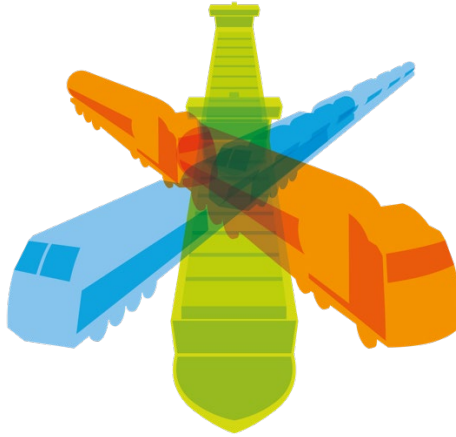




Loading and unloading a tank

Procedure

During loading and unloading, things regularly go wrong, sometimes with serious consequences. A successful operation depends on the driver's knowledge, experience and commitment.

Before loading:

- Always wear the prescribed PPE.
- Always wear a high-visibility vest after leaving the cab.
- Report to the gatehouse. Provide the loading references and make sure that you are at the correct address.
- Follow the instructions of the on-site personnel regarding signs, weighing and sampling.
- Break the seal only when instructed and in the presence of the loader.
- Ensure that the vehicle is positioned correctly on the weighbridge and that weighing in and out is performed in the same way.
- Make sure that you are positioned beneath the correct loading pipe. Always have this checked by a member of staff and, if necessary, verified on the CMR.
- Check that the tank is 100% clean and dry, unless the customer's requirements permit a different loading condition.
- Load without cleaning only when instructed by Planning, for example for dedicated transport or a comparable product.
- If the tank is contaminated, do not load. Consult Planning.
- Ensure that everything on the tank is closed, except the air line when bottom loading.
- Know the capacity of the various compartments. This is stated on the tank or tank container.



Important: prevent items such as pens, mobile phones or Bluetooth earpieces from falling into the tank during inspection or loading. This prevents physical contamination. Never carry loose items in your pockets.

- When working on the tank, always raise the handrail. If work at height cannot be performed safely, contact Planning immediately.
- Always use fall protection.
- Check all spill trays to ensure that all valves are closed and all clamps are properly tightened.
- Determine whether a heated product will be loaded, as the tank often needs to be preheated. Always state the product temperature on the CMR.

Checklist voor belading:

- Loading checklist:
- Outlet closed.
- Sampling valve closed.
- Air line closed for top loading.
- Always: bottom valve closed and checked.
- All tank connections closed, including vacuum valves, CIP connections and sampling valve, and checked.

During loading



Bottom loading



Top loading

- Keep windows and door from the truck closed.
- After loading:

Close the manhole covers. Also check the covers of compartments that were not loaded.

- Close the air line.



Check for defects, leakages and cracks in the chassis, and confirm that no equipment is missing.

- For ADR: display the instructions in writing behind the windscreen, fit the Kemler plates with the UN and hazard identification numbers, and apply the required labels.
- Documents and other items that may accompany the load:
 - CMR, completed by the driver if necessary.
 - Certificate of Analysis or Certificate of Quality (COA/COQ).
 - Delivery note or Lieferschein.
 - Customs documents.
 - Samples in the outlet box, not in the document box.
 - ADR instructions in writing and other documents.
 - Documenten en andere zaken die met de vracht mee kunnen gaan.
 - Spill:
 - Product may be spilled during loading or unloading. Always take responsibility and clean up the spilled product. If the spill is substantial, report it to both the site and your planner.
 - When coupling a loaded unit, always check for spills. Wet mudguards are a good indication. Wet drains may indicate a recent leak from a manhole-cover gasket. Do not drive and report this immediately to your planner.
 - Customs forms.
 - Samples in the outletbox, not in the documents box!
 - ADR: hazard card and other documents.

Spill:

Before unloading:

If uncertainties or doubts about the transport documents are identified before unloading, they must be resolved before unloading starts.

Proceed as follows:



From that moment, act only in consultation with and after approval from your planner.



All communication with the customer about this issue must take place only through the responsible commercial manager and, where applicable, the consignor.

