



USER MANUAL



45 CBM FUEL TANKER TRAILER
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EFEMMAK
ARAÇ ÜSTÜ EKİPMANLARI



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FOREWORD

First of all, thank you for choosing us for your new vehicle investment.

Your vehicle is manufactured with the latest production technologies to the highest quality standards and equipped with the best safety and efficiency features.

You can find detailed information about the accessories, equipment and hardware that might be in your vehicle in this manual. The defined options in this manual can vary according to the vehicle specs.

Important information on how you can use your vehicle is explained in this user manual, please be sure that you review and understand the content. We suggest keeping this user manual available in your vehicle at all times. This information is specified in the product's user manual. We recommend you read this operating manual thoroughly to get the most out of your vehicle.

** Owing to the developments in product research, the manufacturer reserves the right to make any changes in the product, without any prior notice. The publication rights of this documentation belong to the manufacturer.*

1. GENERAL INFORMATION AND SAFETY INSTRUCTIONS

1.1. About the User Manual

The usage and operation information given in this manual is prepared to make sure the vehicle is used in compliance with its purpose and as desired.

The instructions here contain important recommendations to perform your operations safely, completely, and in the most efficient manner. Complying with these instructions, warnings and recommendations will prevent accidents, decrease down-time & repair costs, and make sure you use your vehicle safely, reliably and problem-free.

Please read the operating instructions in this manual carefully and completely. The manufacturer is not liable for the damages and deficiencies caused by the failure to comply with these instructions. The instructions herein must be supported by local laws, rules and regulations. Please comply with these instructions to prevent accidents and protect your surroundings and the environment.

Any usage of transportation that goes beyond the use in accordance with the rules will be considered improper use


Transportation of the following is not allowed:


- Carrying people and live animals
- Transportations that need to be carried according to special instructions, e.g., dangerous good transportations
- Transportation of unsecured goods
- Transportation of materials that are dangerous due to their properties or that need to be carried with special equipment
- Exceeding technically and legally permissible weights of the axles or king pin load
- Exceeding of the maximum vehicle speed
- Exceeding the permissible length, width and height




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- Unapproved parts like tires, accessories, spare parts and etc. by the manufacturer
- The manufacturer shall not accept any responsibility for the problems and faults that occurs that are not in compliance with the purpose of the vehicle's usage. All the risks of this issue belong to the customer.


 It is necessary to keep the user manual available on the vehicle at all times.


 The vehicle can be equipped with a lot of different options. The standard or optional features will be explained in the manual. Some options may not be available for your vehicle


 Adhere strictly to the operating instructions when using your vehicle. When problems occur which can lead to dangerous consequences, contact the service centre immediately.


1.2. Meanings of Symbols Used in User Manual

Several warnings are available in this manual to ensure maximum safety when using your vehicle. Each warning is indicated by a special symbol. These symbols and their meanings are as follows

 The information specified by this warning symbol is very important for health and human safety. When the given information is ignored, serious damage, injuries and even death may occur.

 This symbol specified in this manual indicates that critical accidents may occur when the instructions do not comply.

 This symbol is used when additional information is required.

 This symbol is used when chemicals and other substances can be disposed of with precautions that will not harm the environment.




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1.3. Personal Protective Equipments


Personal protective equipments serves the purpose of preventing injuries and are prevents injuries and are determined by regional regulations depending on the load carried.

People who will work or perform operations on the vehicle must wear proper and appropriate protective clothing.


- Depending on the load to be carried, the eyes, ears, body, and respiratory tract must be protected with the relevant protective equipment.
- As a rule, gloves and work shoes are always used.


 It is obligatory to use appropriate personal protective equipment during the operations.

 Long hair is particularly dangerous when working on the vehicle, regardless of whether it is loose or tied up, and it should be protected properly to avoid tangling.

 Wearing a tie, necklace and/or dangling jewelry when working on the vehicle is strictly prohibited. They may get caught in moving parts or mechanisms and cause injuries and even death.

Protective Gloves

 During the operation, protective gloves must be used. Please make sure you are using the correct type of gloves when you are working with hot parts or chemicals.

 Gloves should fit snugly. Otherwise, there is a risk of them getting caught in moving parts or mechanisms.



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Protective Cloth

- Overalls should not have pleats, buttons or external pockets and their closure system should be made in such a way that they can be opened as soon as possible in case of an emergency

Interior pockets should have fasten- ings to close them up. Cuffs should be adjusted to fit the wrist

Protective Helmets , Ear plugs , goggles and Mask

- When working around the vehicle, a lightweight helmet approved by an accredited institution should be worn.
- A hearing protective device (headsets or ear plugs) should always be used around self- propelled vehicles
- Protective goggles should be worn during all maintenance operations.
- Appropriate protective masks should be used when working with substances that are dangerous to breathe or in industry environments.

1.4. Terms of Use and Safety Information

It is necessary to keep the warranty, operating and maintenance manual and other documentation about the vehicle available on the vehicle at all times

To prevent possible accidents and envi- ronmental pollution, follow the operating instructions and binding regulations.

- Pay attention to the safety and warning signs placed on your vehicle.
- Always keep these safety and warn- ing signs completely visible.
- Make sure that the load carrier is se- cured properly.
- In case of any dangerous condition in the operation of safety, stop your vehicle immediately and inform the authorized people or institutions.
- Do not modify anything on the ve- hicle without a written manufac- turer's approval. Your vehicles guarantee terms do not cover unap- proved modifications.
- The spare parts must meet the tech- nical requirements set forth by the manufacturer company. Only the original spare part/parts meet their requirements



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1.5. Possible Dangers

Your tanker vehicle has been designed using the most up-to-date technology and in compliance with generally accepted technical safety regulations and rules. Nevertheless, its use could involve risk of injury and death to the user and to others and damage to the vehicle itself and to other objects.

Below is a summary of dangers that can occur while working with the tanker vehicle. It is recommended to read these dangers entirely.

Danger Source	Consequences
Contact with the load when unloading, loading or cleaning	<p>Risk of injury of poisoning!</p> <p>Breathing load or contact with skin or eyes may result in injury.</p> <ul style="list-style-type: none">• Avoid physical contact with load and avoid breathing vapour resulted from load.• Never loosen connection hoses during loading or unloading.• Wear protective clothes against load and hazards that may arise from load. <p>If the load causes an injury, contact to material safety document for necessary emergency measures.</p>
Rubbing of load against tank walls and connections	<p>Risk of fire and explosion!</p> <p>If the identical potential conductor (grounding pins) is not connected, statical load may cause sparks and explosions.</p> <p>Connect grounding pins during loading, unloading and cleaning.</p>
Entering into the tank	<p>Risk of fatal injury!</p> <p>Entering into the tank after the journey for cleaning, inspection and maintenance purposes will lead to serious health risks.</p> <ul style="list-style-type: none">• Do not enter into the tank when not necessary. <p>Conduct the necessary gas measurements appropriately before entering into the tank.</p>



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1.6. Danger Areas

In this section, dangerous areas on and around the tanker vehicle and dangers that may occur are briefly described.

