Basic requirements for drivers equipment, AC equipment, working procedures and applied internal rules in warehouses of ČEPRO, a.s.

(their observance is checked in the warehouses to ensure compliance with general security measures in warehouses, use of approved working procedures and fulfillment of obligations of the sender under ADR rules, and in case of violation, Sanction rules applies to violating persons and companies)

- Drivers - required PPE (Personal Protective Equipment)
  - Protective shoes in antistatic design,
  - Antistatic protective clothing without apparent damage and properly fastened,
  - Protective helmet in antistatic design
  - Eye protection - ČSN EN 166 and hand (when connecting, disconnecting and operating the filling arms and AC. When operating ACCULOAD eye and hand protection is not required, eye protection is also not required when connecting the grounding cable)
  - AC DRIVERS MAY NOT CHANGE IN THE WAREHOUSE AREA!


AC (Tank Truck) driver - ready for filling

PPE label

PPE label


Chemical resistant gloves

- Technical condition of the Tank Truck (AC)
  - Examples of the technical condition of trailers and tanks (semi-trailer or trailer) that do not allow safe AC (tank truck) filling and therefore such tank trucks will not be filled until the issues are remedied:
    - Obvious and visible damage to vehicles (wiring, obviously broken cables, lighting, in particular broken glass of lights, damaged fittings and defects or cracks on the tank)
    - Tank is deformed (for example after a vehicle accident)
    - Obvious leaks of operating fluids and other fluids
    - Apparent air leak, which would subsequently require the vehicle's engine to start during filling to “re-fill” the air in the vehicle system
    - Defects in the starter or in the vehicle battery, unreliability of the engine starting
    - Defects in tank equipment
    - Defects in ADR equipment
    - Defects in safety and ADR marking
    - Blocking of the interlock button on the recovery safety valve is not permitted in any way
    - Blocking safety switches of technological boxes (so-called roll valves) is inadmissible in any way.

- Examples of correct AC safety markings
  - The markings shall be visible, clean, legible, undamaged, and set at the departure of the warehouse on the corresponding transported product (KEMLER code / UN number, fish marking, diamond ...)

Diesel fuel

Gasoline

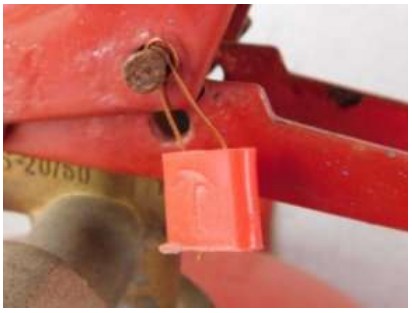
JET A1

Flammable liquid


Harmful to the environment

- Portable fire extinguishers (PHP) - mandatory equipment of tank trucks (AC)
  - are checked: validity check / revision, seal, PHP pressure

Fire extinguisher label


Intact seal


Pressure indicator

  - if the PHP bears an intact seal of a duly certified inspection technician, it is checked through a sight glass that the PHP is available inside the box
  - sealed PHP storage box without sight glass
    - a PHP check will be performed as described above
    - if the storage box is equipped with the inspection technician's seal (see the picture above), the driver will submit accompanying documentation to PHP
- number of PHPs, their operability and the amount of extinguishing agent must comply with ADR requirements

Inspection of boxes and drain valves

  - SLUDGE DRIPPING VALVES MUST BE CLOSED PERMANENTLY!

- It is checked whether there is "something that should not be there" in the boxes, in particular:
  - plastics not-certified for contact or use with fuels
  - sparkling materials
  - canisters
  - wheel chocks, tools, pressure bottles - PB...,

