PROFESSIONAL
DRIVER MANUAL

TotalEnergies

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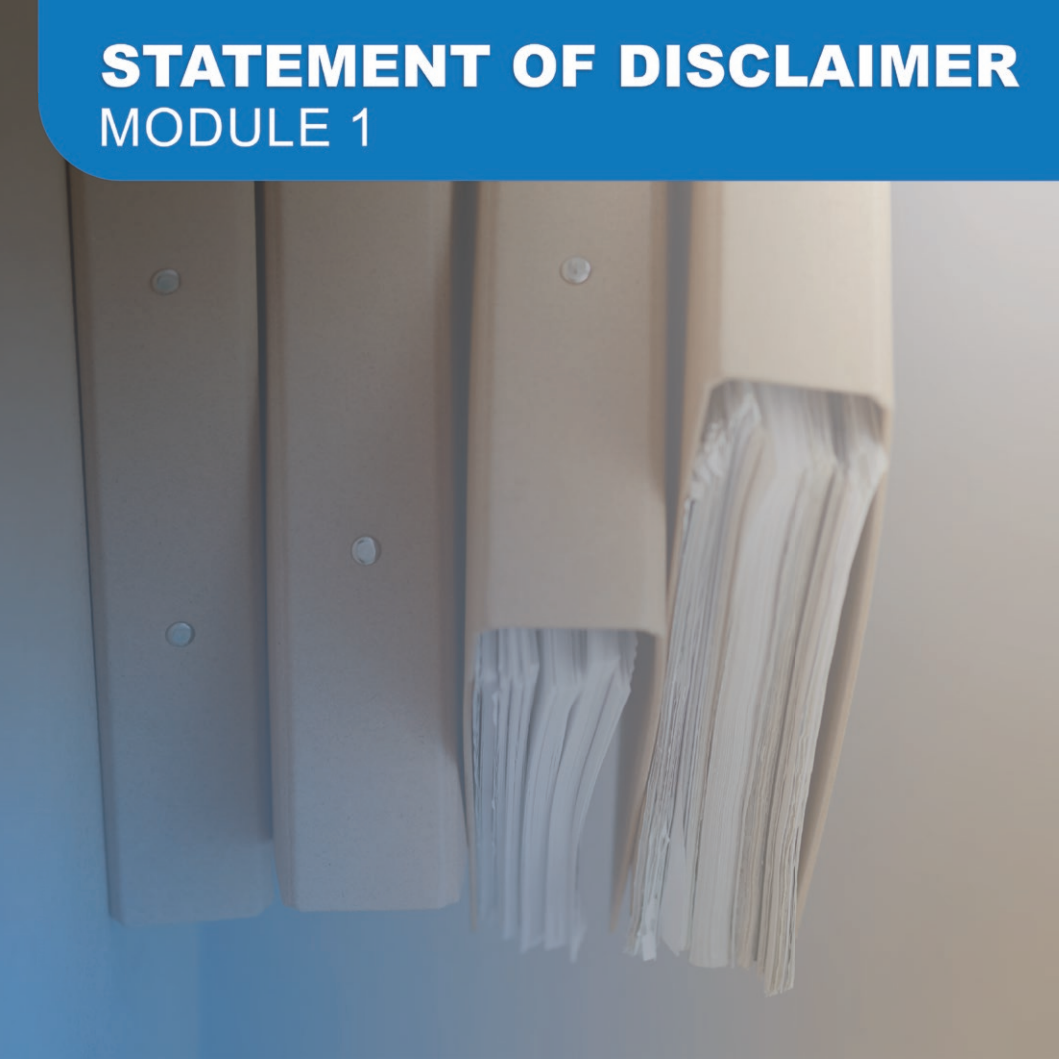
STATEMENT OF DISCLAIMER
MODULE 1



OVERVIEW

This disclaimer highlights that while the policies and procedures reflected in this manual describe current practices, Total South Africa does not guarantee their effectiveness or exclusivity. The company and its members are not liable for any claims resulting from the use or reliance on this manual. In case of conflict, existing legislation and regulations supersede the manual's procedures. Furthermore, as industry practices evolve, the manual may be subject to revision without prior notice.

KEY TAKEAWAYS

1. The manual outlines procedures for handling petroleum products and managing emergencies, with emphasis on safety and awareness of hazards.
2. TotalEnergies disclaims liability for any claims arising from reliance on the manual and states that existing legislation supersedes its procedures.
3. TotalEnergies emphasises the importance of training drivers to prioritise safety and adhere to industry standards.
4. TotalEnergies' safety principles, endorsed by the Chairman and CEO, prioritise compliance with laws, fostering a safety culture among employees, and minimising environmental impact while engaging with stakeholders.

STATEMENT OF DISCLAIMER

The policies, procedures, and rules outlined in this manual reflect the current practices of TotalEnergies Marketing South Africa (Pty) Ltd. (TotalEnergies) as of the publication or amendment date. This includes guidelines for loading and delivering refined petroleum products.

The manual includes crucial details regarding the hazards and properties of petroleum products, which everyone must be aware. It also provides guidelines for managing emergencies that may arise.

TotalEnergies does not guarantee that these procedures are the best or the only ones currently implemented, nor does it assure that the best results can be obtained by relying solely on these procedures. In no circumstance shall TotalEnergies or its members be held liable for any claims arising from the use of or reliance on this manual.

Existing legislation and government regulations will supersede the procedures outlined in this manual in the event of any conflict. Given that industry practices may evolve, this manual is subject to revision without prior notice to any or all parties involved.

INTRODUCTION

As a petroleum driver, you have a crucial job delivering fuel, which is important but can also be dangerous. That's why it's essential to have thorough training and expertise to enable you to prioritise safety for people, property, and the environment.

To help you understand the industry and your responsibilities, TotalEnergies has created this manual to introduce you to safe product handling practices.

This manual contains information and guidelines that are standard throughout the industry. It represents the minimum level of professional knowledge and understanding that is required to safely deliver products to all our customers. The Professional Driver Manual is designed to familiarise you with the specific rules and regulations that pertain to you and your heavy vehicle. It serves as a valuable resource, providing guidance on the rules, regulations, skills, and proper attitude necessary for professional drivers. This publication must be read in conjunction with the relevant work instructions.

The manual will be reviewed and updated from time to time to ensure that it reflects current industry and regulatory requirements.

TotalEnergies wishes to recognise and thank those involved, the transporters and operational / corporate staff whose efforts and participation were instrumental in the development and implementation of this **Professional Driver Manual.**

HSSEQ Policy

(Health; Safety; Security; Environment and Quality)

TotalEnergies Marketing South Africa (Pty) Ltd (TMSA) is a market leader in the receipt, storage, and distribution (via road, rail, and pipeline) of petrochemical products, including the manufacturing of lubricants and greases. As a primary objective, TMSA prides itself on our commitment to a safe and healthy work environment.

TMSA and beta are committed to meeting the needs of our stakeholders and outside parties in a sustainable manner through continual improvement of our Integrated Management System, inclusive of all activities and services of staff, contractors, and transporters.

The following objectives have been established to ensure the business delivers through its Policy Commitments that are in compliance with the TotalEnergies Company SHEQ Charter.

OBJECTIVES

- Complying with laws and other requirements relevant to the business HSSEQ risks.
- Identifying, evaluating, and mitigating HSSEQ risks in our business processes, activities, and services, including transportation, so as to reduce the HSSEQ risk to our staff, stakeholders, and outside parties and to protect the environment.
- Create an incident hee workplace by ensuring continual prevention of occupational heath related illnesses and Injury to our staff, stakeholders and outside parties.
- Prevention of pollution by reducing environment impacts arising from our business processes; activities and services.
- Strictly prohibits the use of or being under the influence of alcohol and drugs (zero tolerence) while on duty or reporting for duty. Alcohol maybe served during company social events under strict risk mitigation messures applied for the event.
- Protect and safeguard our personnel and assets including data against theft / sabotage or misuse by through continuous assessments of threats to our operations and implementation of appropriate measures.
- Create dialogue with our stakeholders to engage on HSC matters.
- TMSA, contractors and transporters at all levels are aware of their roles and responsibilities pertaining to HSE and empowered to prevent HSE incidents. Staff contractors and transporters have the right to refuse work that is unsafe and has a negative impact on the environment.
- Commit to establishing the extent of the organisations environmental footprint and implementing the necessary reduction strategies by optimising the consumption of raw materials and energy usage throughout the busines value chain.
- Continual monitoring of the effectiveness of our control systems, performance and risk by periodically reviewing the HSSEQ objectives and targets by implementing improved and effective corrective and preventive actions.
- To ensure that necessary resources will be made available in fulfilling the policy objectives.

This Policy will be communicated to all employees, visitors, contractors and transporters. It will further be made available to all stakeholders and outside parties upon request.

Mariam KANE -GARCIA

CEOMD

TotalEnergies Marketing South Africa (Pty) Ltd

Safety health environment quality charter

In accordance with its Code of Conduct, TotalEnergies has adopted the following principles concerning safety, security, health, the environment, quality and societal commitment:

1. TotalEnergies holds safety, security, health, respect for the environment, customer satisfaction, listening to all stakeholders by way of an open dialogue, as paramount priorities.
2. TotalEnergies complies with all applicable laws and regulations wherever it conducts its business and supplemen ts them with specific requirements and commitments when necessary.
3. TotalEnergies promotes, among its employees a shared culture which the core components are professionalism, the rigorous compliance and application of regulations, skills management, incident feedback and continuous learning. This approach relies on the vigilance and commitment of all.
4. Each and every team member, at all levels, must be aware of their role and personal responsibility in the practice of their duties. Individuals must demonstrate the strictest discipline in preventing accidents and deliberate damage; in protecting health, the environment and product and service quality whilst addressing stakeholder expectations. Rigor and exemplarity in these fields are important criteria in evaluating the performance of each member of personnel, in particular for those in positions of responsibility.
5. TotalEnergies favors the selection of industrial and business partners on the basis of their ability to apply policies similar to its own concerning safety, security, health, the environment, quality and societal measures.
6. TotalEnergies implements, for all of its operations, appropriate management policies regarding safety, security, health, the environment, quality, societal commitment and a periodic risk assessment of relevant policies and measures. Any development of a project or launch of a product is undertaken upon full lifecycle risk assessment.
7. Appropriate safety, health, environmental, quality and societal commitment management systems for each business undergo regular assessment involving measurement of performance setting milestones, formulating relevant action plans and instituting suitable control procedures.
8. TotalEnergies implements incident response plans and means of intervention designed to face different types of events it may encounter. Such measures are periodically updated and reviewed during exercises.
9. TotalEnergies is committed to managing its energy consumption, emissions in natural environments (water, air and soils), production of final waste, use of natural resources and impact on biodiversity. It develops new processes, products and customer services in order to enhance energy efficiency and reduce environmental footprint.
10. TotalEnergies adopts a constructive attitude towards safety, security, health, the environment and quality, based on transparency and an open dialogue with stakeholders and outside parties. Through its societal commitment, TotalEnergies is particularly keen on contributing to the sustainable development of neighboring communities, with a focus on human, economic and social issues. It conducts its operations in such a way as to responsibly ensure security, in compliance with the Voluntary Principles on Security and Human Rights (VPSHR).

TotalEnergies

Patrick Pouyanné

Chairman and Chief Executive Officer

September 2021

THE TWELVE GOLDEN RULES

1. **High Risk Situations**
   Avoid High Risk Situations.

2. **Traffic**
   I follow the safety rules when I drive, ride a bike or walk.

3. **Body Mechanics & Tools**
   I handle tools safely.

4. **Personal Protective Equipment (PPE)**
   I wear the required PPE.

5. **Work Permits**
   I Work with a valid Permit.

6. **Lifting Operations**
   I follow the lifting plan.

7 Powered Systems
I check the isolation and the absence of energy and fluids before any intervetion.

8 Confined Spaces
I obtain authorisation before entering a confined space.

9 Excavation Work
I secure excavation areas.

10 Work at Height
I protect myself against a fall when working at height >1.5m.

11 Hot Work
I avoid hot work whenever possible.

12 Line of Fire
I keep myself and others out of the line of fire.

GENERAL
MODULE 2

OVERVIEW

Essential aspects of professional driving within TotalEnergies include General aspects such as safety standards, operational procedures, customer interactions, and regulatory compliance. The training for Bulk Vehicle Operators (BVOs) focuses on safe loading and delivery practices, alongside stressing the significance of professionalism, integrity, and adherence to company policies while on the road.

KEY TAKEAWAYS

1. Professional Driver Requirements:

To load at any terminal or depot, drivers must meet various requirements, including completing emergency response training, possessing a valid driver's license and dangerous goods permit, and demonstrating competency in training and work instructions.

2. Preparation and Safety:

Professional drivers are responsible for safety during loading, transportation, and unloading. They must stay focused, properly equip themselves and the vehicle, adhere to regulations, and respect customer facilities and safety requirements.

3. Transportation of Dangerous Goods:

Drivers transporting dangerous goods must be trained and possess the necessary licenses and certificates. They are responsible for ensuring proper identification of the load with appropriate placards and adhering to company policies and legal regulations.

4. Primary and Secondary Distribution:

TotalEnergies is involved in primary distribution from refineries to bulk terminal storage facilities and secondary distribution to petrol stations and commercial facilities. Safe and timely deliveries are crucial for the success of the supply chain

5. Customer Care and Integrity:

Professional drivers are crucial for managing customer relations as they represent TotalEnergies. While prioritising customer needs, they must maintain professionalism and integrity, promptly addressing any complaints and conducting themselves honestly and fairly, even in challenging situations.

BECOMING A CERTIFIED PROFFESSIONAL DRIVER

To promote safety and professionalism among drivers, TotalEnergies has developed site-specific work instructions. These guidelines are training materials for Bulk Vehicle Operators (BVOs), providing detailed information on the proper procedures for loading and delivering products.

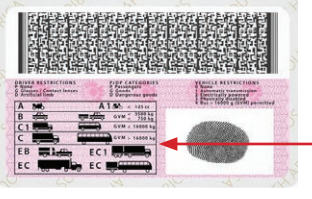
NOTE: In addition to work instruction training, drivers must also complete individual terminal orientations / inductions for locations where they will be loading.

Professional Driver Requirements

To load at any terminal or depot, individuals must meet the following requirements:

- Received emergency response training for Dangerous Goods.
- Hold a valid Driver's License (EC).
- Possess a valid Dangerous Goods Permit.
- Received Hazardous Materials Training.
- Declared fit for duty with a valid Medical Certificate.
- Declared competent in TotalEnergies' training and various work instructions.

PrDP D,G,P



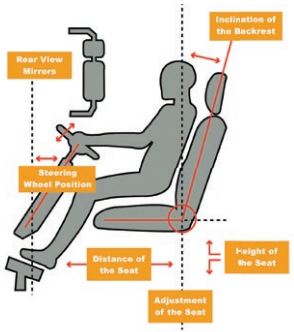
EC

PREPARING TO DRIVE THE BULK VEHICLE

Given the significant responsibility professional drivers bear when loading, transporting, and unloading their cargo, it's crucial that they follow these general guidelines:

- Stay focused, think, practice, and enforce safety.
- Ensure both you and the vehicle are properly equipped for a safe delivery.
- Comply with working hour regulations.
- Carry the appropriate paperwork, including Transportation of Dangerous Goods certificate, Air Brake certificate, MSDS, TREMCARDS, placards, etc.
- Respect your customer's loading/unloading facility and safety requirements.
- Never leave your vehicle unattended during loading or unloading.
- Avoid leaving valuables in your cab; keep it locked when you're away.
- Do not pick up unauthorised passengers.
- If encountering aggressive customers, consult your supervisor before proceeding with delivery.
- Deliver products on schedule or advise if delayed.