Danger Area	Action to be performed
Between the tractor and tanker vehicle	Risk of sticking persons during fastening or unfastening tractor and tanker vehicle. <ul style="list-style-type: none">• People should be far off from the danger area.
Around tanker vehicle and filling – discharging area	In accordance with ADR legislation, no action should be taken in zone 0, zone 1 and the area within half a meter diameter of the gas adapter, which may cause sparks, and should not be approached with elements that may cause fire or flashing.
Around tanker vehicle	Presenting unauthorized persons around the vehicle during loading and unloading is dangerous for you and other persons. Ensure the unauthorized persons are outside the danger area.
Tanker body	It is obligatory to perform gas-free operation on the tanker body before any operations that may create a spark or explosion risk (welding, etc.) on the tanker body.
All sides of not connected tanker vehicle	In some cases not connected tanker can suddenly fall down and injure people. <ul style="list-style-type: none">• For this reason never stay around the tanker not connected to tractor. Tanker should be in safe condition for maintenance operations.



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2. MAIN INFORMATIONS

There are vehicle identification stickers on the vehicle.

2.1. TANK LABEL

Vehicle identification label is located on the right side of the vehicle.

You may find the following information's on this label;

EFEMMAK		ARAÇ ÜSTÜ EKİPMAN LTD. ŞTİ. www.efemmak.com		Adres Bilgisi Girecek						
Üretim Yılı / Year of Manufactures		2025								
Tank Kodu / Tank Code		22303-02-ST-000-T-LGBF-058								
Tankın Toplam Hacmi Capacity of the Tank		48012								
Gözlerin hacmi (Dalgakıran Bulunan Gözlere "S") Capacity of the Compartments (Compartments with baffles "S")										
1.	16044 "S"	L 2.	15953 "S"	L 3.	16015 "S"	L 4.		L 5.		L
6.		L 7.		L 8.		L 9.		L 10.		L
TEST BASINCI / TEST PRESSURE										
Komple Tank Basıncı/ Complete Tank Pressure		0,40 BAR								
Göz Basıncı / Compartman Pressure		0,39 BAR								
Tasarım Sıcaklık Aralığı / Design Temperature İnterval		20°C								
İşletme Sıcaklığı / Service Temperature		-20°C // 50°C								
Tank Malzemesi Tank Material		ST37								
Azami Çalışma Basıncı Maximum Working Pressure		0,10 BAR								
Tasarım Dış Basıncı External Design Pressure		0,03 BAR								

2.2. BRAKE LABEL

There is a brake information label on the vehicle equipped with ABS system.





2.3. VIN (CHASSIS) NUMBERS ON SUBFRAME

The VIN (chassis) number is located on the right side of the vehicle and marked with a different color than the chassis color.



2.4. WARRANTY AND RESPONSIBILITIES

Our trailers, semi-trailers and truck on-board applications are manufactured in compliance with regulations and our quality standards. It is necessary to perform the maintenance to ensure our products always operate in the most efficient manner in compliance with our latest directives and maintenance programs. The warranty starting date is the date that the vehicle is delivered to the customer.

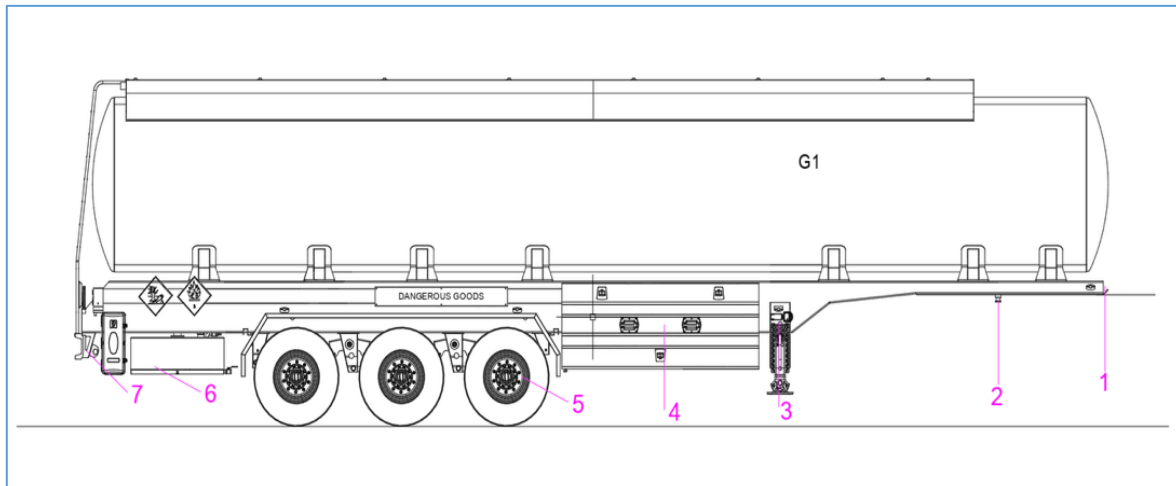
The performance of maintenance and repair/servicing of the vehicle with the use of original spare parts by authorized service shall assure the client's warranty rights. This warranty is based upon the usage and maintenance conditions described herein and in the warranty book. Thus, it is important to read and understand this operation manual and warranty book.

It is necessary to keep the warranty, always operating and maintenance manual available on the vehicle to allow authorized service performing the servicing to see the warranty conditions and maintenance records. In the repairs made during the warranty period, the authorized service performing the repair will demand this. Purchasing one trailer or semi-trailer is an important investment. For the highest return on your investment, it is necessary to comply with the manufacturer's procedures and recommendations during the operation period of the vehicle. The information provided by the client/driver related to the warranty written in this manual shall be kept within our database.



FUEL TANKER TRAILER

3. TRAILER RUNNING GEAR AND USAGE INSTRUCTIONS



1. Air -Electric -Hyd. Connections
2. King Pin
3. Landing Legs
4. Armature Box
5. Axles and Tyres
6. Extra Fuel Tank
7. Bumper and accessories
8. Top Ladder

3.1.1 AIR COUPLINGS

The main connection between the truck and trailers is air couplings.

There are 2 different air supply lines in the system.

Brake Line (Yellow)

Supply Line (Red)

Brake Line: Pneumatically air hose which will feeds the brake line.

Supply Line: Pneumatically air hose which will feeds the air tanks and trailer.



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When the couplings are mounting/demounting, the parking brake of the truck and trailer must be engaged.



If the brake parameters are modified, your vehicle's brake calculation might be non-suitable for regulations. Only authorized services must service.



Only authorized services and personnel should make service operations for the brake system.

There might be test points on the chassis or above the air couplings. When you remove the test points rubber protection parts and push the points you can check the air pressure on the brake lines.