Storage of spare wheel and hose by the manufacturer

- AC (tank truck) grounding, earthing system

- It is necessary to observe the correct chronology (sequence) of the ground connection
- Grounding is always the first to be connected to the loading platform!
    1. Tank truck (AC) connection - earthing drum, cable clamp connection
    2. Connection to the earthing point of VL technology structure
- AC grounding and earthing points and correct marking is checked
    - the correct way to ground a tank truck (AC) is:
        - AC grounding drum → marked grounding point of the footbridge grounding point
        - marked grounding point of the tank truck → cable → marked footbridge grounding point
        - the connection cable must not have damaged insulation
        - the grounding clamps must not be damaged, they must be firmly attached to the grounding point
        - the grounding clamp must be firmly connected to the connecting cable without any sign of insulation damage

AC grounding point

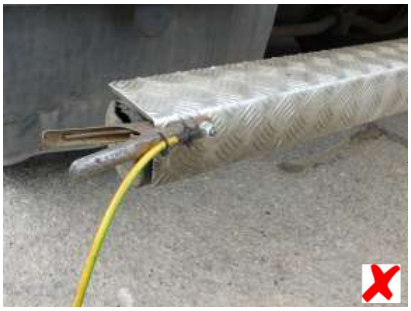
AC grounding point

AC grounding drum

VL technology grounding point

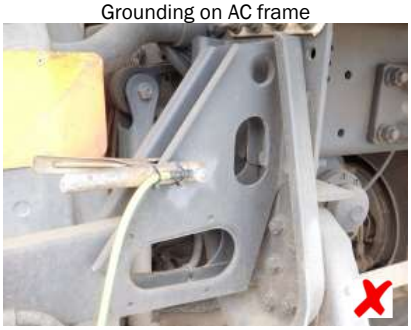
    - Inacceptable and wrong AC grounding methods:
        - Grounding to AC wheel bolts and/or to AC frames outside designated points
        - damaged, improperly connected or adjusted grounding cables
        - connection other than through the grounding drum (if installed on AC) and marked points
        - damaged insulation of the grounding cable
        - the grounding clamps are damaged and the grounding cable is not firmly attached to the grounding point
        - the grounding clamp is not firmly connected to the connecting cable without any sign of insulation damage
        - when filling the tank the trailer is grounded via grounding on the towing vehicle (inacceptable unreliable electrical connection through the trailer towing device)
        - or vice versa, the towing vehilce is grounded through the trailer (inacceptable unreliable electrical connection through the trailer towing device)

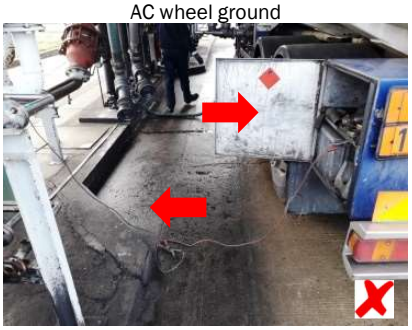
Each tank must be earthed separately with a separate cable through dedicated earthing points!)


Grounding on AC frame


AC wheel ground


Earthing drum not working


Grounding on AC frame


Improper grounding


Use of jumper cables


Damaged grounding cable


Cable-to-cable connection

- the AC ground connection is indicated by a green light signal

- Checking the CIVACON connection
  - The green light indicates that the device is connected correctly and is operational
  - When the red indicator gets lit it indicates that either the socket is not connected, or the regenerative arm is not yet connected properly, or the system indicates a fault in the VOC system.
  - In the event of a fault, the driver shall always contact the operator.