ADJUST YOUR SEAT



BULK VEHICLES

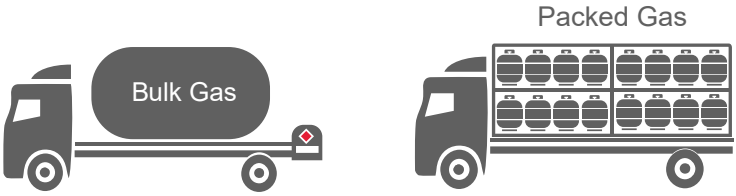
As a professional driver, you may operate various vehicles based on the cargo you transport. These could include truck-tractors with trailers or rigid drawbar combinations. Tankers are equipped with multiple compartments for loading different products.

Before LOADING or DELIVERING, professional drivers must ensure that the vehicle is safe to operate. Professional drivers are required to adhere to company policies, legal regulations, or both, by thoroughly inspecting the vehicle inside and out. Any defects must be documented on the company's vehicle inspection report and rectified before departure.

When taking over a vehicle from another driver, it's crucial for the incoming driver to inspect each compartment to verify they are clean and empty. This ensures awareness of tank capacities and prevents loading a compartment with existing product. As a professional driver, you bear responsibility for your actions.

TYPES OF VEHICLES

TYPES OF VEHICLES CONTINUED



TRANSPORTATION OF DANGEROUS GOODS

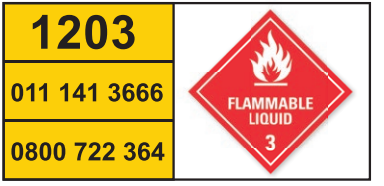
Most petroleum products are considered by Legislation to be “dangerous goods” and under the Transportation of Dangerous Goods Act and Regulations they must be identified while being transported.

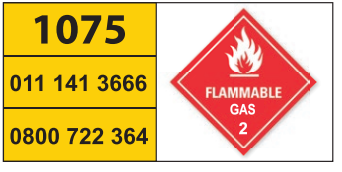
Any professional driver transporting dangerous goods must therefore be trained and have a Hazardous Chemical training certificate. As part of the driver’s responsibilities they must ensure that the load is identified by the appropriate placards.

Some hazardous substances have their own UN numbers (e.g. acrylamide has UN2074), while sometimes groups of chemicals or products with similar properties receive a common UN number (e.g. petroleum products UN1203)

The transportation of lubricants however does not fall under this category. The transportation of lubricants can be identified by the “multi-load or Mixed Load” decals

Figure C.2 - Mixed Load Diamond





TRANSPORTING DANGEROUS GOODS

ANY VEHICLE TRANSPORTING DANGEROUS GOODS ON A SOUTH AFRICAN ROAD, UNLESS SUBJECT TO AN EXEMPTION (TRANSPORTING THE DANGEROUS GOODS IN EXCESS OF THE EXEMPT QUANTITY), MUST BE REGISTERED.

DRIVING THE BULK VEHICLE

Due to the nature of the product being hauled, it's crucial for professional drivers to adhere to all company policies, procedures, and rules of the road. Drivers must ensure they have enough space to maneuver the vehicle properly for loading and unloading.

TERMINAL/DEPOT SPECIFIC TRAINING

A minimum of three loads under supervision of a Driver Trainer or transport operator must be completed. A Driver Trainer or transport operator must supervise a minimum of three loads before the driver can operate independently. On the last load, the driver will be tested by a transport operator on site specific issues. If the test is successfully completed, the terminal/depot will issue load authorisation. If the test is not successfully completed, the terminal/depot can request that the driver repeat the site-specific training until the level of competency is reached.

IMPORTANT

Do not reverse a bulk vehicle unless absolutely necessary.

If reversing is unavoidable have someone assist you and reverse slowly with your warning lights on.

THE PETROCHEMICAL SUPPLY CHAIN

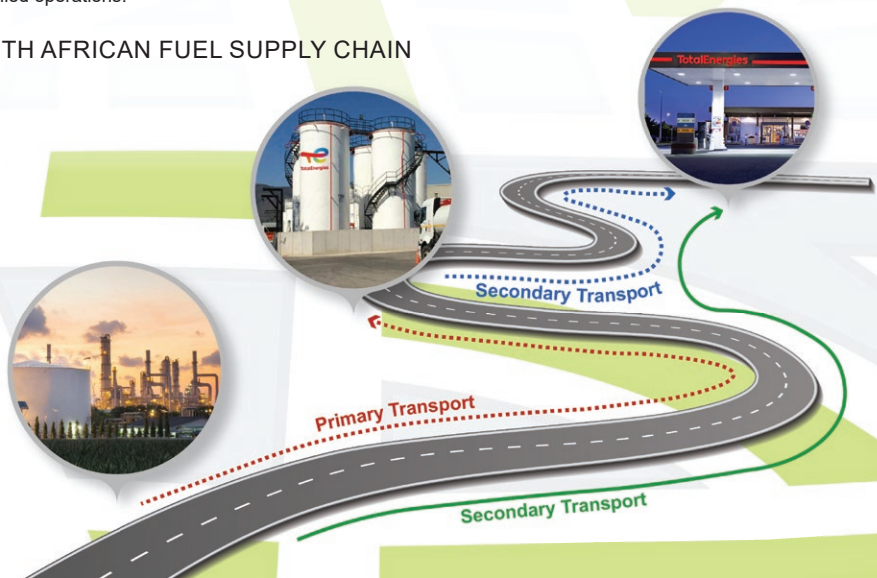
Professional drivers play a crucial role in the petrochemical supply chain, contributing significantly to its overall success. TotalEnergies is involved in distributing petrochemicals at two key phases within this supply chain. These include primary and secondary distribution.

Primary distribution is the transportation of product from a refinery or bulk storage facility to a smaller bulk terminal storage facility. Primary distribution is also known as bridging operations.

Secondary distribution is the transportation of product to the petrol stations where the public refuel vehicles or to a commercial facility that refuel vehicles.

Delivering on time and in full is critical, but safety should not be overlooked. Always ensure safe and controlled operations.

SOUTH AFRICAN FUEL SUPPLY CHAIN



NAMIBIA, BOTSWANA AND ESWATINI SUPPLY CHAIN

NAMIBIA

WALVIS BAY TERMINAL

PRIMARY TRANSPORT

SECONDARY TRANSPORT

DEPOTS

MINING CUSTOMERS

SECONDARY TRANSPORT

SECONDARY TRANSPORT

CUSTOMERS

BOTSWANA

NATREF

PRIMARY TRANSPORT

SECONDARY TRANSPORT

DEPOTS

SECONDARY TRANSPORT

CUSTOMERS

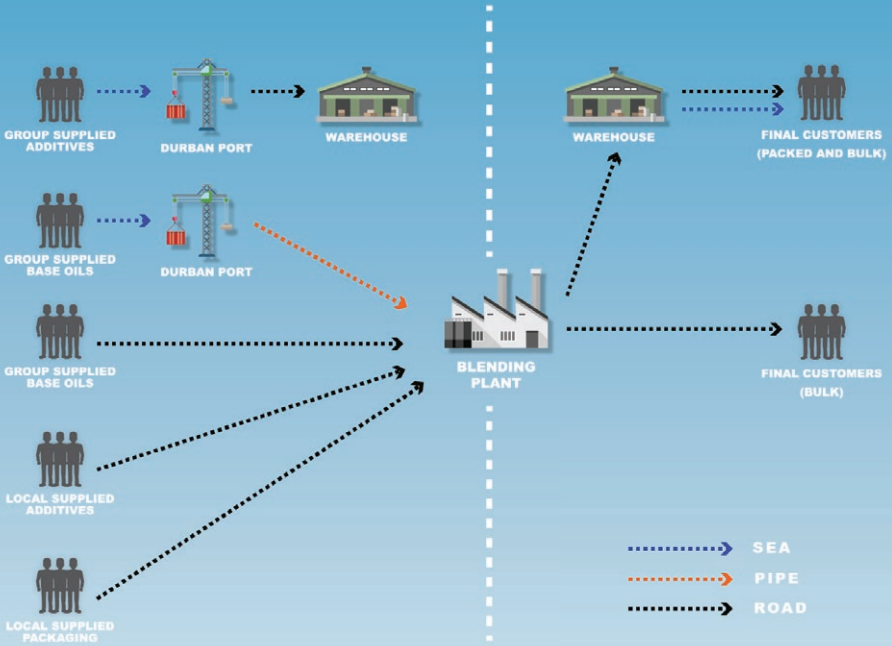
ESWATINI

ISLAND VIEW

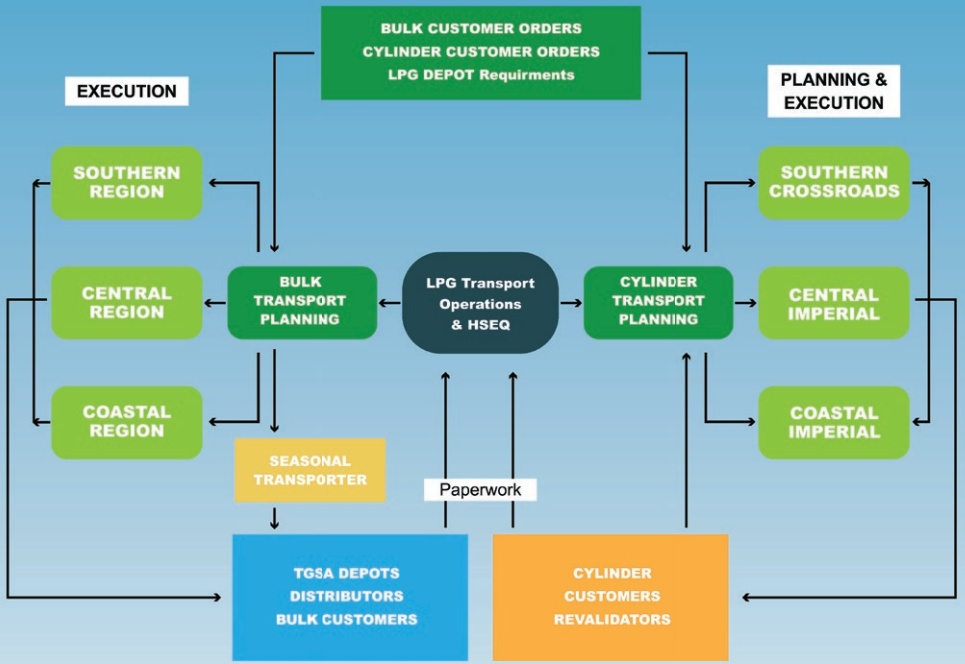
SECONDARY TRANSPORT

CUSTOMERS

LUBRICANTS SUPPLY CHAIN



GAS SUPPLY CHAIN




RELIABLE
SERVICE
HELP
CLIENT
CUSTOMER CARE
ADVICE
QUALITY
SUPPORT
SATISFACTION

CUSTOMER CARE

TotalEnergies is a leading petroleum company committed to providing customers with top-quality services and products. Our goal is to consistantly deliver exceptional performance, surpassing customer expectations.

SAFETY

The safety of yourself, our customers and the environment is always our priority, ensure you act in a responsible manner at all times.

DRESS CODE

A smart appearance portrays an image of professionalism. Always ensure you look presentable and professional. Wearing the correct PPE demonstrates your commitment to safety.

PERSONAL PROTECTIVE EQUIPMENT

Professional drivers are provided with uniforms and Personal Protective Equipment (PPE) and are expected to wear the required PPE at all times. Safety is the top priority, so it's crucial to always prioritise safety and promptly replace any damaged PPE.

CODE OF CONDUCT

While on duty, you represent TotalEnergies and are expected to always conduct yourself in a professional and courteous manner. While driving, it's crucial to maintain a professional and courteous attitude, considering that the vehicle serves as a moving advertisement for TotalEnergies and reflects our commitment to our customers.

CUSTOMER CARE TIPS

Under no circumstances may an employee disrespect a customer.

Always remain calm and respond politely.

CUSTOMER CARE

CUSTOMER RELATIONS

Professional drivers have more face-to-face interactions with customers than anyone else in the company. Ensuring that our customers receive safe and efficient service is crucial. Prioritise their needs while also considering reasonable time constraints, all while ensuring your own safety.

CUSTOMER COMPLAINTS

Ensure to communicate any encountered issues promptly to management and refer them back to the manager or the appropriate personnel for resolution. All customer complaints are investigated, and corrective actions implemented.

INTEGRITY

Every employee's interaction with customers and suppliers shall be fair and honest in strict compliance with contractual undertakings and applicable laws and regulations. The exchange of gifts or entertainment should adhere to acceptable limits, considering both customary practices and anti-corruption laws. If unsure, every employee should seek approval from their management before proceeding.

CODE OF CONDUCT

Operating in more than 130 countries, including complex environments, our growth and long-term viability are based on three shared values that guide all our activities:

RESPECT, RESPONSIBILITY, EXEMPLARY CONDUCT

The Code of Conduct outlines how we implement these values daily. It details our commitments and expectations towards stakeholders and offers guidance for employees and all those who represent us.

The following three priority business principles are equally critical to our success as a responsible company:

- Commitment to the highest levels of safety and security in our operations, as well as protecting health and the environment.
- Compliance with the highest integrity standards, particularly by preventing corruption, fraud, and anti-competitive practices.
- Respect for internationally recognised Human Rights standards.

In every business unit, management is in charge of instilling these values and ensuring that our business principles are respected.

If you have any concerns regarding the application of the Code of Conduct, especially when faced with sensitive decisions in your work, you can contact the Ethics Committee for assistance.

We are confident that each and every one of us will conduct business in accordance with the Code of Conduct. By working together, we can achieve sustainable growth, create value for all our stakeholders, and strengthen our commitment to better energy.

DOCUMENTATION
MODULE 3

OVERVIEW

This module covers the most critical documentation and paperwork that professional drivers need for safe and efficient work. It includes forms like loading and delivery documents, accident reports, bills of lading, and vehicle checklists. The focus is on completing and submitting these documents accurately and on time.

KEY TAKEAWAYS

1. Documentation Responsibility:

Professional drivers are responsible for providing various documents to ensure safe and efficient operations. These documents include metered loading/delivery documents, accident/near miss reports, bills of lading, time sheets, defect/briefing documents, and more.

2. Daily Documentation List:

The section covers a comprehensive list of daily documentation required, ranging from meter calibration certificates to dangerous goods declarations. These documents are crucial for ensuring compliance with safety regulations and operational efficiency.

3. Positioning of Orange Document Box:

The placement of the orange document box is crucial. It holds essential paperwork and must be positioned correctly within the vehicle to ensure accessibility without compromising the driver's safety. Proper placement enables quick retrieval of documents during operations when needed.

4. Customer Documentation:

Customer-specific documentation requirements may vary, but they mainly relate to loading/delivery authority, as well as invoices and delivery tickets. Professional drivers must ensure they have all necessary customer documentation for each delivery.

5. Transport Emergency Card:

In accordance with SANS 10232-4, professional drivers must be familiar with the Transport Emergency Card for road transport. This card provides critical information and guidance in the event of transport-related emergencies, emphasising the importance of preparedness and response protocols.

DOCUMENTATION

Professional drivers are responsible for providing documentation to ensure safe and efficient operations.

DAILY DOCUMENTATION LIST

- Metered Loading/Delivery Documents
- Accident / Near Miss Documents
- Bill of Lading
- Time Sheets
- Defect / briefing documents
- Tremcards
- Consignor's Declaration
- Daily Vehicle Check lists
- Dangerous Goods Declaration
- Meter calibration certificates
- Brake Test Certificates

NOTE

The Orange Document Box should be positioned correctly for easy accessibility without posing any risk to the driver. Customer documentation will vary based on their requirements, primarily focusing on loading/delivery authority and invoices/delivery tickets.

As previously mentioned, this documentation is crucial for safe and efficient operations, requiring accurate and prompt submission by the professional driver.