Position of Air Couplings ;





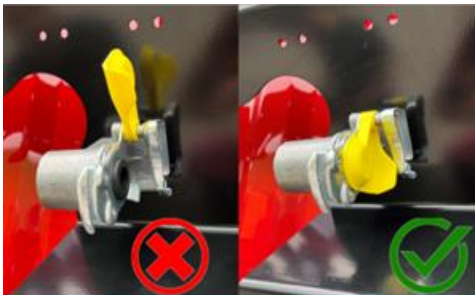
FUEL TANKER TRAILER


Mounting of Couplings;


- Slightly slide plastic covers to the upper side. Slide plastic covers to upper side.
- Be sure that sealing surfaces are clean and durable. If necessary, clean/change the air coupling.
- The coupling which comes from the truck should be pushed slightly from the upper side to the lower side and connect the coupling. Be sure that couplings are matched correctly.
- First mount service line yellow (1).
- Mount supply line red (2).

De-mounting of Couplings;

- The coupling which comes from the truck should be pushed slightly from the lower side to the upper side and demount the coupling.
- First demount the supply line red (2).
- Demount the service line yellow (1).
- Slightly slide plastic covers to the lower side and close the plastic covers.



 **Driving with a non-suitable air connection is dangerous and forbidden.**

 **Using damaged air supply parts can cause serious hazards. Torn or damaged compressed air connectors reduce the vehicle's braking performance.**

Compressed Air Tanks ;

Pressured air can be stored in the air tanks.

The quantities and capacities of the air tanks can be changed according to your vehicle specifications.

In cold periods of the year or when the air humidity is high, the moisture in their can be condensed and collected in the compressed air tank.

The tractors are generally fitted with air driers to prevent condensation in compressed air. The tractors are generally fitted with air driers to prevent condensation in compressed air. Even if the air driers system, the humidity in the air can be condensed. The condensed water must be drained out via the drain valve.

The water in the air tanks should be completely drained out. That's why please push the valve on the air tanks



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1. Compressed Air Tanks

2. Drain valve



The water in the compressed air tank can cause corrosion problems and affect the functionality of the brake system. The frozen water in the pneumatic lines can cause the failure of the brake system.



The water in the pneumatic system should be checked more frequently in cold weather or extremely variable outside temperatures.



When the air tank pressure is lower than 4,5 bars, the EBS warning lamp on the tractor turns on and the driver can see this situation.



When the pressure in the service line (in the red coupling) is lower than 2,5 bars, the brakes automatically lock.

** Some functions differ as per chosen Brake configuration.*



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3.1.2 ELECTRIC CONNECTIONS



ABS / EBS SOCKET

Our trailers and semi-trailers are equipped with an ABS system.

ABS is an electronically controlled anti lock braking system.

To activate the ABS system, your truck and trailer must be equipped with an ABS system. Please mount the ABS ca-ble that will come from the truck to the ABS socket on the trailer.

- Driving with a non-connected ABS connection is illegal.
- Drive only with an approved and well-operating ABS plug connection in accordance with regulations.
- ABS connection must be made between the truck and trailer.

ELECTRIC SOCKET



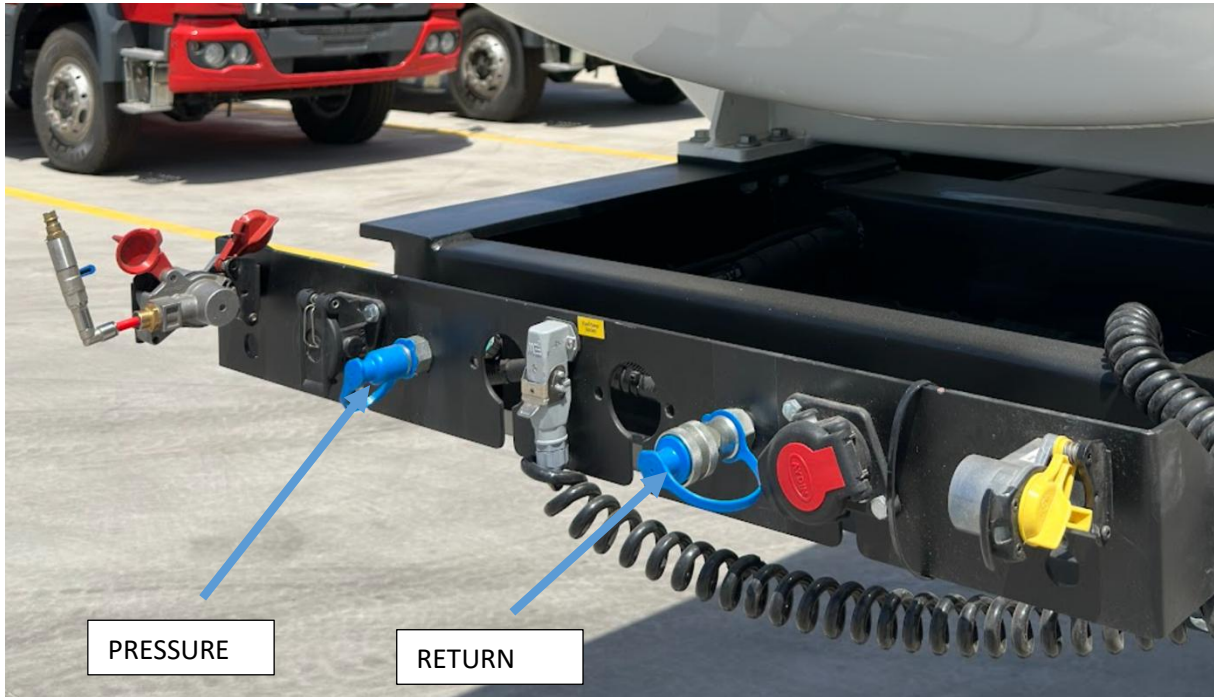
There is 15 pin (1) electrical socket in our vehicles. Thanks to this socket, electrical connections between truck and trailer will be made.

Open the protection cover and mount the sockets regularly. You may find extra information about the pins functions in diagrams.



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3.1.3 HYDRAULIC CONNECTIONS



Pump system powered by hydraulic wet kit which is mounted on truck tractor head.

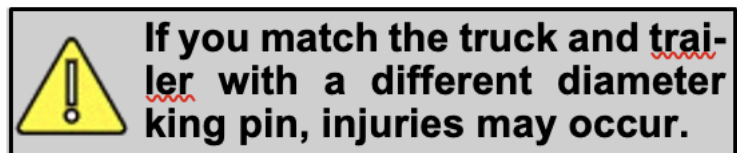
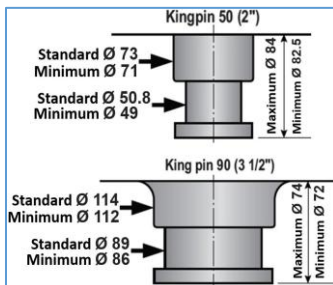
It is very important pump system never used without hydraulic connections, it may cause damage of the system.

- Connect pressure and return lines from the wet kit mounted on truck tractor
- Be sure all connections done properly and couplings fitted correctly.