Parking position CIVACON


Connecting CIVACON to AC

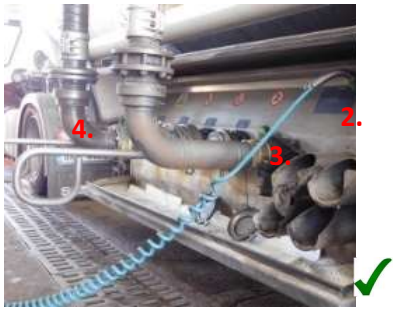

CIVACON not connected


CIVACON connected

- Checking the AC filling procedure - described in detail by the AC driver workflow
  - Follow the filling sequence in the following order:
    1. Inspection of AC and footbridge technology prior to filling
    2. Earthing connection
    3. CIVACON system connection
    4. Connection of the vapor recovery arm at the bottom filling (depending on the local design, this can be interchanged with dispensing arms)
    5. Connection of dispensing arms (depending on the local design, can be interchanged with the recovery arm)
    6. Check for correct connection and technology before starting filling
    7. Log in by card and select quantity (volume) to be delivered
    8. Start filling on ACCULOAD
    9. Permanent inspection, presence at the filling point and monitoring of the progress of the filling (with an emphasis on non-standard conditions, leaks, impacts, damage to the footbridge or AC technology, operational accidents, emergencies, ...)
  - During the bottom filling the following is checked:
    - attachment and securing of dispensing arms, leaks (dripping)
    - ensuring connection of the vapor recovery arm with both levers
    - check whether there is any dripping during filling (there should be no dripping)
    - permanent connection of the vapor recovery arm to AC
    - whether the interlock button on the recovery safety valve is not blocked
    - whether the safety switches on technology boxes are not blocked

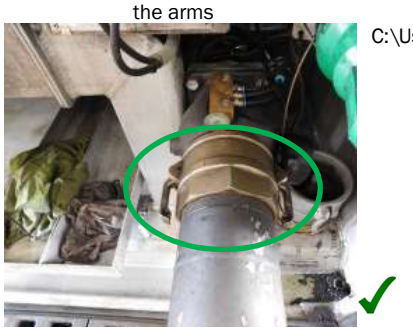

AC driver's equipment when handling


Connection of recovery arm



AC connection sequence

the arms



Securing the recovery arm

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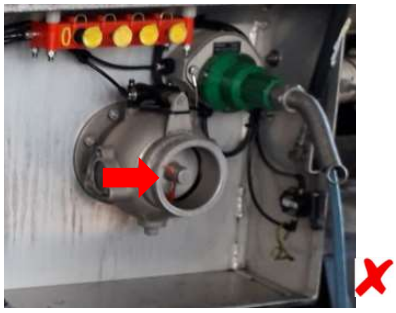
Unauthorized valve locking



Unauthorized valve locking

- after completion of the bottom filling the following is checked:
  - correct disconnection of the dispensing and vapor recovery arms and their proper parking and locking in the stands
  - capping of all filling flanges (valves) on AC equipped with caps on flanges
  - closure and tightness of AC fittings
  - tightness of the dispensing arms and AC flanges (valves), including closing of the draining (outlet) valves of the AC filling box (drips)
  - correct disconnection of the CIVACON device and correct branching of the plug to the socket on the device and their correct placing to the starting position, correct and suitable cable placement outside the walking and passable area of the dispensing point (to prevent damage to the cable)
  - disconnection of the grounding, in case of using our grounding cable, its suitable placement outside the walkable and passable area of the dispensing point (to prevent damage to the cable)
  - closing of the AC filling box (it is forbidden to drive AC with the open box in the warehouse area)
  - the condition of the technology of the footbridge after filling (e.g. to check whether it shows an apparent defect or product leakage)

- When filling at the top filling point the following is checked:
  - Correct folding of the steps to the correct position so that both stops abut the AC housing to ensure a safe transition from the walkway platform to the AC and vice versa
  - AC handrail alignment (unless the top fill line is equipped with a stable handrail)
  - only the chambers that are currently being filled may be opened, the others remain closed
  - perpendicular seating of the dispensing arm into the chamber, delimiting the space around the arm and opening of the chamber by means of spacers or cones (ensuring vapor draining)
  - ejection, and possible arrestment of the filling needle of the dispensing arm to the bottom of the filled chamber (prevention of spraying of fuel during filling, ensuring the safety transmission of possible electrostatic charge)
  - holding the valve of the emergency quick-closing valve of the dispensing arm, so-called dead man's lever, for the whole time of filling by hand - if the dispensing arm is equipped with it (the lever must not be locked by anything, just held by hand)