TRANSPORT EMERGENCY CARD - ROAD TRANSPORT

In accordance with SANS 10232-4

UN Number	**1202**
Class	**3**
Subsidiary Risk	
Packaging Group	**II**
ERG Number	**128**

PROPER SHIPPING NAME

Diesel Fuel

APPEARANCE

Liquid; Coloured; Perceptible odour

WARNING

- Containers could explode when heated.
- Containers are highly flammable: Easily ignited by heat, sparks, or flames.
- Vapour could form an explosive mixture with air.
- Vapour could travel to the source of ignition and cause a flashback.
- Vapour explosion hazard indoors, outdoors, and in sewers.

PERSONAL PROTECTIVE EQUIPMENT

- Protective goggles or face shield.
- Protective gloves.
- Protective shoes.
- Eyewash bottle with clean water.

EMERGENCY RESPONSE EQUIPMENT

- Dry chemical or CO_2.
- Sand or other absorbent.
- Shovel.

DRIVER FIRST ACTIONS - Only if they can be carried out without personal risk.

- Keep upwind.
- No smoking allowed.
- Warn road users and passersby to keep away from the danger area.

DRIVER SPECIAL / ADDITIONAL ACTIONS - Only if it can be carried out without personal risk.

- Avoid sparks.
- Prevent runoff from entering water courses; sewers and basements.
- Warn all persons of explosion hazard.
- Warn all persons not to touch damaged packages or spilled material.

DRIVER ACTIONS IN CASE OF FIRE - Only if they can be carried out without personal risk.

- Do not attempt to deal with any major fire that involves the load.
- Use fire extinguisher on small fire only if it can be done without personal risk.

FIRST AID

- Apply artificial respiration if victim is not breathing.
- In case of contact with material; immediately flush skin or eyes (or both) with running water for at least 20 minutes.
- Move victim to fresh air.
- Remove and isolate contaminated clothing and shoes.

SPECIAL INFORMATION FOR EMERGENCY SERVICES

- Do not use straight streams.
- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Use water spray; fog or alcohol-resistant foam.
- Always stay away from ends of tanks.

ADDITIONAL INFORMATION

- Check the expiry date of the extinguisher. For example, this is an expired fire extinguisher:
  Expiry Date: 2016-03-11

EMERGENCY TELEPHONE NUMBERS

+27 (11) 869 8400 / 0800 112 890 / +27 (17) 610 4444

Notes

TRANSPORT EMERGENCY CARD - ROAD TRANSPORT

In accordance with SANS 10232-4

UN Number	**1075**
Class	**2.1**
Subsidiary Risk	
Packaging Group	
ERG Number	**115**

PROPER SHIPPING NAME

Petroleum Gas ; Liquified

APPEARANCE

Liquified Gas; Colourless; Perceptible odour

POTENTIAL HAZARD(DANGER)

EXTREMELY FLAMMABLE. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. Containers may explode when heated.

PERSONAL PROTECTIVE EQUIPMENT

- Protective goggles or face shield.
- Protective gloves.
- Protective shoes.
- Eyewash bottle with clean water.
- Respiratory safety device that will allow driver to escape.
- Light protective clothing.

DRIVER INTERVENTION EQUIPMENT

- Positive pressure self-contained breathing apparatus (SCBA).
- Thermal protective clothing when handling refrigerated/cryogenic liquids or solids.

DRIVER FIRST ACTIONS

1. Only if it can be carried out without personal risk.
2. Contact emergency services.

3. Stay upwind, uphill and/or upstream.
4. Stop the engine.
5. Avoid contact with spiled material.

DRIVER SPECIAL/ADDITIONAL ACTIONS

Only if it can be carried out without personal risk:

1. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).
2. Do not touch or walk through spilled material.
3. Stop leak if you can do it without risk.

DRIVER ACTIONS IN CASE OF FIRE

1. Only if it can be carried out without personal risk.
2. DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED.
3. Small Fire - Dry chemical or CO2.
4. Large Fire - Move containers from fire area if you can do it without risk.

FIRST AID

- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas; thaw frosted parts with lukewarm water.
- Remove and isolate contaminated clothing and shoes. Move victim to fresh air.

EMERGENCY TELEPHONE NUMBERS

+27 011 010 0156

PREPARED BY SAFETY FOCUS Using Tree Card (PTY)LTD software. From the best knowledge currently available; no guarantee is provided that the information is sufficient or correct under all circumstances.

Preparation Date:21-06-2023
Expiry Date: 21-06-2026
Reference: 67-1075-3040581

TRANSPORT EMERGENCY CARD - ROAD TRANSPORT

In accordance with SANS 10232-4

UN Number	**3083**
Class	**9**
Subsidiary Risk	
Packaging Group	**111**
Guide Number	**171**

PROPER SHIPPING NAME

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

APPEARANCE

Liquid

POTENTIAL HAZARD(DANGER)

Some may burn but none ignite readily. Containers may explode when heated. Some may be transported hot. Inhalation of material may be harmful. Contact may cause bums to skin and eyes. Inhalation of asbestos dust may hana a damaging effect on the lungs. Fire may produce imitating, corrosive and/or toxic gases. Some liquids produce vapors that may cause dizziness or asphyxiation. Runoff from fire control or dilution water may cause environmental contamination.

PERSONAL PROTECTIVE EQUIPMENT

- Protective goggles or face shield.
- Respiratory safety device that will allow driver to escape.

DRIVER INTERVENTION EQUIPMENT

Wear positive pressure self-contained breathing apparatus (SCBA) Structural firefighters' protective clothing provides thermal protection but only limited chemical protection. Shovel.

DRIVER FIRST ACTIONS

- Only if it can be carried out without personal risk.

- Keep upwind.
- No smoking allowed.
- Avoid contact with spilled material

DRIVER SPECIAL/ADDITIONAL ACTIONS

Only if it can be carried out without personal risk:

1. clean, dry container and cover loosely, move containers from spilares.

DRIVER ACTIONS IN CASE OF FIRE

1. Do not touch or walk through spilled material.
2. Stop leak if you can do it without risk.
3. Prevent dust cloud.
4. Isolate spill or leak area in all directions for at least 50 meters for liquids and at least 25 meters for solids.

FIRST AID

1. Move victim to fresh air if it can be done safely.
2. Give artificial respiration if victim is not breathing.
3. Administer oxygen if breathing is difficult.
4. Remove and isolate contaminated clothing and shoes.
5. In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

SPECIAL INFORMATION FOR EMERGENCY SERVICES

Cool containers with flooding quantities of water urvil well after fire is out. Withdrew immediately in case of rising sound from vending safety devices or discoloration of tank. Small Fire Dry chemical, CO_2, water spray or regular foam Large Fire Water spray, fog or regular foam. Do not scatter spilled material with high-pressure water streams. If it can be done safely, move undamaged containers away from the area around the fire. For Asbestos, avoid inhalation of dust. Cover spill with plastic sheet or tarp to minimize spreading. Do not clean up or dispose of, except under supervision of a specialist. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters in all directions; also, consider initial evacuation for 800 meters in all directions.

EMERGENCY TELEPHONE NUMBERS

+27 (087) 362 7097

PREPARED BY DGR Consultants (878) 220 5997
from the best knowledge currently available, no guarantee is provided
that the information in sufficient or correct under all circumstances.

Preparation Date: 17-02-2023
Expiry Date: 17-02-2026
Exempt Cty: 1000
Reference: 3082-171

Notes

EMERGENCIES

MODULE 4

OVERVIEW

Procedures and protocols for managing emergencies during the transportation and delivery of petroleum products is explained. Guidelines for notifying relevant authorities, responding to vehicle accidents, handling spillages, contaminations, vehicle rollovers, and managing fire emergencies is included. Professional drivers undergo training to adhere to these procedures, prioritising the safety of themselves, others, and the environment during emergency situations.

KEY TAKEAWAYS

1. Immediate Response Protocols:
The critical importance of immediate response protocols is highlighted in various emergency situations, including vehicle accidents, spillage, contaminations, vehicle rollovers, protest actions, and fire emergencies. Drivers are instructed to take swift actions to contain the situation, minimise risks, and ensure safety.

2. Notification Procedures:
Clear guidelines are provided on how drivers should notify relevant authorities and their employers in an emergency. This includes securing the area, informing emergency services, and reporting incidents to the appropriate channels promptly.

3. Safety Measures and Precautions:
The necessity of adhering to safety measures and precautions to prevent emergencies is emphasised to minimise severe outcomes. This includes wearing personal protective equipment, maintaining safe distances, and following proper procedures during loading, unloading, and transportation.

4. Fire Safety and Extinguishing Techniques:
This section provides comprehensive guidance on fire safety protocols, covering the identification of potential fire hazards, effective containment of fuel sources, and the correct use of fire extinguishing equipment.

5. Risk Awareness and Mitigation:
Drivers are informed about the multitude of risks linked to transporting petroleum products and are trained in effective methods to mitigate these risks. This includes understanding the nature of fire, recognising potential hazards, and implementing preventive measures to ensure the safety of themselves and others.

EMERGENCIES

Drivers must be prepared for unexpected situations during deliveries of petroleum products. In the event of an emergency, the Bulk Truck Operator must follow the regulated procedures.

NOTIFYING RELEVANT AUTHORITIES

- Secure the area if authorities have not yet arrived at the scene.
- Contain the leak/ fire or contamination if safe to do so.
- Remain at the scene to provide assistance to emergency personnel, such as Fire, Police, Ambulance, or other emergency services.
- Understand the role of the emergency services.
- Report the incident to your employer.
- If the media is at the scene, the driver is NOT required to speak with them.

VEHICLE ACCIDENTS

If involved in a vehicle accident, follow these steps:

- Place the vehicle in a safe and visible position, place chock blocks and leave warning lights on.
- Contact your fleet controller to report the incident.
- Stay at the scene until the emergency services arrive.
- If possible, take photos and gather as much information as possible from the scene.
- If there has been a product spill, contain it if possible using your spill kit, eliminate any sources of ignition, and ensure that no one enters the area.

EMERGENCY TIPS

Never leave the scene of an accident. Remain calm and gather as much information as possible.

EMERGENCIES

SPILLAGES

In the event of a spillage, taking action in those first critical moments after the event can greatly reduce the severity of the spillage. Take a few seconds to determine the fire and safety risk. If safe to do so, take the following actions:

- Stop the flow of product.
- Stop all sources of possible ignition.
- Switch off the isolator.
- Report the spillage to your employer.
- Remove people from the immediate area so that they are clear of danger.
- Refer to emergency procedures information concerning the process to follow.
- Contain the spill using absorbent materials and block off, drains, manholes, culverts, dykes and ditches.
- In the event that product is exposed to your PPE, ensure PPE is returned to the PPE store for disposal.
- In the event of a spillage in the gantry, immediately activate the Emergency Shut Down Switch (ESD).

CONTAMINATIONS

In the event of a contamination or suspected contamination, it is important that the professional driver immediately responds to the situation to prevent further damage to vehicles. In the event of a contamination, you must take the following actions:

- Immediately stop product flow.
- Inform the customer of the possible contamination.
- Ensure all pumps are closed and no sales take place.
- Report the contamination to your controller and await further instructions.

EMERGENCY TIPS

Always report the incident immediately, non reporting is a dismissible offence.

EMERGENCIES

VEHICLE ROLL-OVER

There are several forces acting on a vehicle's movement:

Gravity: Which is zero on a flat surface, however, can be positive or negative depending on the slope.

Inertia: During acceleration and deceleration, forces either resist the forward movement or propel the vehicle forward. Other forces to consider include aerodynamics and rolling forces.

Centrifugate forces: Centrifugal forces acting on the vehicle while cornering are directly related to speed, load height/movement, curve radius, and road slope. Tanker-trailers are particularly vulnerable due to the trailer's high center of gravity and frequently unstable loads.

- In an emergency situation: Immediately stop product flow (if required).
- Inform your management.
- Remove people from the immediate area so that they are clear of danger.

PROTEST ACTION

- Inform emergency services of expected situations.
- Determine supply volumes required to continue normal operations.
- Arrange deliveries from alternative depots if possible.
- Compile customer priority list with marketing departments.
- Increase security measures.
- Keep management informed as and when required.

EMERGENCY TIPS

Report the incident immediately; failure to report is grounds for dismissal.

FIRE EMERGENCIES

Due to the flammability of petroleum products under certain conditions, it's essential for professional drivers to understand the risks of fire and implement the regulated fire control protocols.

THE NATURE OF FIRE

Petroleum product vapours can fuel fires, posing a significant threat to life and property. To ignite fires, three elements are required: Oxygen, heat and fuel.

If any one element is missing, the fire will not occur. Therefore, the following actions should be taken to minimise the risk of fire:

- Properly contain the fuel. If there is a fire, eliminate the source of the fuel if safe to do so.
- Minimise exposure to ignition sources.
- Ensure fire extinguishers are available to eliminate the oxygen fuelling a fire.

FIRE CLASSES

CLASS A

CLASS A
FIRES INVOLVING SOLIDS

- Carbon
- Wood
- Paper

CLASS B

CLASS B
FIRES INVOLVING LIQUIDS

- Gasoline
- Alcohol
- Solvents
- Liquefiable Solids

CLASS C

CLASS C
FIRES INVOLVING GASES

CLASS D

CLASS D
FIRES INVOLVING METALS

FIRE EMERGENCY

HOW TO USE YOUR FIRE EXTINGUISHER

FIRE FIGHTING TIPS

DO NOT PANIC. Test your extinguisher before approaching the fire. Keep low and approach with the wind at your back.

If clothing catches fire, extinguish with dry powder or water. Direct the dry powder or water at the base of the flame and watch for re-flash. If neither is available, wrap in a blanket or coat and roll on the ground until the fire is out.

Should a tyre vehicle catch fire whilst in transit, stop the vehicle. The fire can be managed with the efficient use of dry chemical extinguishers. Remember to save some extinguishing powder after the initial attack to fight frequent flashbacks that may occur.

Notes

LOADING OPERATIONS

MODULE 5

OVERVIEW

This module provides detailed procedures and responsibilities for loading petroleum products, with a focus on the importance of personal protective equipment (PPE). It also outlines safety requirements and measures for loading operations. Specific loading procedures for bulk fuel, packed lubricants, and gas are detailed, including steps such as vehicle preparation, connection of loading equipment, and safety checks. The module also offers guidance on loading at terminals, refineries, and SEVESO depots, emphasising adherence to site-specific protocols, safety measures, and communication with relevant authorities.

KEY TAKEAWAYS

1. Responsibility and Due Diligence:

Professional drivers are responsible for loading operations, overseeing loading operations, and ensuring that both equipment and procedures meet stringent HSEQ (Health, Safety, Environment, and Quality) standards. They must exercise due diligence in their decision-making processes to uphold these standards and prioritise safety throughout the loading process.

2. Personal Protective Equipment (PPE):

Adherence to terminal-specific PPE requirements is compulsory to ensure driver safety during loading operations, emphasising the importance of protective measures in operational areas.

3. Bulk Fuel Loading:

Procedures involve parking, connecting bonding cables, pre-setting meters, and loading products into compartments according to instructions. Attention to detail, such as closing valves after loading and conducting pre-departure checks, ensures safe loading practices.

4. Packed Lubricant Loading:

Loading procedures for vehicles accommodate various types, emphasising safety measures such as vehicle inspection, proper loading, securing of products, and documentation completion before departure.

5. Gas Loading and Offloading:

Loading procedures at terminals, refineries, and depots include a series of safety measures, including thorough safety checks, proper connection of loading arms, vigilant monitoring of loading operations, and strict adherence to site-specific protocols governing safe loading and departure. Attention to detail, such as following loading sequences and monitoring pressure gauges, ensures safe and efficient operations.

PREPARING TO LOAD

The procedures and actions outlined in this section reflect current industry practices for loading refined petroleum products. For specific details, refer to site-specific work instructions and equipment-specific guidelines.

RESPONSIBILITIES

The professional driver ultimately is responsible for deciding to carry out the loading operation, given their training in the relevant procedures. The professional driver must demonstrate due diligence by making sure that the equipment and operating procedures meet the high level required for HSEQ.