3.2 KINGPIN

King pin is a shaft which connects truck and trailer together. Your vehicle may be equipped with 2" or 3.5" diameter pins. Please check the king pin diameter before connecting the truck.

The flanged king pin is used on the vehicle. That's why king pin can be replaced easily.



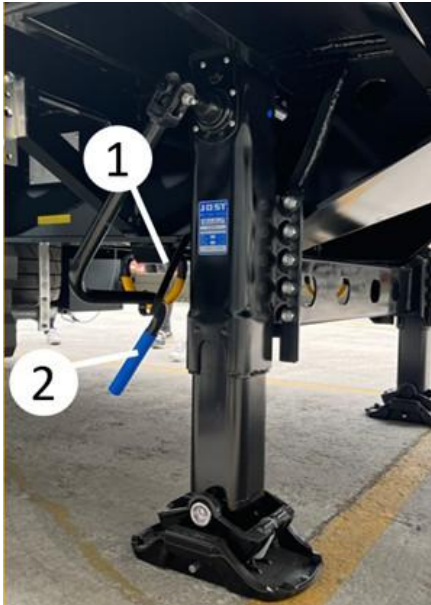
Your vehicle may be equipped with a double king pin slot. You can remove the bolts around the king pin and mount king pin to the other slot. Please be careful about the total length of the vehicle according to country regulations and be sure that the total length is suitable for regulations.



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3.3 LANDING GEAR

There is a front landing gear behind the vehicle's gooseneck area so that your vehicle can stop in park without truck.



The landing gear crank handle (1) should be removed from its holder (2) and brought to a perpendicular position to the vehicle

Low Speed (A): When the crank handle

(1) is turned in the fully pressed position, it raises / lowers at low speed.


High Speed (B): It performs high speed lifting / lowering when the lever turned in the fully extended position. The position is used to quickly lower the gear until the foot (plates) touch the ground during the process of separating the semi-trailer from the tractor, or to raise the gear quickly after the semi-trailer is connected to the tractor.


The landing gear crank handle is usually located on the passenger side of the vehicle.





In order to protect the landing gear, be sure that there won't be any lateral movements on your vehicle. For this reason give attention to the following criteria:

- Disconnect the semi-trailer from the tractor only when the landing gear are in the middle (neutral) position.
- If you will park for a long time without the coupled tractor, be sure that adjustment done for the landing gears and the loading area will be parallel to the ground.

 In all conditions, secure the semi-trailer against tipping with correctly positioned wheel wedges. If the vehicle is not properly secured, the landing gear or the vehicle may be damaged.

 If the loading / unloading operation is performed while semi-trailer is not paired with the tractor, the front or rear of the vehicle may raise. Serious accident and damaged may occur. For this reason, the semi-trailer must be paired with the tractor during the loading and unloading operations.

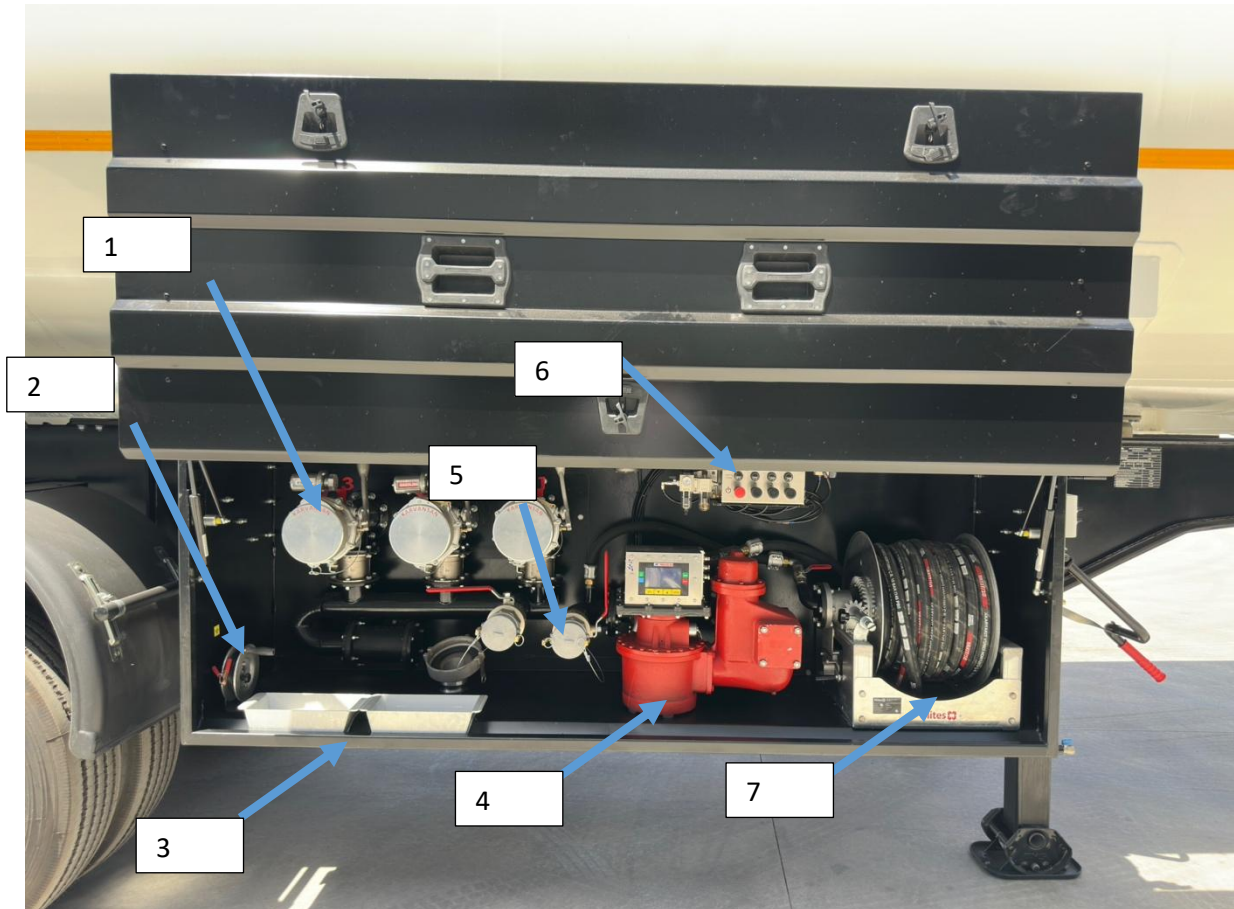
 If the tractor leaves from the loaded trailer, be sure that the load is distributed homogeneously in the vehicle. Otherwise, the front or rear section of the vehicle may be raised due to centre of gravity, and accident may occur.

 Before you start to drive operations, make sure that the landing gear is turned off (highest position).



