not loose		
3	Wiring		
a	No exposed/uninsulated electrical wirings		
b	Jumper wires not used in lieu of fuse/fuse link		
c	Wire neatly laid and arranged		
4	Horn		
a	Front horn in good working condition		
b	Backing horn available and in good working condition		

	L. Others	PASSED	FAILED
1	Wheel chock provided (minimum of 2 pieces)		
2	Warning Signs		

a	Black and yellow stripes Zebra at both front and rear bumper of the truck and tank trailer		
b	HAZMAT sign for carrying hazardous materials painted at both rear sides of the tank		
3	Early warning device are available 2pcs		
4	Safety cone are available @ at least 4pcs		
5	Personal Protective Equipment (PPE)		
a	Reflectorized vest available for driver and helper		
b	Jackets/long sleeves shirt		
c	Hard Hat		
d	Safety shoes		
e	Gloves		
f	Goggles		

Annex III Government Checklist of Requirements

A. Department of the Interior and Local Government – Bureau of Fire Protection (DILG-BFP)

- Fire Safety Inspection Checklist

Republic of the Philippines
Department of the Interior and Local Government
Bureau of Fire Protection

(Region)
(District/Provincial Office)
(STATION)
(Station Address)

FIRE SAFETY INSPECTION CHECKLIST
for CONVEYANCE CLEARANCE
(CONVEYANCE OF HAZARDOUS MATERIALS AND CHEMICALS IN VEHICLES)

Date_____

Control No.

Name of Operator
Address
Name of Driver — Driver License No
Type of Vehicle _____ — Plate No _____
Motor(Engine)Number — Chassis No
Quantity & Description — Validity of Registration
If with trailer, Trailer No

Instruction: (√) Check the appropriate box (Yes/No) if the following condition is provided:

	CONDITIONS	Yes	No
1	LTO Certificate of Registration & Updated LTO Official Receipt (OR) of vehicle available		
2	Business Permit and Fire Safety Inspection Certificate Num & date issued for Business (Operator)		
3	Certification of the design, construction & testing of tank from manufacturer shall readily available (for new tank vehicle)		
4	With hydrotest certificate per compartment from fabricator at 3psi for 5 min. (NFPA-385)		
5	Each compartment provided with internal/emergency valve (pneumatic, mechanical)		
6	Hazardous Material Identification System (HMIS) label. Referred to (NFPA 400, Globally Harmonized System (GHS) and other Internationally recognized standards. Material Safety Data Sheet (MSDS) of products being loaded shall be available at all times		
7	"NO SMOKING" sign within 50 ft. (Rear & both sides). Signage size atleast (273mm) in height and the text indicating the "NO SMOKING" sign should be atleast (41mm)		
8	"FLAMMABLE LIQUID" or "FLAMMABLE GAS" sign (Rear & both sides). Signage size atleast (273mm) in height and the text indicating the "FLAMMABLE LIQUID" or "FLAMMABLE GAS" sign should be atleast (41mm)		
9	Atleast one (1)-unit portable fire extinguishers with appropriate rating based on the products and shall be properly maintained at all times located conspicuously and good operational condition		
10	Wheel chocks are readily available with two (2) pieces with truck body number painted on it to prevent motion of the vehicle while it is being loaded, unloaded or parked		
11	Bonding/grounding system for tank vehicle shall be provided available		
12	Piping & hoses are maintained in good condition while in service		
13	Basic oil spill containment kit available (absorbent pads, pail of sand with towel)		
14	Warning cones four (4) pieces and atleast two (2) feet high		
15	Early warning device (triangular in shape) two(2) pieces available and not damaged		
16	All tires in good condition		
17	Whistle with audible sound for emergency attraction shall be provided for driver		
18	Medical first aid kit available		

Prohibited Acts:

- Smoking is prohibited while driving, making deliveries, filling or making repairs to tank vehicles.
- Tank vehicle shall never be left unattended for more than one (1) hour on any street, highway, avenue or alley.
- While loading or unloading, extreme care shall be taken to keep away from fire and to prevent persons in the vicinity from smoking, lighting matches or carrying any flame or lighted cigar, pipe or cigarette
- Only qualified personnel shall operate tank vehicle and with training skills in firefighting with how to operate fire extinguisher

DEFECTS / DEFICIENCIES NOTED DURING INSPECTION:

RECOMMENDATIONS:

ACKNOWLEDGED BY:

Signature Over Printed Name of Owner/Representative

Date & Time

Fire Safety Inspector/s

Team Leader

RECOMMEND ISSUANCE OF FSC for Conveyance:

CHIEF, FIRE SAFETY ENFORCEMENT SECTION

APPROVED / DISAPPROVED:

CITY / MUNICIPAL FIRE MARSHAL

PAALALA: MAHIGPIT NA IPINAGBABAWAL NG PAMUNUAN NG BUREAU OF FIRE PROTECTION SA MGA KAWANI NITO ANG MAGBENTA O MAGREKOMENDA NG ANUMANG BRAND NG FIRE EXTINGUISHER

"FIRE SAFETY IS OUR MAIN CONCERN"

- Fire Safety Clearance (Conveyance of Hazardous and Chemicals in Cargo Vehicles

Republic of the Philippines
Department of the Interior and Local Government
BUREAU OF FIRE PROTECTION
(Region)
(District/Province Office)
(Station)
(Station Address)
(Telephone No./Email Address)

FSCCHMCCV NO. R_____ _____
DATE

FIRE SAFETY CLEARANCE
CONVEYANCE OF HAZARDOUS MATERIALS AND CHEMICALS IN CARGO VEHICLES

TO WHOM IT MAY CONCERN:

By virtue of the provisions of RA 9514 otherwise known as the "Fire Code of the Philippines of 2008" and its Revised Implementing Rules and Regulations (RIRR), this **Clearance** is hereby issued for the Transportation / Conveyance of Hazardous Materials and Chemicals in Cargo Vehicles to _____
(Name of Building Structure/Facility)
located at
(Address)
and owned by _____.
(Name of Owner)

Type of Vehicle: _____ Plate Number: _____
Motor Number: Chassis Number:
Name of Driver: _____ License Number: _____
If with trailer, Trailer Number:
Capacity (Liters/Kilograms): _____

Violation of the provisions of RA 9514 shall cause this Clearance ***NULL AND VOID*** after appropriate proceeding and shall hold the owner and his/her installer/contractor liable to the penalties provided under RA 9514.

This clearance is valid until _____/_____/_____.
Date Month Year

Fire Code Fees:
Amount Paid: _____
O.R. Number: _____
Date: _____

RECOMMEND APPROVAL:

_____
CHIEF, FSES

APPROVED:

_____
CITY/MUNICIPAL FIRE MARSHAL

NOTE: "This Clearance is accompanied with AFTER INSPECTION REPORT CHECKLIST FOR CONVEYANCE and does not take the place of any license required by law and is not transferable."

PAALALA: MAHIGPIT NA PINAGBABAWAL NG PAMUNUAN NG BUREAU OF FIRE PROTECTION SA MGA KAWANI NITO ANG MAGBENTA O MAGREKOMENDA NG ANUMANG BRAND NG FIRE EXTINGUISHER

"FIRE SAFETY IS OUR MAIN CONCERN"

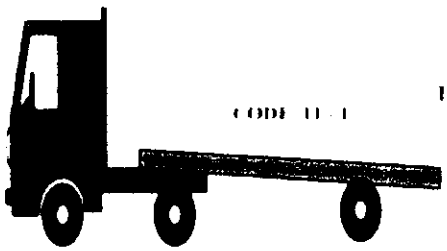
DISTRIBUTION:
Original: (Applicant/Owner's Copy)
Duplicate: (BFP Copy)

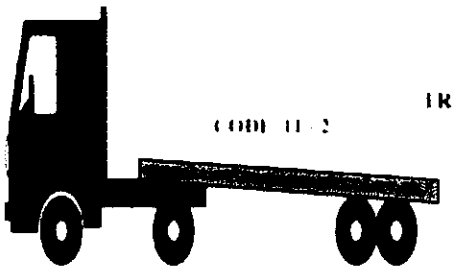
BFP-QSF-FSED-038 REV.02 (08.24.20)

B. Department of Public Works and Highways (DPWH)

- Maximum Allowable Gross Vehicle Weight

MAXIMUM ALLOWABLE GROSS VEHICLE WEIGHT PER RA NO. 8794
Based on the maximum allowable axle load of 13,500 kgs.