PERSONAL PROTECTIVE EQUIPMENT

It is compulsory to wear the prescribed personal protective equipment in all operational areas. Always refer to the terminal specific PPE requirement and ensure you adhere to these requirements at all times.

SAFETY GOGGLES

GLOVES

SAFETY BOOTS

FLAME RETARDANT OVERALLS

HARD HAT
(With chin strap)

RESPIRATOR

BULK FUEL LOADING

NOTE: Vehicles waiting to load must observe a safe distance.

- Apply the parking brake, turn off the engine, including the battery-isolating switch, and position wheel chocks.
- Connect the bonding cable to the vehicle. Make sure there is metal contact and with copper.
- Connect vapour recovery (where applicable).
- Connect applicable product loading arm to manifold API.
- Pre-set GANTRY meter with the correct order number, quantity per compartment, product and driver number.
- Enter details specific to the loading instruction and start the meter.
- Start product loading.
- Close bottom loading valve immediately after each compartment has been loaded.
- Load each compartment as per instruction. Loading beyond the set markers is not permissible.
- On completion of loading, the control valve will close automatically and product flow will stop.
- Close truck bottom loading valve.
- Disconnect loading hose, and replace on rack position.
- Remove bonding cable, vapour recovery and wheel chocks.
- Conduct a pre-departure check and obtain gate pass.

- Always set your product indicators prior to loading.
- Walk the line before starting product flow, ensure you have selected the correct product and the correct compartment.

PACKED LUBRICANT LOADING

TotalEnergies Distribution facilities will accommodate super link, taut liners and 10-ton vehicles.

- The vehicle tarps (or protective cover) is opened, and the shift supervisor inspects the vehicle for rubber mats and ensures that the truck is safe for use.
- Material Handling Equipment is allocated to the vehicle and given a go-ahead as soon as the shift supervisors complete their tasks.
- The product is removed from the temporary staging area and loaded onto the vehicle from the front to the back.
- As soon as the dedicated load is loaded onto the truck, the checkers/spotters conduct their tasks and ensure that the vehicle is loaded safely and securely.
- The driver and driver assistant ensure that all products have corner plates and are strapped appropriately.
- The driver and driver assistant then inspect the vehicle and ensure that it is loaded safely and securely.
- Once the load is secured accordingly, the driver and driver assistant begin closing and securing the tarps of the vehicle.

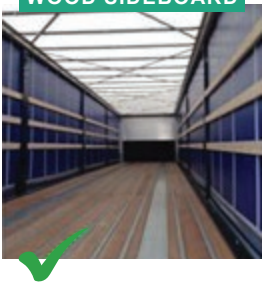
The driver receives and completes the necessary documentation with the debriefer. The driver removes the wheel chocks before getting into the vehicle to proceed to the next destination.

WHAT TO EXPECT?

LOCKS DAMAGED, IMPOSSIBLE TO FASTEN

WHAT TO EXPECT?

WOOD SIDEBOARD



ALUMINIUM SIDEBOARD

GAS LAODING AND OFFLOADING PROCEDURE

Procedure

Personnel conducting loading and unloading operations should receive training on work instructions and site specific Emergency Response Plans. The major hazards associated with loading and unloading must be clearly understood when personnel are inducted to sites. This operation shall be under constant supervision by both Driver and Operator. The ullage of both Road Tanker and Site Tanker must be checked prior starting operations/after completion of operations and recorded on “Goods Receive Note”.

Loading at Terminals, Refinery

- Loading orders for the quantities to be uplifted must be submitted to the Terminals or refineries before the vehicle arrives for loading.
- Loading slips must be issued to the driver clearly indicating registration for both Tractor and Trailer; and quantities to be loaded.

- Upon arrival at the terminal or refinery, the vehicle shall be directed to the weighbridge to record its tare weight before loading.
- The Vehicle should be positioned facing the emergency exit gate.
- The hand brake shall be applied, and the engine stopped.
- Wheel-chocks must be used on both sides of at least one wheel to prevent unexpected movement of the vehicle.
- The electrical equipment of the vehicle must be switched off using the “Battery Isolator Switch.”
- The electrostatic bonding connection must be made between the tanker and the fixed bonding point before connecting loading pipes and will remain connected until the operation is completed.
- Remove road tanker side bars on the loading side in order to access the coupling points.
- Anti-tow-away safety interlocks barriers must be engaged by opening doors of the coupling cabinets.
- Terminal or Refinery Operator with the help of BVO will connect the loading arms onto the dry-coupling points and ensure that it is properly secured.
- BVO to open the loading valves, both manual (gradually) and pneumatic by pulling the “blue selection switch”.
- Periodic level and pressure gauge monitoring must be conducted during loading operations in order to ensure no overloading and vapour balance excess flow valve is not closed.
- If the tanker is accidentally overfilled, Transport Manager must be notified immediately, and the excess LPG must be decanted before the vehicle departs.
- Loading operations must be stopped and all valves closed after the road tanker is filled to 85%.
- Decouple the loading arms while electrostatic bonding is still connected.
- Disengage Anti-tow-away interlocks by closing the cabinet doors and remove the wheel-chock blocks.
- The tanker must be directed to the weighbridge for gross weight in order to determine the net weight of the LPG loaded and the BVO will be issued with weighbridge ticket and guided to exit the terminal or refinery.

Loading from SEVESO Depots

- The Bulk Transport Coordinator must send the order number to the depot, clearly indicating the quantity of LPG to be loaded in the road tanker.
- After Safe to Load inspection as per 6.3 the vehicle shall be directed to the weighbridge for recording of tare weights (Blackheath does not have Weighbridge).
- The vehicle must be directed to the loading Gantry after the tare weight is recorded and be positioned within the water sprinkler system.
- Site traffic rules must be observed to position the bulk truck following exit traffic flow.
- During positioning, the reversing of the vehicle should be guided by a second person from the front of the vehicle. No guiding of the vehicle should occur while “on the line of fire” – behind the vehicle.
- The hand brake shall be firmly applied, gear disengaged, and the engine stopped.
- Wheel-chocks must be used on both sides of at least one wheel to prevent inadvertent movement of the vehicle.
- The electrical equipment of the vehicle must be switched off using the “Battery Isolator Switch”.
- Traffic cones must be placed to barricade the Gantry during loading of the road tanker.
- Fire extinguishers must be placed on accessible positions.
- Remove road tanker side bars on the loading side in order to access the coupling points.
- Anti-tow-away safety interlocks barriers must be engaged by opening doors of the coupling cabinets.
- Connect the earth monitor and ensure that the status is healthy (all LED lights are green).
- Follow Works Instructions OPD-INS-SL-TGAS-003 (a,b,c) for the connections/disconnection of hoses for start and stop of loading operations.

NB: Select loading sequence from SCADA

- After loading is completed and decoupling is conducted, the bulk truck must be directed to weighbridge for gross weight recoding and obtain net weight before exiting the Depot.

Notes

TRIP MANAGEMENT

MODULE 6

OVERVIEW

This module covers trip management for professional drivers, focusing on key aspects such as tank loading procedures, tyre management, the use of chock blocks, speed management, defensive driving techniques, journey planning, and handling adverse weather conditions. It emphasises the importance of safe driving practices and effective trip management to ensure successful deliveries and prevent accidents.

KEY TAKEAWAYS

1. Effective Planning:
Proper planning is essential for successful trip management, involving route optimisation, scheduling, and resource allocation to ensure timely and efficient delivery or transportation operations.

2. Risk Management:
The process of identifying and mitigating potential risks associated with the trip, such as adverse weather conditions, road hazards, and regulatory compliance, is described. This is crucial for ensuring the safety of drivers, cargo, and the public.

3. Communication and Coordination:
Effective communication and coordination among stakeholders, including drivers, dispatchers, and customers, are vital for smooth trip execution, addressing unforeseen circumstances, and resolving issues promptly.

4. Monitoring and Tracking:
Continuous monitoring and tracking of trip progress, vehicle performance, and driver behaviour enable real-time decision-making, proactive intervention, and adherence to schedules, enhancing operational efficiency and customer satisfaction.

5. Compliance and Documentation:
Ensuring compliance with legal regulations, industry standards, and company policies regarding trip management, documentation, and reporting is fundamental for maintaining operational integrity, avoiding penalties, and upholding TotalEnergies reputation.

TRIP MANAGEMENT

Liquid bulk tanks are never filled to capacity. Ullage or evenly distributed space must be left for expansion, allowing the liquid to move within the tank. This movement can cause the load to shift, impacting the stability of a road tanker during cornering, acceleration, or braking.

The curvature and slope of the road also play a role in this scenario. While separate compartments and baffles inside a tank aim to minimise this, surge remains a significant factor in causing tanker accidents. The liquid's movement against and up the tank walls raises the center of gravity and significantly raises the risk of the tanker rolling over.

PRETRIP INSPECTION

Before starting each shift, make sure your vehicle is in proper working order. Conduct a thorough inspection of the vehicle according to the pre-trip inspection form, note any defects, and ensure the vehicle is fit for use before beginning your journey.

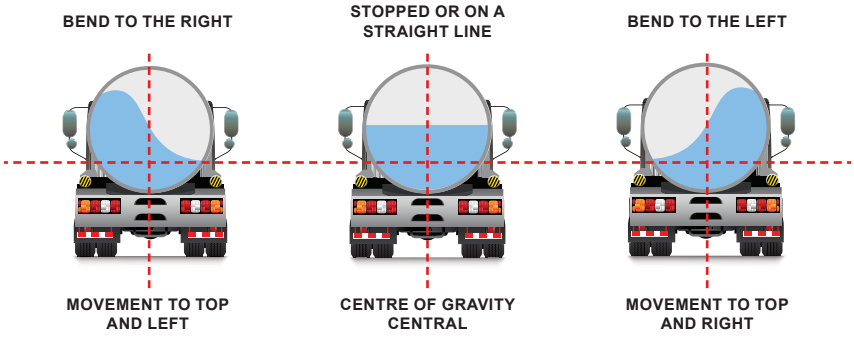
SWERVING OR CORNERING

At high speeds, the liquid inside the tank can surge from side to side, leading to vehicle instability and sliding. Attempting to counter this by turning away from the slide direction may increase the risk of a vehicle rollover.

RAPID ACCELERATION

A surge in acceleration to the rear causes fluctuations in gear changing and engine revs, particularly during over braking. The forward and upward propulsion of the load in the tank can result in a jackknife scenario, potentially leading to a tanker rollover.

THE BALLAST, OR WEIGHT DISTRIBUTION, INCREASES DANGER



TYRE MANAGEMENT

Ensuring proper tyre maintenance is crucial for road safety, as tyres are the only point of contact between the vehicle and the road. Simple checks like maintaining correct tyre pressure are vital, as the air inside HGV tyres bears the weight of the vehicle and its cargo.

Properly maintained tyres are crucial for ensuring vehicle stability, especially when navigating corners. They work in conjunction with the main suspension system to optimise vehicle performance, aiding in effective acceleration and braking.

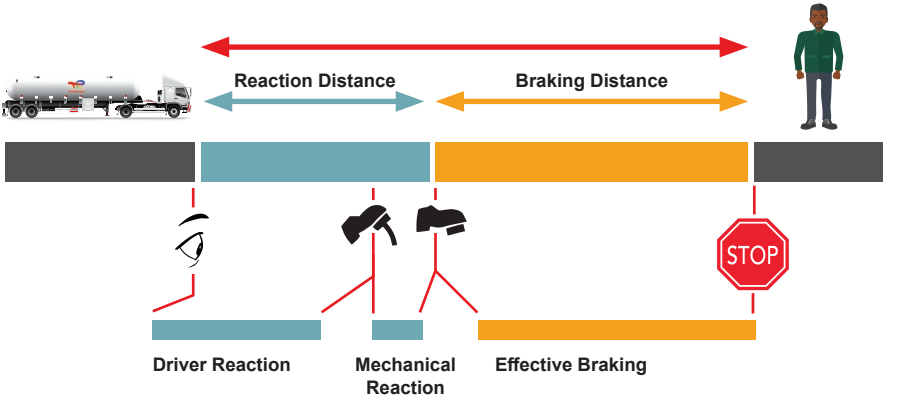
CHOCK BLOCKS

Vehicle chock blocks are essential safeguards to prevent the vehicle from moving when unattended. The use of chock blocks will be in accordance with the requirements in SANS 10231 and the National Road Traffic Act.

CHOCK BLOCKS MUST BE PLACED DURING:

- Breakdowns.
- Mechanical checks.
- Loading.
- Offloading.
- When parked.
- When trailers are unhitched.

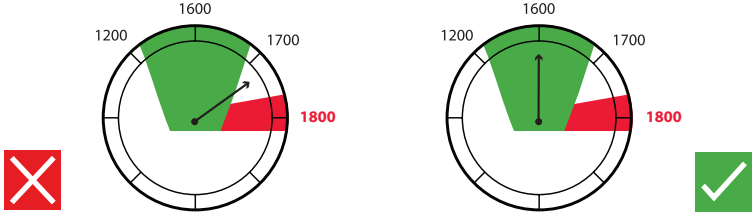
STOPPING DISTANCE



SPEED CONTROL

Maintaining control over your vehicle's speed is crucial, as driving too slow can be just as hazardous as driving too fast. The following guidelines must be followed:

- Check mirrors before the speed is adjusted.
- Do not drive too fast for the road conditions.
- Do not drive too slow for the circumstances.
- Avoid jerky or uneven acceleration.
- Do not release the accelerator pedal so that vehicle jerks when slowing down.
- Avoid jerky or uneven braking.
- Use the exhaust or engine brake with caution.
- Maintain the correct four-second following distance.



TRIP MANAGEMENT

DEFENSIVE DRIVING

Professional drivers should always practice defensive driving techniques. Drive only when alert, respect other road users, and maintain control of your vehicle. While driving is never without risk, strive to drive defensively, use keen observation, speed management, and road positioning skills.

SPEED MANAGEMENT

Adhere to the speed limit and ensure that you can come to a stop within the visible distance ahead. Slow down when approaching potential hazards and be prepared to stop. If visibility is less than 15 seconds, reduce your speed. Additionally, decrease speed on wet, icy, or gravel roads where stopping distance is increased.

ROAD POSITIONING

Position your vehicle to maximise distance from hazards, a practice known as buffering. For example, when approaching the top of a hill, shift to the left to maintain distance from oncoming vehicles. Similarly, avoid parked cars to prevent the risk of doors opening and encountering pedestrian activity.

COLLISION AVOIDANCE

A defensive driver maintains a safe following distance and has a circle of awareness and maintains a safety cushion completely around the vehicle. The safety cushion is managed by adjusting the vehicle's speed and road position. In order to maintain a safe following distance you must consider two key factors – reaction time and response time.

COLLISION AVOIDANCE

Reaction time is the time the driver needs to:

- **S**ee the information.
- **P**erceive what it means.
- **D**ecide on a response.
- **I**nstigate that response.

Response time is the time required to take action. Generally a minimum of 1,5 seconds is needed to respond. In many situations braking may be the only possible response. Swerving is rarely appropriate and can result in a more severe accident, for example a head-on collision.

JOURNEY MANAGEMENT

It's crucial to manage your journey effectively to prevent collisions and ensure accurate deliveries to the intended customers. Every trip must be conducted using a Journey Plan. As a professional driver you must always follow the journey plan.

PLAN YOUR ROUTE

Before departing the depot, review the journey plan during your briefing. You must plan your route mentally and ensure you are familiar with the risks and the roads that you will be travelling. Each Journey Plan accurately describes the following:

- Loading Depot
- Customer location
- Route Hazards
- Speed Limits
- Directions
- Approved Stops
- Trip Distance
- Trip Time
- Return Route
- Site Layout
- Tank Information
- Emergency Contacts
- Delivery instructions
- Site hazards

Ensure you stop only at approved stops, report to your fleet controller when stopping your vehicle to park or deliver.