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3.4 ARMATURE BOX



1. Gravity Discharge
2. Earthing cable
3. Collection Tray
4. Metering
5. Pressure Discharge
6. Control panel
7. Hose Reel

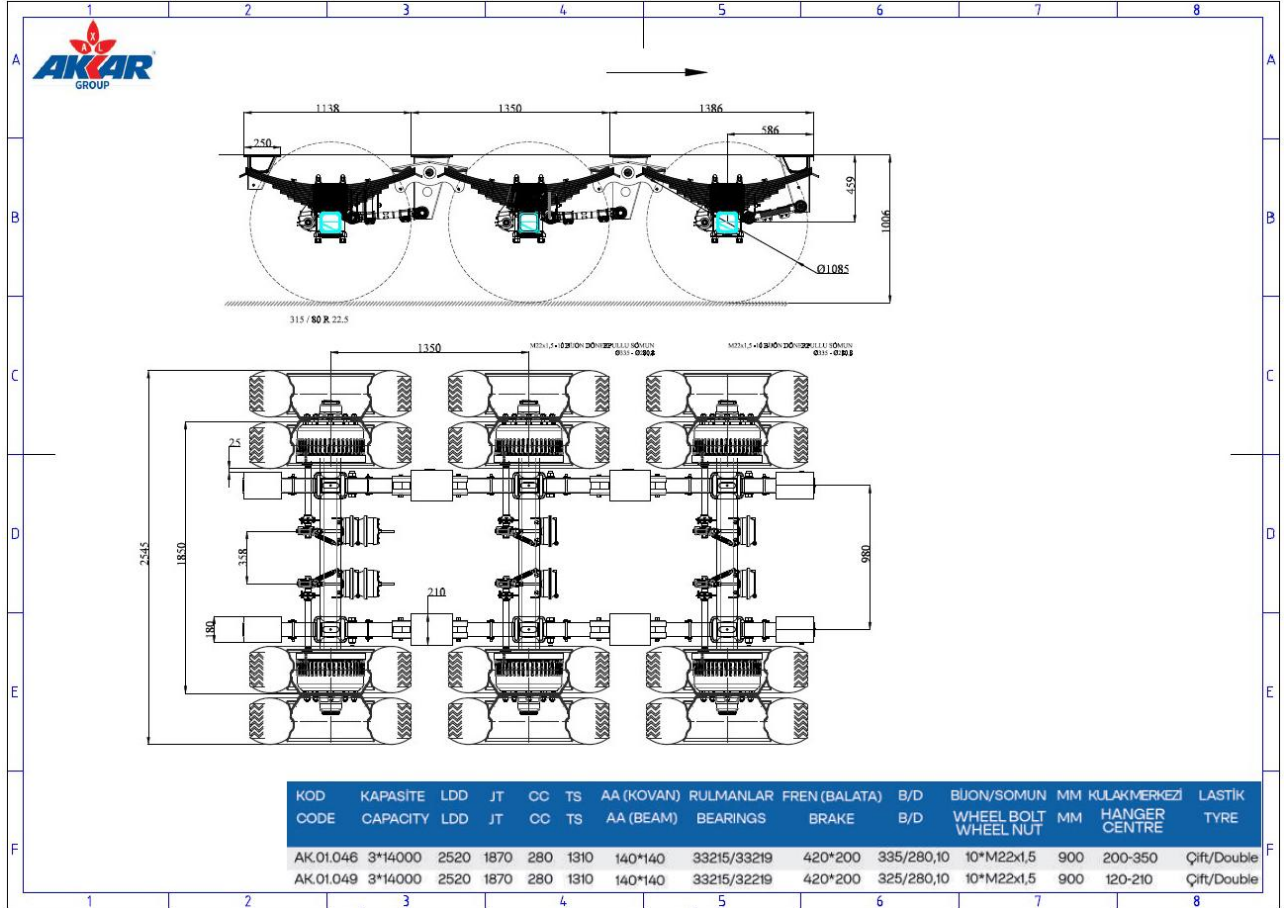


FUEL TANKER TRAILER

3.5 AXLES AND TYRES

3 X 12 TONS AXLES WITH 14 TON PER SET REINFORCED LEAF SPRINGS

EQUIPPED WITH PIRELLI FR25 315/80 R22.5 ON ROAD / OFF ROAD DOUBLE TYRE – 9.00X22.5” STEEL RIMS



3.6 EXTRA FUEL TANK



Trailer is equipped with 900 lt. extra fuel tank and fuel canisters to be used transfer between extra fuel tank and truck tractor head.



FUEL TANKER TRAILER

3.7 BUMPER AND ACCESSORIES

Trailer is equipped with accessories of ;

- Steel rear bumper
- Hose carriers on both sides
- 2 x 5 mt. x 3" discharge hoses with couplings
- 1 nos. 60 lt. Stainless steel water tank
- Spare Wheel carrier with spare Wheel
- 1 set of plastic Wheel chock and connector
- 2nos. 9 kg. Fire extinguisher
- 1 nos. Toolbox
- Warning labels and stickers
- Earthing cable reel

3.8 TOP LADDER



The folding ladder is attached to the handrail next to the upper walkway. Thus, with the opening of the folding ladder, the handrail also opens.

Opening the ladder;

Pull the ladder towards yourself by putting it above and release it from its lock pin (1).

Open the unlocked ladder pulling downwards.

Closing the ladder;

Lift the ladder upwards by holding from its bottom part. Fix the ladder by inserting the lock pin mechanism which is installed on fixed part of ladder , in its place.



FUEL TANKER TRAILER


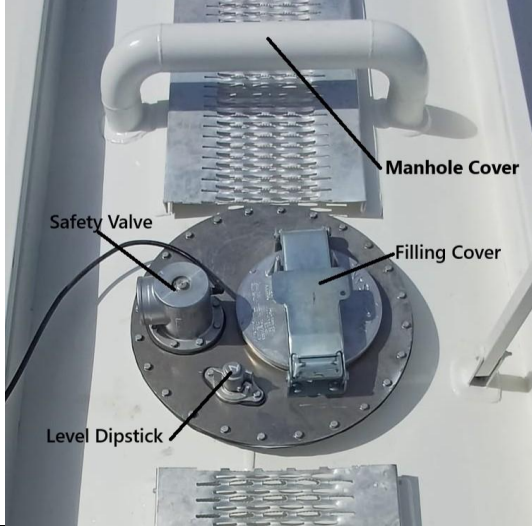
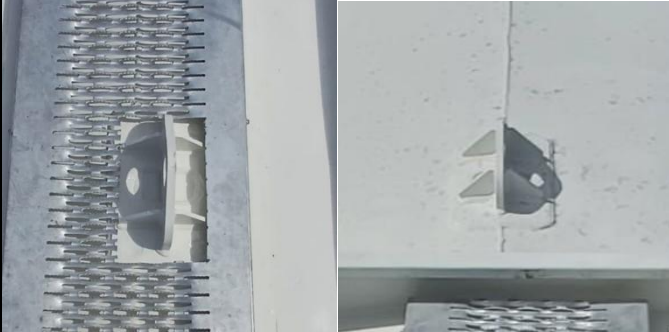
4. OPERATION COMPONENTS AND USAGE

In this chapter, components of the tanker and their use will be explained.