- When filling at the top filling point is completed the following is checked:
  - slow and gradual withdrawal of the dispensing arm from the AC chamber (time required for the product to flow from the arm into the chamber), ejecting and locking the filling needle in the parking position, hanging of the drip tray on the bottom of the arm, correctly positioning the dispensing arm in the parking position
  - closing of all the top covers of the AC chambers (the AC vehicle is not allowed to move with open chambers)
  - Pulling up the steps to the footbridge platform so that they do not hinder the departure / exit of the AC from the filling point

- During filling (applies to both bottom and top filling) the following is checked for VL (dispensing footbridge):
  - It is forbidden to run the engine with attached CIVACON technology arms and grounding
  - Tthe driver / filler must always be present in the ACCULOAD area, filling box and within the range of the "STOP" button during the physical filling of the AC - during pump operation (violation is sitting in the AC vehicle cabin, being on the other side of the AC while filling and performance of activities not directly related to the filling process itself)
  - It is forbidden to use devices not intended for use in a potentially explosive zone (mobile phones including HandsFree, radios, independent heating, electronic cigarettes, smart watches, tablets, navigation, IQOS, etc.)
  - It is forbidden to open the box with the printer for printing the AC measurement status and use this printer during filling unless the printer is in EX version (this applies to all dot matrix printers normally mounted in AC - they are not in EX version)
  - The report can only be printed after filling and without opening the cabinet. The cabinet must not be opened in the VL area while the printer is running (currently printing).
  - All devices not related to AC filling shall be switched off (if possible) and stored in the driver's cabin before the AC is connected to filling system.


  - That the radio is off, that the air conditioning is off
  - the auxiliary heater is switched off well in advance before the AC filling starts
  - the alarms are off - the ignition is switched off (check is performed before and after filling)
  - the doors and windows of the vehicle are closed, including the sunroof (check is carried out before and after filling)


- Warehouse transport rules
  - The violation is:
    - driving through the warehouse area with the technological boxes lid(s) open
    - nájezd na obsazenou výdejní stopu
    - not keeping the distance from the filled vehicle on the footbridge
    - reversing on dispensing footbridges without the assistance and explicit permission of the operator
    - any other violation of the Warehouse Transport Code (the Code is part of the training)
    - violation of road traffic rules in the warehouse area
    - leaving the engine running in the dispensing (filling) area without the driver in the cabin
- Test for alcohol
    - It is not part of the AC filling checking process
    - Performed by a warehouse operator or another authorized person
    - It can be done at any time while in the warehouse
    - The test is always performed outside the EX zone

Examples of unacceptable AC adjustments that exclude safe filling

Inadmissible blocking of AC safety devices. Blocking of AC safety devices (limit switches and interlocks) changes the way AC is operated, disrupting the safety functions of the valve blocking, creating an unacceptable risk. Safety features on AC have a safety function, and must not be blocked!

Examples:

Blocking of the limit switch of the bottom filling box and taping it using a mounting tape or otherwise

Explanation:

In this case the box (filling) limit switch is locked here in the active position by a mounting tape. For the pneumatic system this permanently simulates closing of the bottom filling box (or closing the emptying box). When the switch is in this locked position, the entire pneumatic control on the AC side where the switch is locked should be disabled. If these limit switches are working properly, the pneumatic control of the entire tank should be blocked while both boxes are opened at the same time. By blocking these limit switches their safety functionality is bypassed. In case of SPD tanks, this safety function is partly taken over by the SPD system, but the limit switches must not be blocked there either.

The basic function of these limit switches is to close all valves on AC while the boxes are closed, and also to prevent tank operation from both sides (for instance empty the tank on the right and at the same time operate the bottom filling or to prevent opening of emptying valves while filling the tank from the bottom, which may result in fuel leaks). Other additional

functions of the switches may also be the automatic protection of the tank against movement when the technological box is open. Driving with an open box is prohibited in the warehouse area, and this function can be bypassed by blocking this switch.

If the pneumatic control of the tank is still functional even when these limit switches are blocked, there is a valid assumption that the pneumatic system has been modified in an unknown manner. There is no guarantee that it is in compliance with the technology as set by the manufacturer and that it performs the safety functions above.