CHANGE MANAGEMENT

When using the journey plan, review the document for accuracy. ALWAYS report any changes to the route or the site. Temporary changes must be reported and the journey plan must be updated as per the procedure.

SPEED LIMITS

Vehicle speed increases the likelihood of a collision, always drive cautiously and reduce your speed for the conditions of the road. The following speed limits apply to all TotalEnergies Vehicles:

GRAVEL ROAD

BUILT UP AREA

FREEWAY

DRIVING IN BAD WEATHER CONDITIONS

Professional drivers maintain cautious driving in bad weather conditions. Remember to remain visible, reduce speed and increase following distance when conditions suggest the need. Poor weather conditions include fog, smoke, rainfall, and other related conditions. Follow these steps in bad weather conditions:

HEAD LIGHTS ON

HAZARDS ON

SLOW DOWN

SPEED TIPS

Adjust your speed to the changing conditions. Proceed with caution & frequently evaluate your speed.

FOLLOWING DISTANCES

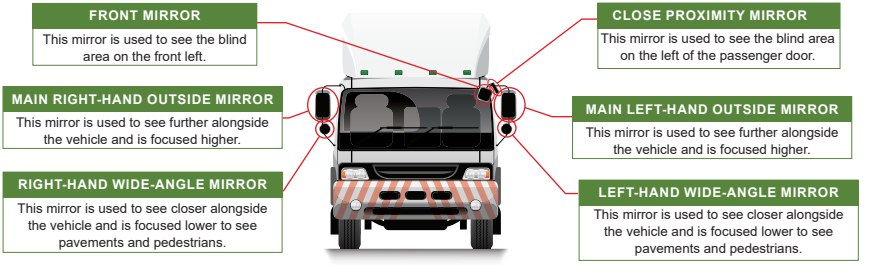
km/h	STOPPING DISTANCE IN METERS	
120	36	95
110	33	80
100	30	66
90	27	54
80	24	43
70	21	32
60	18	24
50	15	17
40	12	11

Reaction Distance Braking Distance

NOTE: Always keep a 4s following distance

BLIND SPOTS

Always be mindful of the blind spots around your vehicle. Adjust your mirrors to maximise visibility of these areas. Ensure all mirrors are correctly positioned.



- **ALWAYS** set your mirrors correctly before departing.
- **ALWAYS** check ALL mirrors before moving forward or backward.
- **ALWAYS** check mirrors when there is a gap alongside your vehicle where other road users may think about moving alongside.

STEERING

To ensure that you are handling the vehicle correctly, you must make sure that the following steering habits are practiced:

- Use the correct steering method.
- Look in the mirrors at least every 5-8 seconds.
- Do not cut a corner or run too wide in a corner (unless unavoidable).
- Do not wander across the road for no reason.
- Adjust your vehicle's position on the road to maximise clearance between your vehicle and potential hazards.
- Do not drive on or on both sides of lane lines

OBLIGATIONS AND PROHIBITIONS OF THE DRIVER

THE OBLIGATIONS AND PROHIBITION OF THE DRIVER

Drivers are strictly prohibited from the following actions:

- Smoking on board or around the vehicle, whether it's empty or full.
- Driving under the influence of alcohol, drugs, or any medication that may cause drowsiness is prohibited.
- Using a mobile phone while the vehicle is in motion, within a depot, gas station, or loading/unloading area.
- Loading/unloading during a lightning storm for vehicles carrying LPG and liquid hydrocarbon products.
- Engaging in activities that may distract concentration while the vehicle is in motion (for example eating, adjusting GPS).
- Loading/unloading without using an earth plug for vehicles transporting LPG and liquid hydrocarbon products.
- Loading gasoline and kerosene in the same truck.
- Carrying unauthorised passengers.
- Allowing an unauthorised third party to drive the truck.
- Conducting unauthorised electric connections or working on the vehicle's electrical circuits.
- Disconnecting or working on the On-Board Computer (OBC), on board camera, fatigue devices, or any other equipment.
- Taking on board goods or empty packages not corresponding to the deliveries.
- Carrying animals.

THE DRIVER MUST:

- Check the condition of the vehicle, including the tyres and spare wheels.
- Ensure that both their driving license and vehicle authorisations are valid and appropriate for transporting LPG and liquid hydrocarbon products.
- Plan the journey and be aware of the associated risks and control measures.
- Verify that there are no leaks from bulk products and that packed products are stowed and secured properly.
- Wear a seatbelt at all times.
- Ensure that authorised passengers also wear seat belts.
- Adhere to traffic rules and any traffic restrictions.
- Observe speed limits and adjust speed according to traffic conditions.
- Comply with driving and rest time regulations and avoid driving while fatigued.
- Report all incidents/accidents during the trip or loading/unloading to their employer.
- Wear appropriate personal protective equipment (PPE) in accordance with government regulations and the nature of the transported products.

Notes

ECO DRIVING
MODULE 7

OVERVIEW

The module outlines Eco Driving techniques and strategies for drivers to maximise fuel efficiency, cut costs, and lessen environmental impact during vehicle operations. It underscores the significance of factors like fuel consumption, time management, and payload efficiency in influencing overall operational expenses.

KEY TAKEAWAYS

1. Eco Driving Practices:
By adopting eco-driving techniques, such as planning efficient routes, monitoring tyre pressure, minimising idling, and practicing smooth driving, can significantly enhance fuel efficiency and lower costs.

2. Driving Within Green Speed Range:
Maintaining a moderate speed within the green speed range helps optimise fuel consumption by avoiding unnecessary acceleration and braking, thereby increasing average speed and reducing fuel consumption.

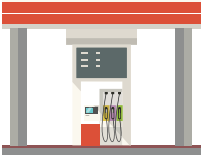
3. Foresighted Driving:
Anticipating traffic conditions and driving with foresight to avoid unnecessary braking and accelerating can contribute to smoother driving, reduced fuel consumption, and safer driving conditions.

4. Avoiding Unnecessary Stops:
Minimising unnecessary stops and adopting a slow and well-estimated approach to driving can lead to more economical fuel usage and reduced wear and tear on the vehicle.

5. Economic Braking Techniques:
Practicing economic braking methods, such as avoiding sudden and harsh braking, contributes to fuel efficiency, prolongs the lifespan of vehicle components, and enhances overall driving safety.

ECONOMICAL DRIVING

Learn the principles of economic driving and driving resistances, as well as the technical aspects and productivity of a commercial vehicle.



FUEL

TIME

PAYLOAD

DRIVERS CAN INFLUENCE THE FOLLOWING COSTS:

FUEL
30% - 40%

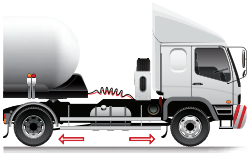
MAINTANANCE
8% - 10%

TYRES
10% - 20%

WAYS TO IMPROVE FUEL EFFICIENCY

PLAN YOUR ROUTE

Plan your route to avoid congestion and find the shortest, safest path to your destination.



MONITOR THE PRESSURE

Underinflated tyres reduce fuel economy. For every 1 PSI drop in pressure, your fuel mileage can be reduced by 0.3%.

MINIMISE IDLING

Only idle your truck when absolutely necessary. One hour of idling burns about 3,78541 litres of fuel.

BE MODERATE WITH BRAKING

Braking is essential while driving, but each time you slow down, it requires more fuel to regain speed. Maintaining a greater distance between you and the vehicle ahead can reduce the need for frequent braking.

WAYS TO IMPROVE FUEL EFFICIENCY

FORESIGHTED DRIVING TECHIQUES

GREEN BAND DRIVING

Drive within green speed range.

FORESIGHTED DRIVING

Anticipate traffic to minimise unnecessary braking and acceleration.

SMOOTH DRIVING TECHNIQUES

Keep a steady speed to maintain a consistent average and save fuel.

AVOID UNNECESSARY STOPS

A slow and well-estimated approach instead of a stop (e.g, before a traffic light) is more economical and protects the drive train.

NO UNNECESSARY BRAKING

Every time you brake, you convert kinetic energy into heat. To speed up again, you need to regenerate this energy using fuel.

ECONOMIC BREAKING

Before resorting to normal service brakes, utilise wear-free braking options like the Exhaust Brake, Engine Brake, Turbo Brake, or Voith Retarder. This not only saves fuel by avoiding braking but also increases safety. However, exercise caution on black ice rather opt for the finely controllable service brake to enhance safety.

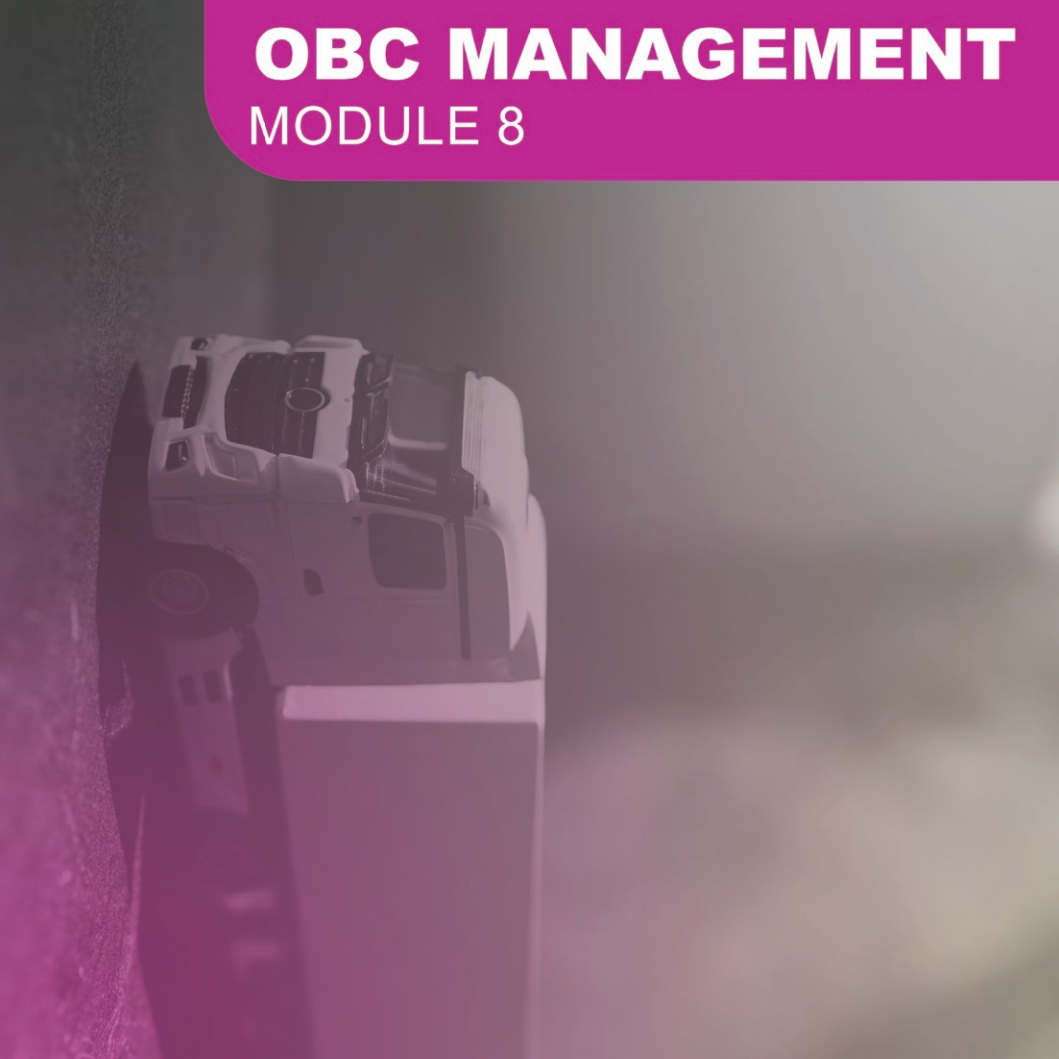
TECHNICAL REQUIREMENTS FOR ECONOMIC DRIVING

- Clean air and fuel filter.
- Correct setting of fuel injector.
- Use oil viscosity classes for engine, transmission and axles according to manufacturer specifications and operating conditions.
- Correct motor and transmission oil levels.

- No leakages in the pressure systemcharge-air cooler and associated lines.
- Brakes release completely.
- Correct tyre pressure.

OBC MANAGEMENT

MODULE 8



OVERVIEW

This module explains how on-board computers (OBCs) monitor and regulate driver behaviour for Transporters. It covers compliance with driving and rest times, speed limits, and night driving restrictions. It also discusses the use of cameras to capture unsafe driving and detect driver fatigue.

KEY TAKEAWAYS

1. Compliance Monitoring:
On-board computers or OBCs are utilised to monitor driver behaviour, ensuring adherence to driving times, rest periods, speed limits, and other safety regulations set by the authorities.

2. Driver Behaviour Tracking:
OBCs track various driver behaviours, including sudden acceleration, harsh braking, extended parking in hazardous areas, and adherence to driving point systems. This data enables proactive management of driving habits.

3. Alerts and Alarms:
Daily operational monitoring detects severe violations, triggering alerts and alarms for immediate attention and corrective actions by transporters and OBC compliance controllers.

4. Performance Evaluation:
Weekly and monthly evaluations offer valuable insights into driving behaviour trends, enabling transporters and management to identify areas for improvement and raise awareness.This approach, driven by data, enables the creation of action plans focused on improving safety and efficiency on the road.

5. Accident Analysis:
On-Board Computers help us to analyse accidents, identify driving patterns and risks, and improve safety measures to reduce accidents and enhance road safety.

OBC MANAGEMENT

On-board computers (OBC) are installed in vehicles to monitor and control aspects of driver behaviour on behalf of transporters.

- Transporters oversee monitoring, overseen by the OBC compliance controller (TSA). Monitored aspects and events include:
  - » Compliance with driving times, rest times, and speed limits.
  - » Adherence to the prohibition on night driving.
  - » Instances of sudden acceleration and harsh braking.
  - » Extended parking in hazardous areas.
- Drivers are assigned points on the driving point system (DPS).
- Points may be deducted or added based on compliance with the above aspects.
- Daily operational monitoring of severe violations (Alerts and Alarms) through Compass FM service.
- Transporter contacts and OBC compliance controller receive daily exceptions for proactive management.
- Actions taken against drivers by the transporter, with evidence provided to the OBC Compliance controller.
- Depending on the violation category, violations are recorded in the DPS by both the transporter and the OBC compliance controller.
- Weekly monitoring of driver behaviour trends, with concerning behaviour shared with transporters for proactive management and awareness.
- Monthly sharing of overall performance evaluation per haulier and country with transporters/TSA management.
- OBC data is also utilised for accident analysis.