It is very important to understand the use and purpose of this components to achieve loading and unloading securely. For this reason, before loading and unloading processes, please read this chapter carefully and follow the instructions.



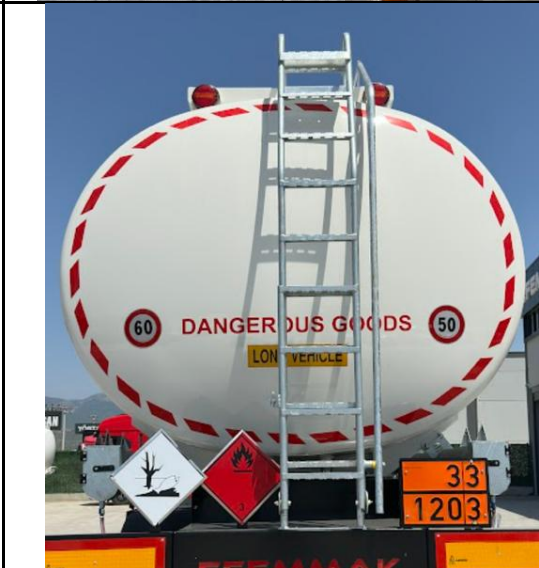
This chapter starts with an overview of components and continues with description of using of these elements in detail. Equipment in fuel tankers are described in this chapter.

4.1 OVERVIEW OF THE COMPONENTS ON TANKER

Component	Function	
Tank	It is the main structure that is separated from each other by walls, has breakwaters and cambers that prevent surges, consists of steel and carries dangerous liquid material.	
Manhole cover	It is the structure which allows filling from top with different equipment on it.	
Filling cover	It is the cover which allows filling from top.	
Pressure&vacuum safety valve	It prevents existing negative and excess pressure inside the tank.	
Level Dipstick	It is calibrated dip-stick mounted on manhole to check level of fuel inside of compartments.	
Lifting eye bolt	It is used for loading the tank to vehicles such as RO-RO, trains or lifting it with a crane after an accident.	



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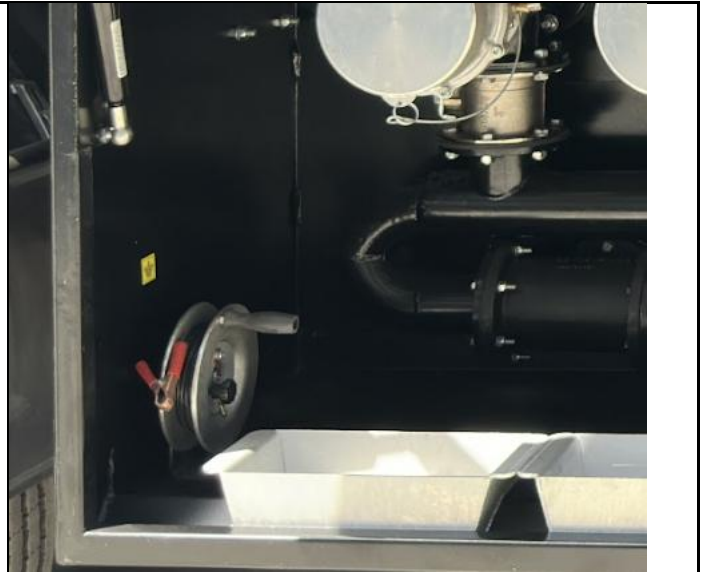
<p>Armature (filling/discharge) box</p>	<p>It is the box where metering, hose reel, connection elements and couplings are present during filling and discharge of the tank.</p>	
<p>Emergency button</p>	<p>Supplies closing of all bottom valves in case of emergency.</p>	
<p>Ladder</p>	<p>It is used to climb to the top of the tank.</p>	



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Earthing cable reel

It is Earthing cable reel mounted inside of armature box for grounding.



4.2 FILLING SYSTEM

TRAILER DESIGNED AS TOP FILLING THROUGH MANHOLES LOCATED IN EACH COMPATMENT.

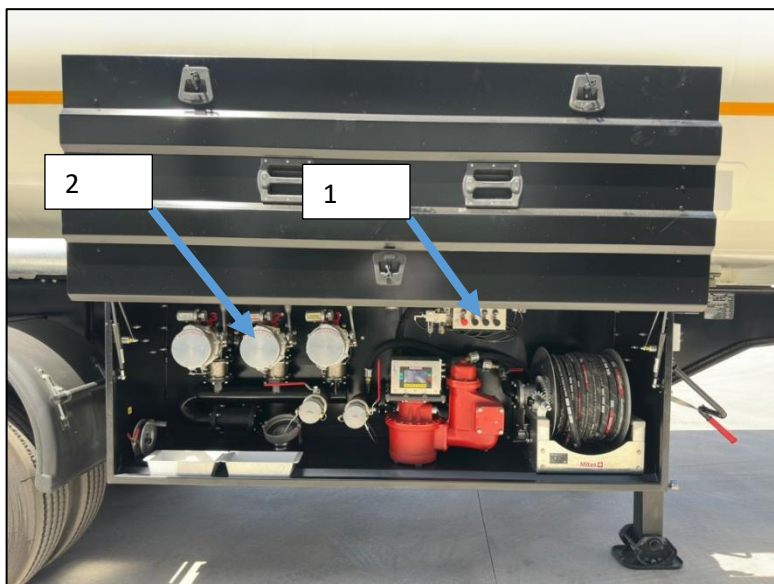


It is mounted on the top of the tanker by welding the bottom throat plate to the tanker. Each compartment will have one (1) nos. Manhole.

The top plate is connected to the throat plate with a sealing gasket and clamp or with 24 bolts. Equipped with min Dia 250 mm. Filling hatch , flame proof pressure & vacuum recovery valve, aluminium level dipstick, and breather.

4.3 DISCHARGE SYSTEM

FUEL DISCHARGE BY GRAVITY FROM THE TRAILER





FUEL TANKER TRAILER

BE SURE THAT TRAILER PARKED PROPERLY AND PARK BRAKES ARE ACTIVATED

GRAVITY DISCHARGE WILL BE DONE WITHOUT PUMP , AND ALL CONNECTIONS BETWEEN TRAILER AND TRUCK MUST BE DONE FOR PROPER OPERATION.