Planning must instruct the driver to wait before unloading until:

the original transport documents have been located; or

- the transport documents have been replaced and signed directly by the principal or consignor, clearly stating what was loaded and in which compartment.
- Planning or the principal will ask the recipient to sample the load and inspect the samples with extra care. Unloading may begin only after written approval by the recipient on the CMR and approval by the principal.
- The instruction to unload is issued to the driver only through the Van den Bosch planner.
- Unloading under any other circumstances or on the instructions of third parties is strictly prohibited.
- Follow the instructions of on-site personnel regarding weighing and sampling.
 - Product sampling is the customer's responsibility. At the customer's request, the driver may take a sample, but this must be reported to the planner and stated on the CMR. There is a real risk that the sample jar may fall into the tank!
 - Check that the vehicle is positioned correctly on the weighbridge, both full and empty.
- Also check that the weight corresponds with the previous customer's weigh-out weight. A small difference due to fuel consumption is normal. This check helps prevent problems caused by weight discrepancies.
- Wear all required PPE and follow the customer's instructions.



- Never remove seals yourself. Remove them only on the recipient's instructions and in the recipient's presence.
- For temperature-sensitive products, always record the product temperature on the CMR. See the Correct Use and Completion of a CMR procedure.
 - Ask the person assigning the unloading point to record the exact silo or tank number on the CMR and sign it. If nobody is available or willing to sign, contact your planner. Waiting costs less than unloading into the wrong tank.
- Check that the vehicle is positioned correctly on the weighbridge, both full and empty.
- Also check that the weight corresponds with the previous customer's weigh-out weight. A small difference due to fuel consumption is normal. This helps prevent problems caused by weight discrepancies.
- Always wear PPE, follow customers instructions.
- Never remove seals yourself. Remove them only on the recipient's instructions and in the recipient's presence.
- Always record producttemperature in case of temperature sensitive products on the CMR.
- Unloading:

Unloading – supervisor hereby orders to unload the above mentioned product in:

SILO: **SIGNATURE:**

Unloading – supervisor hereby signs for giving the order to unload the product in the above mentioned silo and also accounts for giving the driver an instruction which is clear and is not liable for more than one interpretation.

Unloading with a pump

Unloading under pressure

- Unloading with pressure and a pump
- Unloading with a pump
- Gravity discharge (Liquid Chemical only):
- Set the truck air suspension to its highest position and fully lower the trailer or chassis air suspension.

Never rest the manhole cover on the clamps. Open it while keeping one clamp attached.

- Check hoses, gaskets and couplings.
- Connect the discharge hose.
- Open the bottom valve, if fitted.
- Open the butterfly valve slowly and check for leakages.



Unloading with a pump:

Two options:

1. Unloading with the customer's pump

- This requires cooperation between the customer and driver. The customer will usually operate the pump and the driver must follow the customer's instructions.



2. Unloading with the loading unit's pump

The condition and operation of the equipment must be checked before, during and after cleaning. If another driver cleaned and loaded the container, carry out a thorough inspection after breaking the seal at the unloading address.

- **Never trust anything or anyone!**
- Check the hydraulic-reservoir oil level before starting. Depending on the equipment, use the dipstick attached to the filler cap or the sight glass.



- Check that the electric motor works by connecting it to the 380 V power supply and ensure that the main switch is set to "on".
- Check that all pump accessories are present, including hoses and couplings, and inspect their condition. Gaskets must be intact, clean and dry, and hoses must be undamaged.
- Check that the gasket is present in the pump cover and that the pump rotors are undamaged.



- Know the pump's direction of rotation. The upper pump rotor must always rotate towards the customer's tank. If the direction is incorrect, product may be drawn from the customer's tank into your own tank. The direction of the upper rotor shaft can often be seen through the side grille.



If necessary, mark the control with a pen so that you know which way to move the pump-control lever for the correct direction of rotation.



- Connect the discharge hoses.
- Ensure that the air line is open: product out, air in!
- Open a manhole cover only on the customer's instructions.
- Open the bottom valve, if fitted.
- Open the butterfly valve slowly and check for leakages.



- Switch on the pump and continue checking for leakages. Vibration may cause leakage during unloading and the pump may also leak internally. Report this immediately to your planner.



- Check that the air line is drawing air to confirm that the direction of rotation is correct.
- Check that the air line is drawing air to confirm that the direction of rotation is correct.
- When the tank is almost empty, the discharge hoses become lighter and a slurping sound may be audible.
- Lift the hoses so that as much product as possible flows towards the customer's tank. Ensure that the couplings do not come loose.
- Ensure that the customer closes the receiving tank.
- Disconnect the discharge hose from the customer's tank and prevent spillage by placing a drip tray underneath and/or lifting the hose.
- Reverse the pump direction and pump as much remaining product as possible from the discharge hoses and pump back into your own tank. Guide the hoses. Do not run the pump dry for too long.
- Stop the pump.
- Close the bottom valve and butterfly valve.
- Disconnect the hoses and extension pipe and collect any remaining product in a drip tray.
- Fit the blanking caps.
- Also cap the pump to prevent spills during transport.
- Prepare the loading unit for transport again.