OBC MANAGEMENT

DRIVING POINTS SYSTEM

OBC MANAGEMENT

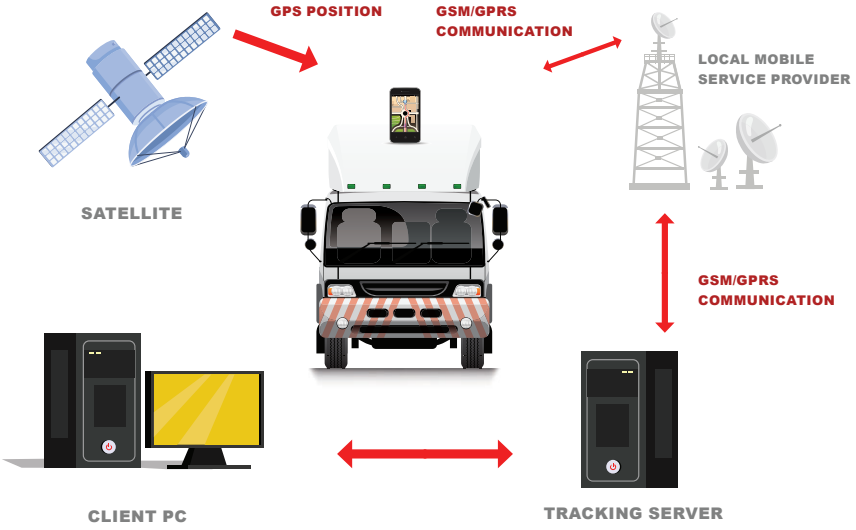
OPERATION INVARIANTS

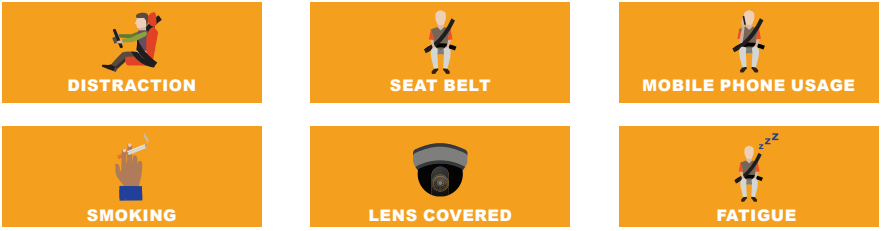
DRIVINGIWORIDREST TIME	INVARIANT
Maximum continuous driving time	4hrs30
Minimum break time	35min
Max. daily driving time	10 hours
Max. daily working time	12 hours
Max. daily rest time	9 hours
Max. weekly driving time	56 hours
Min. weekly rest time	24 hours

NIGHT DRIVING PERIOD	INVARIANT
Driving prohibited between:	20:00 - 05:00

MAXIMUM SPEED	INVARIANT
Highway	80km/h
Priority road	70km/h
Non priority road	60km/h
Track	50km/h
Urban areas	30km/h

TOOLS


GPS POSITION
GSM/GPRS COMMUNICATION
LOCAL MOBILE SERVICE PROVIDER
SATELLITE
GSM/GPRS COMMUNICATION
CLIENT PC
TRACKING SERVER


DISTRACTION
SEAT BELT
MOBILE PHONE USAGE
SMOKING
LENS COVERED
FATIGUE

INCAB AND ROAD FACING CAMERA

All vehicles are equipped with an in-cab and front-facing camera unit. These units are behavior-based and intended to change driver behavior. An unsafe driving manoeuver, such as a harsh braking or a sudden swerve or sudden swerve, will trigger the incab and front facing camera event recorder to capture a 12 second video with data of the critical 8 seconds before and 4 seconds after the incident occurred.

- DUAL LENS CAMERA
- IN CAB FOOTAGE
- EXTERIOR FOOTAGE
- EXCEPTION BASED
- 12 SECONDS OF FOOTAGE

HOW IS THE INCAB AND FRONT FACING CAMERA TRIGGERED

DRIVING RELATED TRIGGERS

HARSH BRAKING

CORNERING

ROAD RELATED TRIGGERS

UNEVEN ROAD SURFACE

COLLISION RELATED TRIGGERS

DRIVECAM COLLISION

DRIVECAM NEAR COLLISION

DRIVER RELATED TRIGGERS

MANUAL ACTIVATION

DRIVECAM TIP

Always ensure that your incab and road-facing cameras are functioning properly before departing.

INCAB AND ROAD FACING CAMERA STATUS

SOLID GREEN RIGHT LIGHT – GOOD

- Unit is working condition.
- No issues or problems.

SOLID RED RIGHT LIGHT – WARNING

- Event has been recorded but not downloaded.
- If the light remains on for 24hrs report to fleet controller.

SOLID RED LIGHT – ERROR

- Event recorder is not downloading, contact your fleet controller to complete the force send procedure.

MANUAL TRIGGER

There are two ways to manually trigger the incab and front facing camera, firstly using the red button situated on the dashboard of the vehicle or any of the BLUE buttons on the incab and front facing camera unit.

COLLISION TIP

Manually trigger your incab and road facing camera in the event of a collision.

FATIGUE CAMERA

Vehicles are equipped with a fatigue camera designed to detect driver fatigue while driving. The camera is installed in the in-cab unit, and when triggered, it activates the in-cab camera to record the event. This camera detects driver distractions and tracks alertness.

IMPORTANT

Obstructing the fatigue camera is NOT permitted.

Notes

DELIVERY
MODULE 9

OVERVIEW

This module outlines the procedures and responsibilities for delivering refined petroleum products in the industry. It highlights the importance of adherence to industry standards and safety protocols, including the use of personal protective equipment (PPE) and proper preparation before delivery. The process involves various steps, such as vehicle preparation, tank dipping to verify ullage, and the actual delivery process for both gravity and PTO deliveries. Additionally, it covers the completion of the delivery, including paperwork and safety checks before departure.

KEY TAKEAWAYS

1. Responsibility and Due Diligence:
Professional drivers are responsible for ensuring the safe and proper execution of delivery operations, following industry standards and safety protocols

2. Personal Protective Equipment (PPE):
Personal protective equipment (PPE) is mandatory during delivery, and drivers must adhere to site-specific requirements.

3. Delivery Preparation:
Before delivery, thorough preparation steps include vehicle parking, checking tank ullage through manual dipping, and barricading the delivery area for safety.

4. Tank Dipping and Ullage Calculation:
The delivery process involves specific procedures for both gravity and PTO deliveries, including steps to ensure correct tank selection and product flow.

5. Delivery Processes (Gravity and PTO):
After completing the delivery, drivers must conduct post-delivery tasks, such as disconnecting equipment, completing paperwork, and ensuring safety before departure.

6. Delivery Processes (Gravity and PTO):
Unloading procedures for LPG and lubricants follow specific protocols, including safety measures and equipment checks to prevent accidents and ensure efficient operations.

PREPARING TO DELIVER

The procedures and actions outlined in this section reflect the prevailing practices in the petroleum industry for delivering refined petroleum products. For more detailed information, please consult the site and vehicle-specific work instructions, as well as the specific procedures applicable to your type of equipment.

RESPONSIBILITIES

The professional driver holds ultimate responsibility for deciding to proceed with the delivery operation, having undergone training in the relevant procedures. The professional driver must demonstrate due diligence by making sure that the equipment and operating procedures meet the high level required for HSEQ.

PERSONAL PROTECTIVE EQUIPMENT

It is compulsory to wear the prescribed personal protective equipment during a delivery. Refer to the site specific requirements when delivering to a commercial facility. Ensure you adhere to these requirements at all times.

DELIVERY PROCEDURE

The following procedure is a generic standard, please always refer to your equipment specific standard operating procedure for detailed process steps for each type of equipment. This section will cover both PTO deliveries to above ground tanks and GRAVITY deliveries to an underground tank.

PREPARATION CHECKLIST

1. Park the vehicle next to the filler point or delivery location.	✓
2. Turn off the engine.	
3. Apply hand brake.	
4. Switch off all lights and electrical accessories, close your windows before exiting the vehicle.	
5. Check mirrors and exit vehicle using 3 point contact.	
6. Turn off battery isolator switch.	
7. Place chock blocks behind and infront of the drive wheels.	
8. Barricade the vehicle using your cones.	
9. Confirm that you are at the right site by asking the site supervisor “what is the name of the site?” then contact your FC to confirm that you are at the correct location.	
10. Place 2 fire extinguishers at the offloading point, one must be 4 meters upwind and the second at the filler points.	
11. Inform the customer that the product is being delivered.	

IMPORTANT

You must ensure the vehicle is safely barricaded, do not obstruct traffic and ensure the area is safe.

TANK DIPPING

Now that you have confirmed that you are at the correct customer you must prepare to deliver. Before you can deliver you must verify that there is sufficient space (ullage) in the tank and plan your delivery. This is done through manual dipping. If the site has ATG you must receive a copy and additionally witness manual dips.

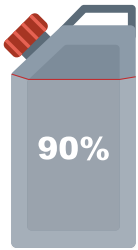
1. Check if the tanks are interlinked, if the tanks are interlinked the connection must be closed.	✓
2. Barricade the dipping area and ensure it is safe to start the dipping process.	
3. Dip each tank individually, ensure you place water finding paste on the dipstick.	
4. Report to the fleet controller immediately if there is water detected.	
5. Dipstick must touch the bottom of the tank, dip more than once to be sure that the reading is correct.	
6. Ensure all dipping points are closed and locked.	
7. Calculate the ullage using the 90% or 95% rule.	
8. Complete the delivery instruction document and agree on the delivery quantities.	
9. Dipping process takes place before and after each delivery.	

IMPORTANT

No Dips, No Delivery! Ensure the CORRECT tanks are manually dipped before and after the delivery.

TANK CAPACITY

When delivering into a customer tank, the ullage and capacity of the tank must be considered during the dipping process. Always complete pre-dips and calculate the available ullage. The following rules apply when considering the tank capacity:



Tank is equal or smaller than 14 000 litres:

90% RULE

Tank size x 0,9 = Safe Fill Capacity
Safe fill capacity – Manual Dip = Available Ullage

TANK SIZE	ULLAGE CALCULATOR	SAFE FILL CAPACITY
2200 e	2200 x 0.9	1980 e
4500 e	4500 x 0.9	4050 e
9000 e	9000 x 0.9	8100 e
14 000 e	14000 x 0.9	12 600 e
23 000 e	23000 x 0.9	20 700 e
30 000 e	30000 x 0.9	27 000 e
46 000 e	46000 x 0.9	41 400 e
83 000 e	83000 x 0.9	74 700 e

GRAVITY DELIVERY PROCESS

1. Attendant to open the CORRECT filler point, only open ONE at a TIME.	✓
2. Connect your bonding cable.	
3. Open the Air Supply.	
4. Connect the delivery hose to the correct underground tank.	
5. Check your delivery instruction document, Bill of Loading & product indicators to ensure they correspond.	
6. Engage unloading mode and select the correct compartment (pre-set as per customer requirement.)	
7. Retrace your steps before starting product flow and ensure the correct tank and compartment selected.	
8. Start product flow, check for leaks.	
9. Always remain at the offloading controls.	
10. When changing compartments ensure you close the compartment with one hand and open the next with the other hand – ONLY one compartment at a time.	
11. When changing compartments ensure the correct compartment is being discharged into the correct tank.	
12. Drain the hose when product flow is complete.	

IMPORTANT

Discharge ONE compartment at a time and ensure only ONE filler point is opened at a time.

PTO DELIVERY PROCESS

1. Attendant to open the CORRECT filler point, only open ONE at a TIME.	✓
2. Connect your bonding cable.	
3. Open the Air Supply.	
4. Connect the PTO delivery hose to the correct underground tank.	
5. Check your delivery instruction document, Bill of Loading & product indicators to ensure they correspond.	
6. Engage unloading mode and select the correct compartment and Pump Delivery (pre-set as per customer requirement).	
7. Pre-set the meter Retrace your steps before starting product flow and ensure the correct tank and compartment selected.	
8. Enter vehicle, start the engine and PTO.	
9. Start product flow, check for leaks – Use the butterfly valve to control speed.	
10. Always remain at the offloading controls.	
11. When changing compartments ensure you close the compartment with one hand and open the next with the other hand – ONLY one compartment at a time.	
12. When changing compartments ensure the correct compartment is being discharged into the correct tank.	

IMPORTANT

Ensure the hose is safely secured to the customer Tank. The attendant must assist by holding the PTO hose while you control the meter.

COMPLETING THE DELIVERY

1. Once all the product has been safely delivered disconnect and drain the delivery hose if applicable.	✓
2. Print all meter slips for the customer.	
3. Stow all equipment back onto the vehicle.	
4. Ensure filler points are closed and locked.	
5. Witness the post-delivery dips, ensure you apply water finding paste to the dipstick and verify that there is no water in the tank.	
6. Complete the remaining sections of the delivery instruction document.	
7. Complete the delivery note for the customer.	
8. Ensure all paperwork is signed and accurate.	
9. Contact your fleet controller to advise of the completed delivery.	
10. Place all cones and fire extinguishers back onto the vehicle.	
11. Walk around the vehicle to ensure area is safe.	
12. Place chock blocks back onto the vehicle and safely depart the customer.	

IMPORTANT

Immediately report all Gains and Losses or any challenges experienced on Site. Report any delivery constraints experienced at customer site.

GAS OFFLOADING PROCEDURE

UNLOADING TO TGSA DEPOTS AND CUSTOMERS

The unloading of LPG bulk tanker into static storage vessel follows the same procedure for loading.

Unloading should not be conducted during night time hours unless sufficient lighting is available.

- Upon arrival at the depot, the Bulk Vehicle Operator (BVO) must report to the security office for administrative procedures and induction if it is their first time at the location.
- Safe To Load Pass must be conducted as per 6.3 and the truck only allowed access if Safe to Load pass is accepted (not applicable to customer sites).
- The vehicle shall be directed to weighbridge upon arrival to the to the Depot to record tare weight before loading (SEVESO Sites).
- The Vehicle should be positioned facing the emergency exit gate.
- Reversing of the vehicle during positioning should be guided by a second person from the front of the vehicle (No guiding of the vehicle while “online of fire” – behind the vehicle)
- The hand brake shall be firmly applied, gear disengaged, and the engine stopped.
- Wheel-chocks must be used on both sides of at least one wheel to prevent unexpected movement of the vehicle.
- All electrical equipment in the vehicle must be switched off using the “Battery Isolator Switch.”
- Traffic cones must be placed to barricade the Gantry during loading of the road tanker.
- Fire extinguishers must be placed in accessible positions.
- Remove road tanker under-run bars to access the coupling points.
- The electrostatic bonding connection must be made between the tanker and the fixed bonding point before connecting loading pipes and will remain connected until the operation is completed.
- Anti-tow-away safety interlocks barriers must be engaged by opening doors of the coupling cabinets.
- Connect the earth monitor and ensure that the status is healthy (all LED lights are green).
- Uncap the dry-coupling connection points.
- For SEVESO Sites follow Works Instructions OPD-INS-SL-TGAS-003 (a,b,c) to start with unloading operations.
- For non-SEVESO Sites follow works instructions OPD-INS-SL-TGAS-003 (d,e,f,g) to start with unloading operations for the Depots, for customers follow below steps.

UNLOADING TO TGSA DEPOTS AND CUSTOMERS (Continued)

- Connect offloading hoses and select offloading with PTO from the Road Tanker. Reset the offloading flow meter. Delivery hoses must be visually examined for kinks, wear, or any damage. Couplings and seals must be similarly examined to ensure compatibility and for any dirt etc. before connection.
- Open valves for gantry piping starting from the bulk tank inlet.
- Switch on Battery Isolator switch from the road tanker and start the truck engine.
- Gradually open the offloading manual valve from the road tanker while observing the pressure on Gantry pressure gauge.
- Slowly start the PTO pump until the flow meter start reading the flow.
- Turn the nob for PTP pump to maximum speed to give 210 l/min.
- Continuously monitor tank levels for both Road Tanker and Static bulk tanker for the duration of the unloading.
- Once the receiving bulk tanker reach 85% stop the operations by reducing PTO speed until the flow is zero and close all Isolation valves.
- Depressurise the offloading hose using the bleeder valve until the pressure is zero.
- Disconnect and roll the flexible hose back to the truck.
- The bonding cable must be disconnected after the hoses have been disconnected and rolled back.
- Remove fire extinguishers and traffic cones from the tanker and place them back in their designated positions.
- Disengage anti-drive-away interlocks before driving the road tanker.

LUBRICANTS OFFLOADING PROCEDURE

1. Open the vehicle tarps and initiate the tasks of the checkers/spotters as they begin scanning the stock.	✓
2. Material Handling Equipment is allocated to the vehicle and given a go ahead as soon as the checkers/ spotters have completed their tasks.	
3. The straps and corner plates must be removed from the vehicle/ product.	
4. Subsequently, the product is unloaded from the vehicle and temporarily stored in a staging area.	
5. A put-away team will be assigned the task of storing the received products into locations generated by the system.	
6. Once the vehicle is emptied, the driver or driver assistant will close the tarps, remove the chocks, and proceed to the destination.	