BE SURE ALL DISCHARGE VALVES ARE CLOSED (PRESSURE, GRAVITY AND HOSE REEL)

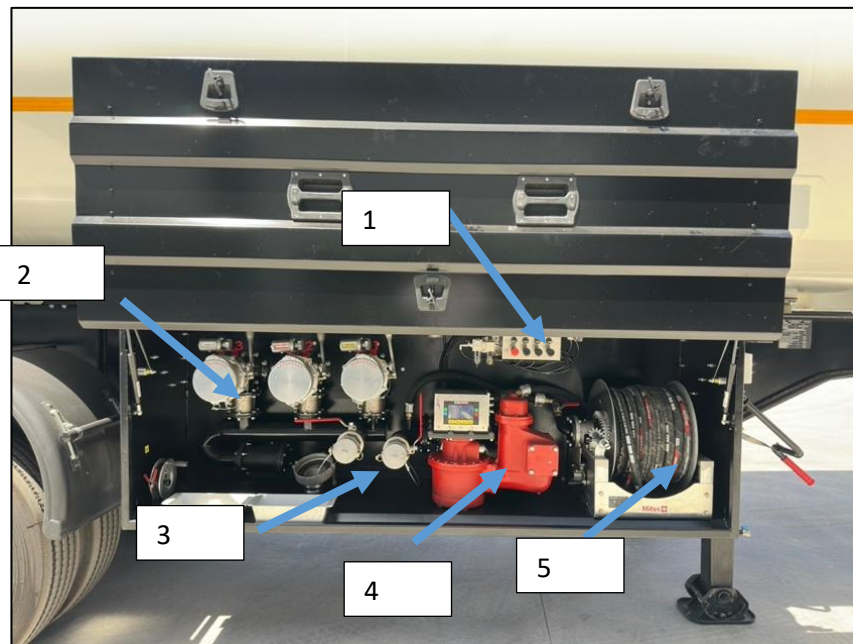
BE SURE THAT TRAILER TRUCK HAS SUFFICIENT AIR (6-8 BAR)

BE SURE THAT GROUND CABLE IS CONNECTED

BE SURE BOTTOM PNEUMATIC VALVE IS OPENED FROM CONTROL BOX INSIDE OF COMPARTMENT (1) AND USE THE "TANK DISCHARGE" OUTLETS LOCATED INSIDE OF COMPARTMENT FOR DESIRED COMPARTMENT.(2)

4.3 DISCHARGE SYSTEM

FUEL DISCHARGE BY PRESSURE FROM THE TRAILER



PARK THE TRAILER PROPERLY AND BE SURE PARKING BRAKES ARE ACTIVATED

BE SURE ALL DISCHARGE VALVES ARE CLOSED (PRESSURE, GRAVITY AND HOSE REEL)

BE SURE THAT GROUND CABLE IS CONNECTED

BE SURE TRUCK AND TRAILER HAVE SUFFICIENT AIR AND RUNNING AT IDLE SPEED

BE SURE ALL AIR , ELECTRIC AND HYDRAULIC CONNECTION BETWEEN TRUCK AND TRAILER CONNECTED PROPERLY.

BE SURE WET KIT OIL TANK OIL SUCTION VALVE IS OPEN



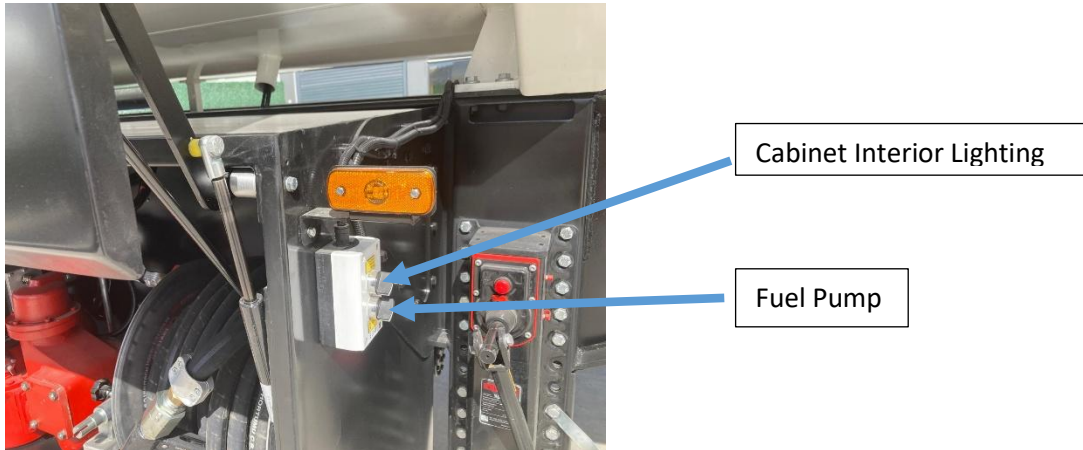
FUEL TANKER TRAILER

BE SURE REQUIRED COMPARTMENT BOTTOM PNEUMATIC VALVE IS OPENED FROM CONTROL BOX INSIDE OF COMPARTMENT (1) AND OPEN SPHERICAL VALVE FROM REQUIRED COMPARTMENT (2).

ENGAGE PTO AS PER RECOMMENDED STEPS BY TRUCK CHASSIS SUPPLIER

IF YOU WANT TO USE PRESSURE OUTLET AND CONNECT HOSES FOR DISCHARGE AND OPEN THE PRESSURE OUTLET VALVE

ENGAGE PUMP FROM PUMP CONTROL PANEL



YOU CAN USE METERING SYSTEM AS PER SUPPLIER INSTRUCTIONS (4)

YOU CAN USE PRESSURE OUTLET OR HOSE REEL OUTLET FOR PRESSURE DISCHARGE OPERATIONS. (3) AND (5)

ALWAYS FOLLOW FUEL TANK COMPARTMENT WHEN IT IS EMPTY, DISENGAGE THE PUMP WHEN DISCHARGE IS FINISHED, DISENGAGE THE PUMP FROM CONTROL PANEL , CLOSE THE VALVES AND DISCONNECT HOSES

DISENGAGE PTO AS PER INSTRUCTIONS

5. TRANSPORTATION PROCESS

5.1 PRE-DRIVING CHECKS

- All necessary documents are in the vehicle,
- Required adjustments and suitability of the loading situation,
- **The vehicle is properly tied and secured to the tow truck with correct king-pin height**
- All pneumatic, electrical and hydraulic connections between the semi-trailer and the tractor are made properly and the ABS system is in working condition,
- All necessary equipment (chocks, underrun protection, ladders, etc.) is in place and properly locked or secured,
- The loads are correctly distributed to prevent displacement while driving,
- The load weight is within the allowable limits,
- The regulations of the country you are in are complied with,
- The lighting and signal system is fully functioning,
- Tire air pressures are at the required level,



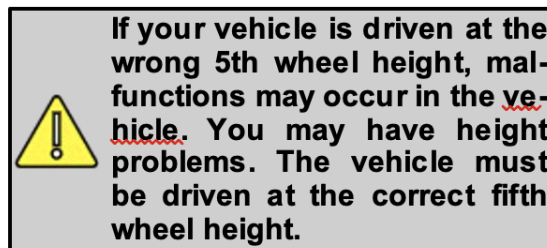
FUEL TANKER TRAILER

- Check that the parking brake of the semi-trailer is released.
- All valves and manhole covers are closed and secured,
- The material hoses are safely lifted.