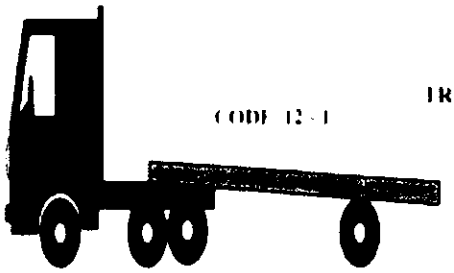
TRUCKS/TRAILERS	DESCRIPTION	MAX. ALLOWABLE GVW (in kgs.)
	TRUCK WITH 2 AXLES (6 WHEELS)	16,880
	TRUCK WITH TANDEM REAR AXLE 3 AXLES (10 WHEELS)	27,250
	TRUCK WITH TANDEM REAR AXLE 4 AXLES (14 WHEELS)	29,700
 CODE 11-1	TRUCK SEMI-TRAILER WITH 3 AXLES (10 WHEELS)	30,380



CODE 11 - 2

TRUCK SEMI-TRAILER
WITH 4 AXLES
(14 WHEELS)

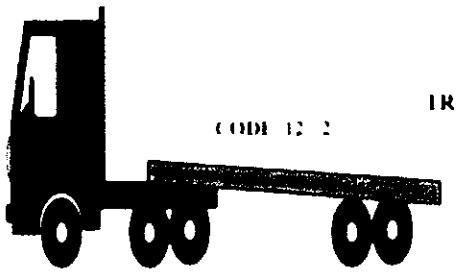
30,380



CODE 12 - 1

TRUCK SEMI-TRAILER
WITH 4 AXLES
(14 WHEELS)

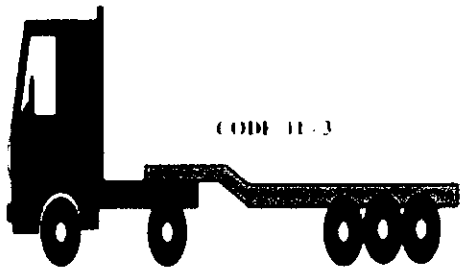
30,380



CODE 12 - 2

TRUCK SEMI-TRAILER
WITH 5 AXLES
(18 WHEELS)

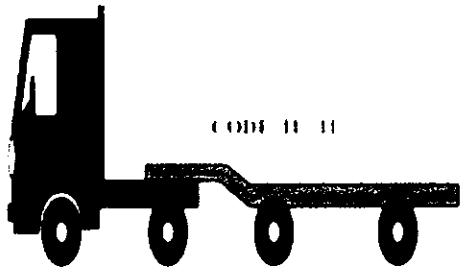
37,800



CODE 11 - 3

TRUCK-TRAILER
WITH 2 AXLES
AT MOTOR VEHICLE
&
3 AXLES AT TRAILER
(18 WHEELS)

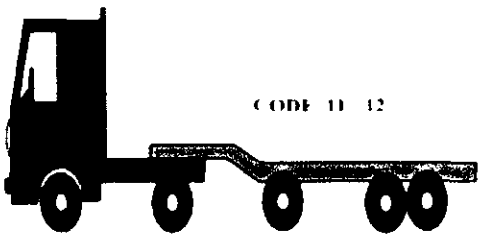
30,378



CODE 11 - 11

TRUCK-TRAILER
WITH 2 AXLES
AT MOTOR VEHICLE
&
2 AXLES AT TRAILER
(14 WHEELS)

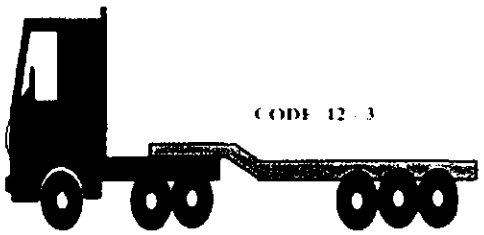
30,378



CODE 11 - 12

TRUCK-TRAILER
WITH 2 AXLES
AT MOTOR VEHICLE
&
3 AXLES AT TRAILER
(18 WHEELS)

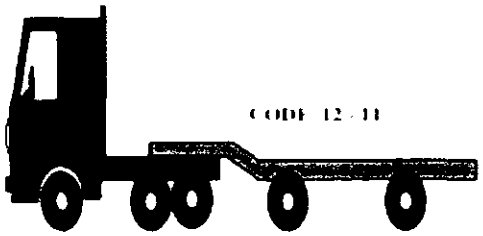
36.900



CODE 12 - 3

TRUCK-TRAILER
WITH 3 AXLES
AT MOTOR VEHICLE
&
3 AXLES AT TRAILER
(22 WHEELS)