In such cases, due to the risk, we always proceed in accordance with the Public Sanction Code, and for safety reasons AC must not be filled in ČEPRO, a.s. warehouses until rectification and confirmation of AC safety.

Inadmissible locking of the automatic recovery valve control button

Description and explanation of the fault:

The valve button is located in the left technological box AC (bottom filling box) or out of it on the connection head for the recovery (recuperation) piping. Drivers usually block it in cases when filling alternately in warehouses where there is no recovery, or when they do not have a device (reducer) to unblock the recovery and VOC system. This is a serious and inadmissible safety fault. (The box image is illustrative, the blocked button image is authentic)

This is a breach of the obligations of the filler within the meaning of 1.4.3.3 of the ADR Agreement, paragraphs (a) and (f), and, in general, breach of the overall safety - obligations of the filler - here is a citation of selected ADR wording:

1.4.3.3 *Filler*

In relation to section 1.4.1, the filler must fulfill, inter alia, the following selected obligations:
(a) verify, before filling the tanks, that the tanks and their equipment are in good technical condition;
(f) after filling the tank, ensure that all valves are in the closed position and that no leakage occurs;
If the filler modifies the safety element, which is part of the tank filling device by locking it in an active state this results in permanent simulation of the condition that the recuperation hose of the filling ladder has been connected.
Such adjustment blocks the safety item, which means that the equipment of the tanks is not in good technical condition - e.g. breach of 1.4.3.3 (a).
When this switch is pressed and locked in active position it activates the VOC electric circuit and allows starting the bottom filling without physical connection of the recovery (recuperation) hose to AC.
Failure to connect the recovery hose may result in explosion, bursting, damage to equipment, or deformation of the tank itself by internal overpressure at the bottom of the tank, unless the flap in the tank's recovery safety valve is opened mechanically by other means. If the recovery safety valve is opened on the AC, fuel fumes from AC are inacceptably blown directly into the filling platform, which increases the risk of explosion and is in direct violation of the Air Protection Act.
If the driver (ADR tanker filler) keeps the button permanently locked while driving, this prohibited blocking may, in some non-standard pneumatic installations, keep pressurized also the recovery system.
Thus, the tank technology is not properly secured against unwanted opening after filling. Infringement of 1.4.3.3 (f).
With the recovery valve locked in this way, the filling of AC is prohibited, and if this issue is found, even the filling and even the departure of already filled tank from the warehous will be prohibited - the vehicle does not meet the conditions stipulated by the ADR agreement.

Other possible AC faults:

In case of obviously abnormal or unprofessional adjustments of the control systems of the vehicle, the carrier may be asked to prove the safety of the vehicle for loading (filling) in ČEPRO warehouses. In these cases, it is always proceeded individually based on technical issues identified and in accordance with the public Penal Code.

Non-standard unauthorized preparations and containers (examples):

The aforementioned examples of technically non-standard products and containers for dangerous and illegal collection of fuels from various AC valves or fittings. ČEPRO, a.s. considers these containers prohibited for use in the premises of our company, in accordance with our internal rules, in particular the Code of Conduct and the Code of Ethics. It is forbidden to bring these and similar preparations and containers into our warehouses and to transport them anywhere in tank trucks (AC), which enter our premises. If such preparations or containers are found in carriers' vehicle, it is considered a violation of internal rules of ČEPRO, a.s. and we shall proceed in accordance with the Sanctions Rules. The familiarization with these rules of ČEPRO, a.s. and with the Sanction Rules is a part of every entrance training of external persons entering our warehouse premises for any reason.

The aforementioned equipment and containers are well known in the industry and it has been known that they may be dangerous. If the above presented and/or similar preparations and containers are transported in AC while entering our warehouses, the driver acts in contradiction of the Access Rules, which he/she was properly made aware of during the initial training.

At the same time, the above shown list of illegal items may not necessarily be complete. In case of finding and identification of possible new or unknown “technical solutions” in this area, this issue will be dealt with individually, and of course always in accordance with Sanction Rules.