Unloading under pressure:

- Agree with the customer on the unloading method and progress.
- Using the correct tools, check that all tank connections are closed except the air line.
- Raise the truck air suspension.



- Lower the chassis air suspension.
- Open the air line.
- Connect the compressor hose.
- Leave the compressor vent valve open so that pressure cannot build up while starting the compressor from the cab. If the air line was not opened, this prevents an unsafe pressure build-up.
- At some unloading locations, factory air or nitrogen must be used. If prescribed, its use is mandatory.
- Check hoses, gaskets and couplings.
- Connect the discharge hose.
- Open the bottom valve, if fitted.
- Always ask yourself two questions:
 - Is the customer ready to unload?
 - What is the maximum permitted unloading pressure? The customer determines this.
- **Pressurise the tank! If you do not, product from the customer's tank may flow back and equalise into your tank.**
- Check for air leaks and monitor the pressure gauge.
- Open the butterfly valve slowly and continue checking for leakages.
- Important: some companies use nitrogen instead of air. Ask whether this applies. If in doubt, contact Planning.

Unloading with a tipping chassis



- Ensure sufficient space for tipping, both above and behind the tank.
- Do not tip immediately. Start unloading first and tip only when the tank is largely empty.



- Never drive with a tipped tank container. The tipping cylinder can support a full tank only while stationary; driving may overload and break it.
- Connect the tipping cable to the truck's NATO socket. Do not leave the cable hanging, as this may cause electrical contact resistance.
- During unloading
Remain with the vehicle throughout unloading so that you can intervene if something goes wrong.



If something goes wrong, immediately close the bottom valve by pulling the emergency cable, if fitted. Close the butterfly valve if there is no bottom valve.



- Do not tip the tank immediately. Start unloading first and tip the tank only when it is largely empty.
- Never drive with a tipped tank container. The tipping cylinder can support the weight of a full tank only while the vehicle is stationary. Driving may place excessive force on the cylinder and cause it to fail.

Important: never enter a tank container that is pressurised!

First release all pressure through the air line.

- Ensure that the customer is aware of the leakage and that you have permission to access the top of the tank container.
- Always use the handrail and wear the correct PPE.

First loosen the manhole-cover clamps without removing them.



- **Important: never enter a tank container that is pressurised!**
- First release all pressure through the air line.
- Ensure that the customer is aware of the leakage and that you have permission to access the top of the tank container.
- Always use the handrail and wear the correct PPE.
- First loosen the manhole-cover clamps without removing them.
- Check whether pressure remains by moving the manhole cover up and down.
- Remove the clamps and open the manhole cover.
- Correct the problem by positioning the gasket correctly or replacing it.
- **Important: the problem cannot be solved by hammering the clamps!**



- Close the manhole cover.
- Lower the handrail.
- Restart the unloading process.
- Empty the tank as completely as possible by allowing the remaining product time to flow towards the butterfly valve. Use the tank pressure, but do not allow it to rise too high. Product viscosity determines how long to wait and how often to repeat this procedure.



After unloading:

Depending on the customer's instructions:

- Open the butterfly valve slightly to blow the hoses empty. Lift the lowest point of the hose and move the product towards the customer.
- Close the valve at the customer's installation.
- Close the tank-container bottom valve, if fitted, and then close the butterfly valve.
- Stop the compressor.
- Release all pressure before disconnecting anything.
- Close the air line before disconnecting the compressor hose.
- Disconnect hoses only after all pressure has been released. Use a drip tray where possible.
- Fit blanking caps to the ends of the discharge hose.
- Store the discharge hoses in the hose tubes.
- Clean up any spilled product.
- Close the customs covers with the rubber fasteners to prevent rattling.
- Fit the blanking caps to the air line.
- Check out, weigh out and check the transport documents.
- For dedicated transport, reseal the unit.
- After unloading with nitrogen, always seal with yellow nitrogen seals (N₂).

Important: after transporting sweeteners such as glucose, ensure that all manhole covers, valves, hose tubes and other openings are closed. If not closed properly, large numbers of insects may enter the tank lines and hoses, causing contamination or rejection of the load.