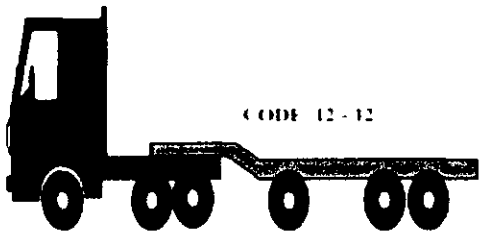
41.000



CODE 12 - 11

TRUCK-TRAILER
WITH 3 AXLES
AT MOTOR VEHICLE
&
2 AXLES AT TRAILER
(18 WHEELS)

37.800



CODE 12 - 12

TRUCK-TRAILER
WITH 3 AXLES
AT MOTOR VEHICLE
&
3 AXLES AT TRAILER
(22 WHEELS)

41.000

C. Department of Environment and Natural Resources (DENR)

Certificate of Conformity (COC) - the following are the requirements prior to the issuance of the same:

- Application letter
- Complete and Detailed Descriptions of Motor Vehicle and Engine
- Description of the Emission Control System
- Details of Fuel Feed System
- Vehicle Type Approval System Test Results (The previous emission test results of pre-production engine vehicle type duly certified by the manufacturer of subject motor vehicle)
- Other particulars which may be required by the DENR

D. Land Transportation Office (LTO)

- Professional License Application Requirements
- Initial Registration for Motor Vehicle (MV)
- Additional requirements for Rebuilt trucks and buses with new or used imported engine and/or chassis
- Renewal of Motor Vehicle (MV) registration

Professional License Application Requirements

QUALIFICATIONS

- Must be at least eighteen (18) years old
- Must be physically and mentally fit to operate a motor vehicle
- Must be able to read and write in Filipino or English
- Must have passed the written and practical examination

REQUIREMENTS

A. LTO Application for Driver's License (ADL) Form
B. Valid Student's Permit (At Least Six (6) Months Old)
C. Clearance / Certificate (Any of the following)
   - NBI Clearance
   - Police Clearance
   - Court Clearance
D. Medical Certificate (From an LTO or Government Accredited Hospital or Physician)
E. Negative Drug Test Result (From DOH Accredited Drug Testing Center)
F. Taxpayer's Identification Number (TIN)

Initial Registration of Motor Vehicle (MV)

CHECKLIST OF REQUIREMENTS
Brand New Locally Assembled / Manufactured Completely Built Units (CBU) / Imported CBUs / Brand new local imported trailer
General Requirements

1. Original Sales invoice
2. Original LTO copy or electronically transmitted appropriate insurance Certificate of Cover (Third Party Liability)
3. Original copy of Philippine National Police - Highway Patrol Group (PNPHPG) Motor Vehicle (MV) Clearance Certificate and Special Bank Receipt (SBR)
4. Original Certificate of Stock Reported (CSR)
5. Payment Reference Number if payment is made through e-PAT

Additional Requirements

Rebuilt trucks and buses with new or used imported engine and/or chassis

1. One (1) photocopy of Commercial / Sales Invoice from country of origin
2. Original Affidavit of Rebuilt executed by the accredited rebuilder stating among others the date of completion
3. Original Certificate of Stock Reported (CSR) of rebuilt truck / bus
4. One (1) Certified true copy of DTI – FTEB Endorsement

5. One (1) photocopy of Certificate of Payment issued if parts/components are imported

Renewal of Motor Vehicle (MV) Registration

CHECKLIST OF REQUIREMENTS

General Requirements

1. LTO Copy and electronically transmitted appropriate insurance Certificate of Cover (Third Party Liability)
2. Duly accomplished Original Motor Vehicle Inspection Report (MVIR)
3. Original copy of Certificate of Emission Compliance (CEC)

E. Department of Science and Technology (DOST)

- Checklist of Requirements for tank truck calibration

CHECKLIST OF REQUIREMENTS FOR CALIBRATION:

For Volumetric Calibration:

• The road tanker, tank or test measure (calibrating bucket) must be thoroughly cleaned removing all dirt, product residues, smell of the product and running in good condition.