LUBRICANTS OFFLOADING PROCEDURE

Responsible Persons:

- Competent: Bulk Filling Operators, Bulk Filling Line Leader, Bulk Supervisor, Laboratory Technician, Laboratory Manager.
- Awareness: Production Manager, Bulk Manager, LMP Manager, Production Planner, Quality Manager.

Emergency Procedures:

- Report all incidents to the immediate supervisor.

PPE Requirements:

- PVC Gloves: Required
- Safety Glasses: Required
- Hard Hat: Required
- Safety Shoes: Required
- Safety Harness: Required

1. **Weekly Plan & Daily Loading Schedule:**

- Weekly plan sent before the week starts.
- Daily loading schedule provided by Bulk Supervisor.
- Changes indicated by the supervisor.
- HSEQ Risk: Poor loading sequencing.

2. **Truck Inspection:**

- Security inspects trucks upon plant entry.
- Bulk Filling Operator conducts inspection per STL safety guidelines.
- Bulk vehicle must be Patrom Compliant.
- Valid Dekra approval disk must be displayed.
- Trucks lacking Dekra approval are rejected for loading.
- HSEQ Risk: Injuries and potential accidents.

3. **Loading Instructions:**

- Verify loading instructions against the bulk loading plan before starting loading.
- Inspect compartments and outlets for cleanliness and integrity.
- Confirm emergency procedures and check rubber seals.
- Remove old manifold labels and use fall protection equipment.
- HSEQ Risk: Spillages & poor sequencing, loading in low-light conditions after hours, old labels on manifold.

4. **Weighing & Positioning:**

- Weigh the empty truck and direct it to the loading area.
- Stop blocks placed under wheels to prevent rolling.
- Earth bonding cable securely connected to prevent rolling during loading.
- HSEQ Risk: Truck rolling during the loading process.

5. **Line-Up Procedure**:

- Ensure correct valves and hoses used to prevent contamination.
- HSEQ Risk: Product quality compromised.

6. **Connecting Hose:**

- Connect dedicated hose to required tank line and flow bin.
- HSEQ Risk: Spill, ensure flow bin below drain.

7. **Filter Connection:**

- Connect filtration system as per product requirements.
- Ensure correct filter unit selected on FLEX BATCH.
- HSEQ Risk: Product quality compromised, contamination if wrong connection.

8. **Start Pump:**

- Open tank and hose exchange valves.
- Start pump at pump panel.
- HSEQ Risk: Product spill, loading arm injury.

9. **Flushing & Sampling**:

- Pig and flush previous product from line and loading arm.
- Collect in flow bin per premix classifications.
- HSEQ Risk: Compromised product quality, overconsumption if compartments not clean.

10. **Approval & Loading:**

- Stop pump and take samples from loading arm nozzle and truck manifold.
- Flush the line when filling directly from blend vessels.
- Begin loading after sample approval.
- HSEQ Risk: Spills, quality compromised, proper PPE required.

11. **Testing & Re-flushing:**

- Re-flush the line if sample fails and re-test.
- HSEQ Risk: Quality compromised, overconsumption if compartments not clean.

12. **Final Approval:**

- Conduct various tests on the line sample before loading.
- Ensure no leaks and compartments are full.
- HSEQ Risk: Spills, quality compromised.

13. **Final Sampling**:

- Take samples from each compartment for individual testing.
- Create composite samples for final testing.
- HSEQ Risk: Spills, quality compromised.

14. Failed Final Sampling Procedure:

- Flush the line and send a sample to the lab if tests fail.
- Report non-conforming results for corrective action.
- Filling starts after lab approval.
- HSEQ Risk: Spills, quality compromised.

15. After Filling Compartments:

- Take samples supervised by the Laboratory.
- Individual tests conducted on each compartment's sample.
- If any compartment fails, obtain a reflush sample and repeat tests.
- HSEQ Risk: Spills, quality compromised.

16. Issuing Quality Certificate:

- Issue quality certificate and samples.
- Provide documentation to the driver.
- HSEQ Risk: Quality may be compromised if not executed properly.

17. Labelling & Sealing:

- Lab completes DOC026, hands it with analysis certificate and load sample to Operator.
- Operator seals valves, completes SAP Delivery Note, gives copies to driver.
- Compartment labelling must align with BFR, checked by supervisor.
- Driver signs for documents and sample.
- HSEQ Risk: Quality and traceability compromised without correct execution.

18. Retention Samples:

- Laboratory retains sealed composite sample for 6 months.
- Retrieve sample for complaints or queries; seal witnessed by manager.
- Test by Laboratory Manager/Technician.
- HSEQ Risk: Compromised quality, poor traceability.

19. Records:

- Production operator files copies of necessary documents.
- Laboratory files Certificate of Analysis and cleanliness certificate for two years.
- Retention samples kept for six months.

20. Competency & Awareness Statements:

- Employees trained and tested on the procedure.
- Awareness training provided for reporting deviations.

21. Approval:

- Approved by Depot Manager.

Notes

HEALTH & SAFETY
MODULE 10

OVERVIEW

This module highlights health and safety protocols for professional drivers in the petroleum industry. It covers crucial elements like wearing safety belts, limitations on mobile phone use, the significance of personal protective equipment (PPE), maintaining well-being through proper sleep, diet, exercise, and stress management. It also discusses the dangers of drugs and alcohol, as well as the risks associated with driver fatigue. Moreover, it discusses the importance of hygiene, awareness of product characteristics and hazards, and precautions against static electricity.

KEY TAKEAWAYS

1. Safety First:
Safety comes first for petroleum drivers who work in a high-risk environment. If any unsafe conditions are encountered, they should stop work immediately.

2. Safety Belt Usage:
Wearing safety belts is crucial to prevent serious injuries or fatalities in the event of a collision. It's compulsory for drivers and passengers to wear safety belts while the vehicle is in motion.

3. Mobile Phone Usage Restrictions:
Cell phone use is strictly prohibited within operational areas, while operating a vehicle, or during deliveries. Phones must be switched off in loading gantries and remain off until reaching office areas.

4. Personal Protective Equipment (PPE):
PPE is vital for work use only, and any misuse is considered a violation. Drivers must adhere to PPE requirements during loading/offloading, including wearing fire-resistant clothing, oil-resistant rubber gloves, eyewear, hard hats, and appropriate footwear.

5. Health and Wellness:
Professional drivers must care for themselves by getting enough sleep, eating well, exercising regularly, and managing stress. This ensures optimal performance on the road. Furthermore, strict adherence to a zero-tolerance policy regarding drugs and alcohol is essential to maintain safe driving practices.

INTRODUCTION

In our high-risk industry, professional drivers must always uphold integrity and exercise caution. If faced with an unsafe environment or condition, drivers should not hesitate to exercise their authority to stop work and ensure safety.

SAFETY BELT

The use of a safety belt is essential to prevent death and serious injury in the event of a collision. Always wear your safety belt while the vehicle is in motion, this includes the yard and when reversing. All vehicles are equipped with a three-point safety belt. All employees including passengers must make use of the safety belt. All safety belts are fitted with reflective bands for identification of usage. Remember to promptly report any defective safety belts.

MOBILE PHONE

Cell phones may **NOT** be used:

- Within the gantry and operational areas.
- Whilst operating a vehicle.
- Whilst conducting delivery.

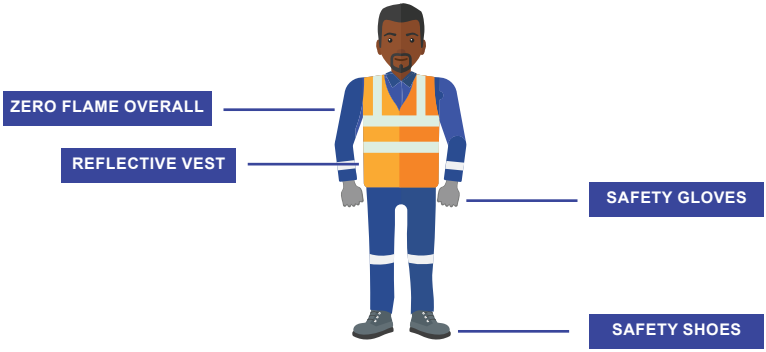
Cell phones must be switched OFF upon entering the Loading gantry and remain off until you reach the office area.

PASSENGERS

No unauthorised passengers are permitted on a company vehicle. Passengers that are in training or conducting observations are. permitted with permission of management.

PERSONAL PROTECTIVE EQUIPMENT

The minimum requirement for Personal Protective Equipment when working with petroleum products is: Zero Flame Overall, Reflective Vest, safety shoes and gloves.



This equipment is for work use only, and any misuse will be considered a violation of the OHS Act, which may lead to prosecution. It is the professional driver's responsibility to keep their PPE clean and in good condition.

During loading or offloading, professional drivers must always comply with the PPE requirements.

Wear only clothing made of 100% cotton or cotton blended materials. Fire resistant clothing provides the best protection. Clothing made of 100% synthetic or nylon materials (snow suits) must be avoided due to static electricity risks.

Wear oil resistant rubber gloves, approved eyewear, hard hats, footwear, and fire-resistant clothing that covers both arms and legs.

For petroleum products, additional specified equipment includes an eye wash bottle, which can be found in your vehicle's first aid kit.

If an eye wash bottle seal is broken or is out of date (see the label on the bottle) it must not be used. When eye wash bottle has been partly used the remainder must be discarded and a new bottle obtained from the PPE Store.

HEALTH & SAFETY

HEALTH

The most important ways to maintain your health and excel in your job are to:

- Get enough sleep.
- Eat a well-balanced diet.
- Exercise regularly.
- Try to relieve stress

ENOUGH SLEEP

The amount of sleep needed varies from person to person, with some requiring more rest than others. It's important to prioritise nighttime sleep over daytime naps, as it's more beneficial for your overall well-being. Aim for a regular night's sleep of seven to eight hours to effectively manage driver fatigue.

DIET & EXCERCISE

Staying fit and healthy for your job is crucial; maintaining your weight within an acceptable range is important. Eating the right foods and exercising regularly are key to achieving this goal.

TRY TO RELIEVE STRESS

Stress can significantly impact your driving ability. If you're experiencing challenges either at home or work, your risk of being involved in an accident increases. Consulting with your doctor will help you find suitable support.

DRUGS & ALCOHOL

It is illegal to drive while under the influence of alcohol or drugs, including some over the counter and prescription medication.

EFFECTS OF ALCOHOL ON DRIVING

Alcohol, being a depressant, impairs your ability to drive safely in several ways:

- Slows brain functions so that you can't respond to situations, make decisions, or react quickly.
- Reduces your ability to judge speed and distance.
- Gives you false confidence that leads to taking risks.
- Makes it hard to do more than one thing at a time.
- Affects your sense of balance and coordination.
- Makes you sleepy.

After a night of heavy drinking, it can take over 18 hours for your blood alcohol concentration (BAC) level to return to zero. Consequently, many individuals are fined for drunk driving the following day, unaware that alcohol can still impair their driving ability long after they stop drinking.

WHAT DOES **NOT** MAKE YOU SOBER:

BLACK COFFEE

FRESH AIR

VOMITING

A SHORT NAP

COLD SHOWER

MILK

MINTS OR GUM

ENERGY DRINKS

THESE ACTIONS HAVE NO EFFECT ON YOUR BLOOD ALCOHOL LEVEL

DRIVER FATIGUE

Driver fatigue is one of the biggest causes of vehicle accidents for heavy vehicle drivers. Many of these accidents occur late at night or early in the morning.

As a professional driver, it's crucial to recognise the factors that cause fatigue and be vigilant for early warning signs. This awareness allows you to act before fatigue impairs your driving ability.

FATIGUE IS CAUSED BY A NUMBER OF FACTORS INCLUDING:

SLEEP FACTORS

- Getting insufficient sleep.
- Consistantly getting less sleep than required over several days.
- Attempting to sleep during the daytime.

TIME OF DAY FACTORS

- Working when you should normally be asleep.
- Working in the early hours of the morning.
- Working in the early afternoon after a heavy lunch.
- Sleeping during the day when you would normally be awake.

WORK FACTORS

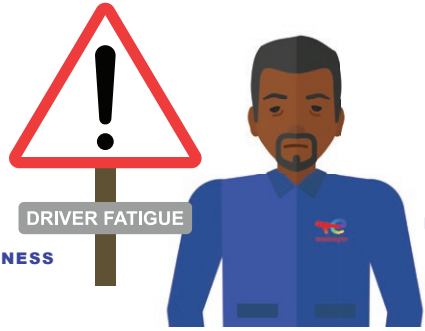
- Long driving hours.
- Nighttime driving.
- Irregular hours and early starting times.
- Tight scheduling.
- Insufficient time to recover from previous work.
- Engaging in physical tasks unrelated to driving such as loading and unloading.
- Poor driving conditions such as hot or wet weather.

PHYSICAL FACTORS

- Poor health and fitness.
- Emotional issues.
- Medical sleep problems.

DRIVER FATIGUE

MOODINESS
LOW MOTIVATION
SLEEPINESS
POOR JUDGMENT
YAWNING
DIZZINESS
ATTENTIONAL BLINDNESS



APPETITE LOSS
MUSCLE PAIN
RUBBING YOUR EYES
DELAYED RESPONSES
MUSCLE WEAKNESS
POOR CONCENTRATION
HEADACHE

TIPS TO MANAGE FATIGUE:

- Rest and sleep are crucial for combating fatigue. Ensure you have a restful night's sleep before embarking on your trip, and consider taking an afternoon nap before beginning a night shift. Additionally, take breaks early in your journey to prevent fatigue from setting in.
- Plan your trip ahead of time to allow for rest breaks.
- Plan your rest breaks before you begin feeling fatigued, or decide on stopping points if fatigue sets in. If possible, schedule rest breaks during times when your body naturally signals sleepiness (such as afternoon, night, or early morning) as these are periods when fatigue is more likely to occur.
- Try and have a regular sleep and waking schedule on every day of the week.
- Be aware of the causes and effects of fatigue and recognise the early warning signs.
- Make sure you stop and rest as soon as possible when you realise you are becoming fatigued. Do not try and push on, especially in those 'body clock' danger times of night/early morning and afternoon.

HYGIENE

Everyone is a potential carrier of pathogenic bacteria – in the hair, on the skin, in the nose, throat and mouth, and in the intestines / bowels. This is why personal hygiene is so important.

Management must facilitate good hygiene by providing adequate facilities to store personal clothing, clean uniforms, soap, water, hand towels for washing up and where required disposable gloves.

- The importance of personal hygiene in the oil industry cannot be over emphasised and it is up to everyone to ensure that they follow simple rules to protect their own health.
- Long term exposure to hydrocarbon oils coupled with poor personal hygiene can cause various ailments and skin conditions such as dermatitis, eczema, and psoriasis and skin cancer.
- To protect against such problems, it is important to wear protective clothing.
- Gloves are a critical part of your PPE clothing. Gloves should always be worn when handling hoses, loading arms, or other items that may be contaminated with fuel. If the insides of the gloves become contaminated with fuel, they should be discarded, and a new pair obtained.
- If your clothes become soaked with fuel, it's important to remove them as soon as possible and wash thoroughly before putting on fresh clothing.
- Avoid carrying clothing contaminated with fuel in the cab, as the warm environment could lead to the formation of fumes, potentially creating a flammable atmosphere. Instead, place the contaminated clothing in your spill kit bag and promptly return it to the PPE store for disposal.
- It is essential to keep cabs clean and ensure that rubbish and oily rags do not accumulate inside.
- Always wear your protective overalls whilst working and ensure that they are regularly washed to remove traces of fuel.
- Before and after using the ablution facility, it's important to wash your hands.
- Wash your hands after handling fuel and always before eating or drinking.

PRODUCT CHARACTERISTICS & HAZARDS

Petroleum products in general are solvents and are stored in a liquid state. Under many conditions these products also produce vapours which when exposed to the air and a source of ignition will burn.