TESTING FEES:

Road Tanker Volume	Fee (Php)
Road Tanker (5,000 L and below)	1,000.00
Road Tanker (6,000-10,000 L)	1,500.00
Road Tanker (11,000-15,000 L)	2,000.00
Road Tanker (16,000-20,000 L)	2,500.00
Road Tanker (21,000-25,000 L)	3,000.00
Road Tanker (26,000-30,000 L)	3,500.00
Road Tanker (31,000-35,000 L)	4,000.00
Road Tanker (36,000-40,000 L)	4,500.00
Road Tanker (41,000-45,000 L)	5,000.00
Road Tanker (46,000-50,000 L)	5,500.00

- DOST-Regional Standards and Testing Laboratory Calibration Procedures

DOST-Regional Standards and Testing Laboratory Calibration Services

SUBMITTING ITEMS FOR TESTING OR CALIBRATION

STEP 1 Proceed to appropriate RSTL receiving area (CHEMISTRY MICROBIOLOGY METROLOGY)

1. Customer Relation Officer (CRO) attends to Customer s requirement and fills out a Technical Service Request (TSR)
2. CRO prints an Order of Payment (OP)

STEP 2 Proceed to Cashier s Office for payment

1. Present TSR and OP to Cashier and pay the required amount
2. Cashier issues O R to Customer

STEP 3 Proceed to appropriate RSTL receiving area (CHEMISTRY MICROBIOLOGY METROLOGY)

1. Customer presents the TSR OP and O R back to CRO and completes the details needed in the TSR Form
2. CRO issues one (1) copy of TSR together with the O R to the customer

CLAIMING OF TEST/ CALIBRATED ITEMS AND CERTIFICATES

STEP 1 Proceed to appropriate RSTL receiving area (CHEMISTRY MICROBIOLOGY, METROLOGY)

1. Present TSR to CRO
2. CRO reviews, prints O P and advises the Customer to proceed to the Cashier s Office (Note if payment is already settled, proceed to Step 3)

STEP 2 Proceed to Cashier s Office for payment

1. Present TSR and OP to Cashier and pay the required amount
2. Cashier issues O R to Customer

STEP 3 Proceed to appropriate RSTL receiving area (CHEMISTRY, MICROBIOLOGY METROLOGY)

1. Customer presents TSR to CRO
2. Customer signs receiving copy to acknowledge receipt
3. CRO releases Test/Calibration certificate, test and calibrated items
4. Customer fills out the Customer Satisfactory Feedback Form

Note: Procedures and fees might not be the same for DOST RML and RSTL. ITDI has different procedures and fees

BUREAU OF PHILIPPINE STANDARDS
Department of Trade and Industry

Technical Committee 68 – Petroleum Processes and Facilities

Chairman
Dir. Rino E. Abad
Oil Industry Management Bureau
Department of Energy

Alternate
Alvin David T. Lim
Oil Industry Management Bureau
Department of Energy

Members:

Government Agencies:

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   Metals Industry Research and Development Center
   Department of Science and Technology

2. **Lorenzo S. De Guia**
   Gerard A. Venezuela
   Bureau of Fire Protection
   Department of Interior and Local Government

3. **Gilbert Q. Marquez**
   Bureau of Working Conditions
   Department of Labor & Employment

4. **Engr. Nelia Granadillos**
   Occupational Safety and Health Center
   Department of Labor & Employment

5. **Visminda A. Osorio**
   Environmental Management Bureau
   Department of Environmental and Natural Resources

6. **Vincent M. Fernandez**
   Bureau of Philippine Standards
   Department of Trade and Industry

7. **Loralai R. Capistrano**
   Alex H. Rayos
   Oil Industry Management Bureau
   Department of Energy

Professional Association:

8. **Edwin D. Villanueva**
   Safety Organization of the Phils.

Industry:

9. **Raffy C. Capinpin**
   Philippine Institute of Petroleum (PIP)

10. **Atty. Bong C. Suntay**
    Independent Philippine Petroleum Companies Association (IPPCA)

11. **Ramon C. Cuison**
    Philippine LPG Association (PLPGA)

12. **Mercedita G. Pastrana**
    LPG Industry Association (LPGIA))

13. **Bernardo M. Bolisay**
    LPG Refillers Association (LPGRA)

14. **Ronie H. Badidles**
    LPG Marketers Association (LPGMA)

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