Furthermore, prolonged exposure to liquid petroleum or inhalation of its vapors can pose health risks. Therefore, it's crucial for anyone handling petroleum products to be knowledgeable about their properties and the associated hazards.

PETROLEUM LIQUIDS:

As petroleum products act as solvents, contact with the skin can lead to skin irritation and increase the risk of skin diseases like dermatitis. It's important to adopt good work practices, including the use of Personal Protective Equipment, to safeguard against these risks. Most products handled by professional drivers are highly volatile and pose potential dangers. However, these risks can be minimized to the utmost degree through proper handling and the utmost respect for their hazardous nature.

PRODUCT FIRST AID

If the product comes into contact with the skin, thoroughly wash with soap and water. If it comes into contact with the face, avoid rubbing the eyes. Instead, immediately flush the eyes with a generous amount of water for at least 10 minutes.

Toxicity from hydrocarbon ingestion can affect many different organs, but the lungs are the most affected organ. The chemical properties of the individual hydrocarbon determine the specific toxicity, while the dose and route of ingestion affect which organs are exposed to the toxicity. If product is spilled on clothing: Avoid all sources of ignition. Remove clothing and rinse contaminated clothing with water before washing.

VAPOUR EXPOSURE

If someone is affected by exposure to petroleum vapors, immediately move them to an area with fresh air. If they experience difficulty breathing, a sore throat, coughing, etc., seek medical assistance promptly. If the person stops breathing, administer emergency first aid such as CPR if qualified, and ensure they receive medical attention without delay.

EXPOSURE to petrol vapour in confined or poorly ventilated areas may cause rapid onset of unconsciousness.

INHALATION may cause dizziness, excitement, and lack of coordination.

INGESTION may cause nausea, vomiting and diarrhea.

PETROL VAPOUR may be irritating to the eyes and respiratory system.

IMPORTANT

Before loading any petroleum products, drivers should familiarise themselves with the location of safety showers and eyewash stations.

Fuel vapour can ignite when it combines with the appropriate air-to-fuel ratio and encounters an ignition source.

STATIC ELECTRICITY

Static Electricity is the electrical charge produced on two dissimilar materials (unlike charges) through physical contact and separation. It's created when there is contact and separation of two unlike materials, especially when one of them is a poor conductor.

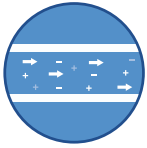
FOUR ELEMENTS MUST BE PRESENT FOR STATIC ELECTRICITY TO PRESENT A HAZARD:

- A means of generating the static charge.
- A mechanism for static to accumulate.
- A spark gap (for the static to discharge).
- A flammable vapour/air mixture.

STATIC ELECTRICITY - ORIGINS: THE FRICTION

TYRE ON BITUMEN

AIR ON THE BODY WORK



LIQUID IN THE PIPING

LIQUID IN THE AIR

STATIC ELECTRICITY

FRICTION ON THE TRUCK:

Friction between the vehicle's bodywork and the air generates static electricity, which cannot dissipate to the ground due to the insulating properties of the tires. Therefore, the vehicle needs to discharge its static charges upon arrival at the loading or service station.

LOADING:

Prior to loading, grounding (earthing) is established by connecting a cable between the loading station and the vehicle. This cable allows for the dissipation of static electricity.

DELIVERY:

Grounding is conducted via the hose at delivery. The hose is firstly connected to the fuel tanker, then, when the other end of the hose is in contact with the offloading outlet (cap in position), the connection is conducted. If an electrical discontinuity occurs on the delivery hose, continuity must be restored promptly by using a conductor cable. Additionally, the hose should be replaced without delay.

CONTACT WITH PLASTICS:

Contact with objects made of plastics is source of electro-static discharge. Contact with objects made with plastics or synthetic fibres must be avoided during loading, unloading in the safety zone.

RELAXATION TIME:

Relaxation time refers to the duration it takes for a charge to dissipate. It's recommended to allow at least 5 minutes for the charge to dissipate effectively.

IMPORTANT

To release any static charge on your body, touch your bare hand on metal. Similarly, touch metal on the vehicle to release the static charges.

Notes

VEHICLE WEIGHTS

MODULE 11

OVERVIEW

This module explains vehicle weights and the transportation of dangerous goods. It includes details on axle weights and Gross Vehicle Mass (GVM) for various vehicle types like single and double diffs, interlinks, and rigid drawbars. Furthermore, it categorises dangerous goods according to their hazards, such as mass explosion hazards, fire hazards, and toxic gases, and offers examples for each category.

KEY TAKEAWAYS

1. Vehicle Weight Limits:
Understand the maximum axle weights and gross vehicle mass or GVM for different types of vehicles to ensure compliance with regulations and safe transportation practices.

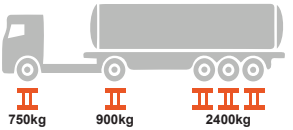
2. Classification of Dangerous Goods:
Drivers must familiarise themselves with the section that outlines various classes of dangerous goods, including flammable gases, toxic gases, flammable liquids, flammable solids, and spontaneously combustible materials. This highlights the importance of safely handling them to minimise risks.

3. The transportation of dangerous goods:
This section explains the various hazards associated with transporting such items, including mass explosion hazards, projection hazards, fire hazards, and toxicity levels. It aims to implement appropriate safety measures and protocols to mitigate these risks.

4. Safety Documentation Process:
This content highlights the importance of SANS color coding and regulated tagging for bulk petroleum products. It emphasises the use of colours, ID collars, and written names to accurately identify products. A sample table illustrates these standards, stressing the need for careful tank identification to prevent errors.

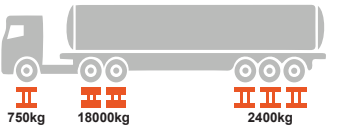
AXLE WEIGHTS AND GVM WHEN LOADED

SINGLE DIFF WITH 3 AXLE



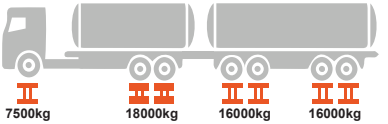
GVM: 40 000 kg

DOUBLE DIFF WITH 3 AXLE



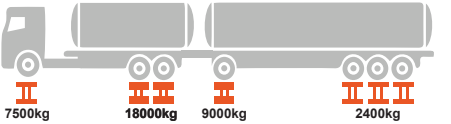
GVM: 49 000 kg

INTER-LINK



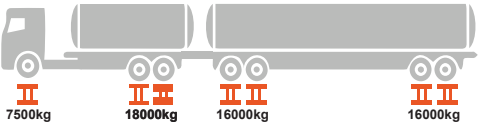
GVM: 54 000 KG

RIGID-DRAWBAR



GVM: 56 000 kg

RIGID-DRAWBAR



GVM: 56 000 KG

Notes

COMPATIBILITY CHART
MODULE 12

TRANSPORTATION OF DANGEROUS GOODS

1.1 1.2 1.3 1.4 1.5 1.6		Mass explosion hazards Projection hazards Fire hazards No significant hazards Very insensitive Extremely insensitive	Dynamite, TNT Bombs and grenades Sodium pycramate Shotgun cartridges Blasting gel
2.1		Flammable gases	Acetylene, Butane, Calor, Aerosols, Hydrogen, LPG, Methane, Propane.
2.2		Non-flammable, non-toxic gases (Dangerous because they are compressed or harmful for other reasons. E.g. Deprive the air of oxygen)	Argon, Carbon dioxide, Helium, Oxygen
2.3		Toxic gases (So poisonous or corrosive that they are known to be extremely dangerous to life)	Ammonia, Chlorine, Carbon monoxide, Hydrogen chloride, Phosgene, Sulphur dioxide
3		Flammable liquids (Ignite easily with a flash point of 60,5 degrees or less) More than 80% of dangerous goods transported belong to Class 3	Acetone, Benzene, Diesel, Ethanol (alcohol), Petrol, Tar, Toluene, Methylated spirits, Paraffin, Turpentine
4.1		Flammable solids (Easily lit by spark or flame or which burn readily or which can catch fire through friction)	Camphor, Matches, Naphthalene, Red phosphorous, Scrap rubber, Sulphur, Wax polish
4.2		Spontaneously combustible (Liquids or solids which generate their own heat and which will self-ignite when exposed to air)	Activated carbon, Cotton waste, Fishmeal, Maneb, Metal shavings, Oil / seed cake, Sodium sulphide, White phosphorous

COMPATIBILITY CHART

Appendix C: Chemical Compatibility Chart

DANGEROUS GOODS & COMBUSTIBLE LIQUIDS STORAGE COMPATIBILITY CHART

Class or Subsidiary Risk													
FLAMMABLE GASES		OK TO STORE TOGETHER	OK TO STORE TOGETHER	SEGREGATE At least 3m	SEGREGATE At least 3m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 3m	ISOLATE	SEGREGATE At least 3m	SEGREGATE At least 5m
NON TOXIC NON FLAMMABLE GASES		OK TO STORE TOGETHER	OK TO STORE TOGETHER	OK TO STORE TOGETHER	OK TO STORE TOGETHER	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 3m	ISOLATE	SEGREGATE At least 3m	SEGREGATE At least 5m
TOXIC GAS		SEGREGATE At least 3m	OK TO STORE TOGETHER	MAY NOT BE COMPATIBLE CHECK MSDS AND NOTES	SEGREGATE At least 3m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 3m	ISOLATE	SEGREGATE At least 3m	SEGREGATE At least 5m
OXIDIZING GAS		SEGREGATE At least 3m	OK TO STORE TOGETHER	SEGREGATE At least 3m	OK TO STORE TOGETHER	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 3m	ISOLATE	SEGREGATE At least 3m	SEGREGATE At least 5m
FLAMMABLE LIQUIDS + COMBUSTIBLE LIQUIDS		SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	OK TO STORE TOGETHER	SEGREGATE At least 3m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	ISOLATE	SEGREGATE At least 5m	SEGREGATE At least 3m
FLAMMABLE SOLID		SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 3m	OK TO STORE TOGETHER	SEGREGATE At least 3m	SEGREGATE At least 5m	SEGREGATE At least 3m	ISOLATE	SEGREGATE At least 3m	MAY NOT BE COMPATIBLE CHECK MSDS AND NOTES
SPONTANEOUSLY COMBUSTIBLE		SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 3m	OK TO STORE TOGETHER	SEGREGATE At least 5m	SEGREGATE At least 5m	ISOLATE	SEGREGATE At least 3m	SEGREGATE At least 3m
DANGEROUS WHEN WET		SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	SEGREGATE At least 5m	OK TO STORE TOGETHER	SEGREGATE At least 5m	ISOLATE	SEGREGATE At least 3m	SEGREGATE At least 5m
OXIDIZING AGENT		SEGREGATE At least 3m	SEGREGATE At least 3m	SEGREGATE At least 3m	SEGREGATE At least 3m	SEGREGATE At least 5m	KEEP APART	SEGREGATE At least 5m	SEGREGATE At least 5m	MAY NOT BE COMPATIBLE CHECK MSDS AND NOTES	ISOLATE	SEGREGATE At least 3m	SEGREGATE At least 3m
ORGANIC PEROXIDE		ISOLATE	ISOLATE	ISOLATE	ISOLATE	ISOLATE	ISOLATE	ISOLATE	ISOLATE	ISOLATE	OK TO STORE TOGETHER	ISOLATE	SEGREGATE At least 3m

TRANSPORTATION OF DANGEROUS GOODS

4.3		Dangerous when wet substances (On contact with water may catch fire by themselves or emit flammable or toxic gases)	Aluminium phosphide, Calcium carbide, Lithium, Magnesium powder, Sodium, Zinc dust
5.1		Oxidizers (Not necessarily flammable in themselves, they can produce large amounts of oxygen increasing the risk and intensity of fire in other metals)	Ammonium nitrate, Calcium hypochlorite (HTH), Hydrogen peroxide bleach, Lead nitrate
5.2		Organic peroxides (Sensitive to heat, are thermally unstable and generate large amounts of heat as they break down)	Benzoyl peroxide used in acne creams and hair dye, Di-tert-butyl peroxide used to innate polymerization of ethylene, styrene and vinyl chloride
6.1		Toxic substances (Cause illness or death if swallowed, inhaled or if absorbed by the skin) Nearly all emit poisonous gases in a fire	Arsenic, cadmium oxide, Cadmium chloride, Creosote, Cyanides, Phenol, Some pesticides
6.2		Infectious substances (Contain bacteria, viruses, parasites and fungi which cause disease in humans and animals)	Medical waste, Pathological specimens, Ebola virus
7		Radioactive materials (Comprising highly penetrative gamma rays, beta particles which can penetrate skin and alpha particles not hazardous unless swallowed or absorbed through a wound)	Type A medical medication, Nuclear fuel, Cobalt, Radium, Uranium, Plutonium

8		Corrosives (Acids and caustic substances in liquid or solid form which chemically eat away a substance and severely damage living tissue) Leakage can also damage other cargo and react with metals used in the construction of vehicles	Acid filled batteries, Hydrochloric acid (spirits of salts and pool acid), Sulphuric acid, Quicklime, Iodine, Lye, Potash, Sodium hydroxide (caustic soda drain cleaner), Soldering flux
9		Miscellaneous (Goods which present a danger but cannot be classified in any of the other classes) They include environmentally hazardous substances	Air bag inflators or modules, Asbestos, Lithium batteries, Expandable polystyrene beads

Notes

PROCESS SAFETY
MODULE 13

SANS 1091
COLOUR CODING

SANS color coding and standardized tagging are essential for accurately identifying bulk petroleum products. Drivers and operators must ensure correct tank connections by checking labels and collars to maintain safety.

SAMPLE STANDARD HOW PRODUCT TAG COLOURS & SYMBOLS ARE DONE IN THE INSDUTRY:

Three components make up a standard product tag:

- Colours –
- ID collars
- Written Names – each product tag has the name of the product written on it – e.g. “LRP”, “Diesel50”, ULP 95”.

Table below is just a **SAMPLE** and does **NOT** cover **ALL** products on the market nor limited to listed products.

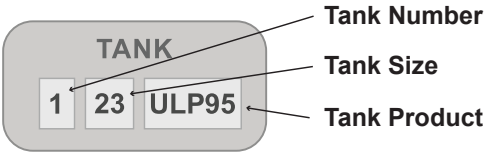
PRODUCT IDENTIFICATION SYSTEM FOR TERMINALS/ DEPOTS IN SOUTH AFRICA

YEAR 2006 PRODUCT	PRODUCT COLOURS	IDENTIFICATION MARKING	SANS COLOUR NUMBER	BANDED OR ENTIRE PIPELINE
LRP 95	Red		A14	Banded
95 ULP	Green		H41	Banded
LRP 93	Orange		B25	Banded
93 ULP***	Yellow		H41 / C61 / H41	Banded
91 ULP***	Yellow		H41 / White / H41	Banded
Diesel 500	Straw		B33	Banded

Diesel 50	Straw		B33 / F06 / B33	Banded
Water White	Water White		F29	Banded
			A08	Banded
			B13 / E22 / B13	Banded
			E14 / White / E14	Banded
			F29	Entire Line
			C61	Entire Line
			A11	Entire Line

TANK IDENTIFICATION

Always check the tank label and the tank collar to ensure you have connected to the correct tank.



PROFESSIONAL DRIVER MANUAL

DOCUMENT CONTROL:

DESIGNATION		SIGNATURE	DATE
Tshepo Moswete	Compiled/Author		
Takshica Naidoo	Validated		
Nohlanhla Bhengu **Thapelo Lesomo**	Approver		
Cammon Mathebula **Simnikiwe Gudla**	Contributors		

NAME	DESIGNATION	TRAINING DATE	EXPIRY DATE

NAME	DESIGNATION	TRAINING DATE	EXPIRY DATE

NAME	DESIGNATION	TRAINING DATE	EXPIRY DATE

DELEGATE ACKNOWLEDGEMENT