5.2 SEMI TRAILER AND TRACTOR COUPLING

Apply the following steps to couple the semi-trailer with the tractor:

- Check the kingpin and couplings are normal.
- Make sure that there is adequate amount of grease oil on the fifth wheel, top-connection plate and kingpin that will ensure undamaged coupling and not contain any dust and contaminant.
- Adjust height with landing gear until it can be inserted in the king pin section of the semi-trailer.
- Set the 5th wheel locking system on the tractor to the "On" position.
- Adjust the height of the semi-trailer to insert it into the tractor. The height of the semi-trailer can be adjusted with the mechanical landing gear. Prevent the movement of the semi-trailer by using the parking brake. Put wheel chock at the rear of the wheels for safety.
- Move the tractor, fifth wheel until it touches the top-connection plate of the semi-trailer and moves back-wards slowly on the same level. The fifth wheel will slide smoothly under the top-connection plate and enter the kingpin's shoes and lock automatically with the intensity of impact.
- Raise the landing legs of the semi-trailer and insert the landing legs arm to its place.
- Connect the air, electrical ,ABS and hydraulic cable and hoses to their places on the tractor. Be sure that all the functions are working properly.
- If the vehicle has a parking brake, release the parking brake



Apply the following steps to un-couple the semi-trailer with the tractor:

- **If the vehicle is equipped with service type brake chambers, apply the parking brake after checking the brake drum. Never apply the parking brake when the brake drums are very hot. (The drum may crack.)**
- If the vehicle has a hand-brake type brake, put a wheel chock in front of the vehicle. Apply the handbrake.
- Disconnect the brake air lines, the brake will be applied automatically. Disconnect the semi-trailer electrical connections.
- Lower the mechanical landing gear of semi-trailer (use high speed). When the mechanical landing gear foots or wheels touch the ground, switch the mechanical landing gear crank handle to low-speed position to raise the semi-trailer.

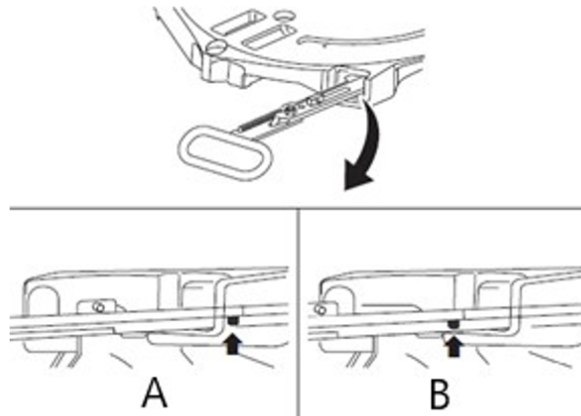


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- Unlock the fifth wheel lock. Separate the tractor from the semi-trailer about 500 mm by slowly moving the tractor forward. Lower the level of the rear suspension airbags of the tractor and leave the semi-trailer's bottom.



To ensure that the king pin is locked properly, engage the first gear of the tractor, and press the gas pedal, when you are slowly releasing the clutch, you will feel that the tractor strives to move the semi-trailer, this indicates that the connection is made properly. During the travel, this connection must be checked carefully to prevent separation of the semi-trailer from the tractor accidentally.



Fifth wheel locking system

A- Locked

B- Unlocked

5.3 CAUTIONS WHILE PARKING AND STOPPING

- Involuntary trailer movements, unstable posture and insufficient safety at night can cause serious accidents and injuries.
- Use the parking brake and wheel chocks while stopping.
- If you are going to park the vehicle in a public traffic area, you must use the necessary marking plate in accordance with legal regulations.

5.4 IMPORTANT TECHNICAL CONSIDERATIONS

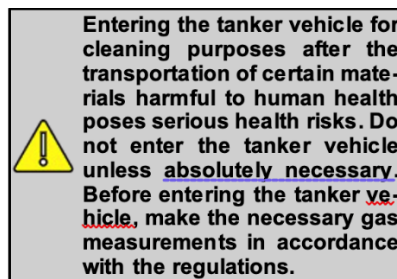
- Have fire extinguishers checked periodically every year and if necessary, fill them up. In case you use the fire extinguisher, fill it immediately.
- Keep the wheel chocks in their place and place them under the wheels during parking. Do not forget to pick up the wheel chocks.



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- Repairing and modification operations must be made by only authorized services. Otherwise, your vehicle may be out of warranty.
- In case the air pressure in the air tubes drops instantly with the engine stop, this means that there is a leakage in the pneumatic system. Contact the nearest authorized service in such a case. The air leakage affects the safety of the braking system
- Never do any welding work on the vehicle body and chassis. Disconnect the vehicle's electrical connection from the tractor before welding on the parts. It is recommended that you disconnect the tractor as well. Connect the minus (-) end of the welding machine as close as possible to the welded part in order to ensure sufficient contact with the part to be welded. Do not connect the negative (-) end to the bracket holders or the axle. Take care that welding sparks or slags do not fall on the bellows, air hoses, bracket holders etc.

5.5 CLEANING OF THE TRAILER

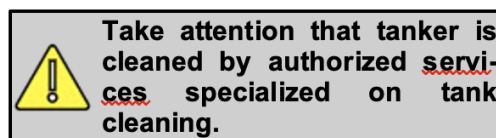


Ensure the tanker clean by daily inspections.

These inspections should be applied especially to connection elements and equipment used in loading and discharging. Dirt and product residuals should be cleaned immediately. Driver compartment should be kept clean and in order.

Warning signs, notes and stickers should be kept clean. Damaged and invisible signs should be replaced as soon as possible.

After transporting of chemicals, tanker should be cleaned and ventilated as soon as possible.



Before Cleaning the Tanker Vehicle:

- Make sure that the tank vehicle has been fully discharged and that there is no product residue left in the fittings, couplings and hoses,
- Make sure that the tank is depressurized
- Make sure that potential conductors are connected



FUEL TANKER TRAILER



Incompatible cleaning agents can damage the tank and its sealants. Only cleaning agents that are compatible with the tank and its sealants should be used.



When a tank that has been hot-cleaned cools down, vacuum damage can occur if the tank is insufficiently vented. Make sure that there is sufficient ventilation via the man-holes and valves.



Do not use the inflammable liquid or toxic substance for cleaning works.

External Cleaning ;



Newly painted surfaces can only be cleaned after a 4-week paint stiffening period. Cleaning done before this can damage the paint. During the first 4 weeks, the tanker vehicle should only be washed with cold water jet. Do not use pressurized water jets or hard brushes.



After 4 weeks: Washing painted surfaces with high-temperature water or abrasive cleaning materials may damage the paint.

- Wash the external of the tank only with water at a temperature below 60°C.
- Do not use abrasive cleaning detergents.
- Maintain the minimum distance required when using high-pressure water jet.

When cleaning the external of the vehicle

- Clean the outpouring load as soon as possible.
- Clean the residues of road salts regularly, as soon as possible.
- Clean the tanker vehicle once a week with a little water and a mild, non-corrosive detergent.



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If you are cleaning with high pressure

- Maintain minimum distance of 70 cm between the circular nozzle and the surface being cleaned.
- Maintain minimum distance of 30 cm between the flat nozzle and the surface being cleaned.
- Do not direct water on electrical components, receptacle connections, seal rings or hoses.



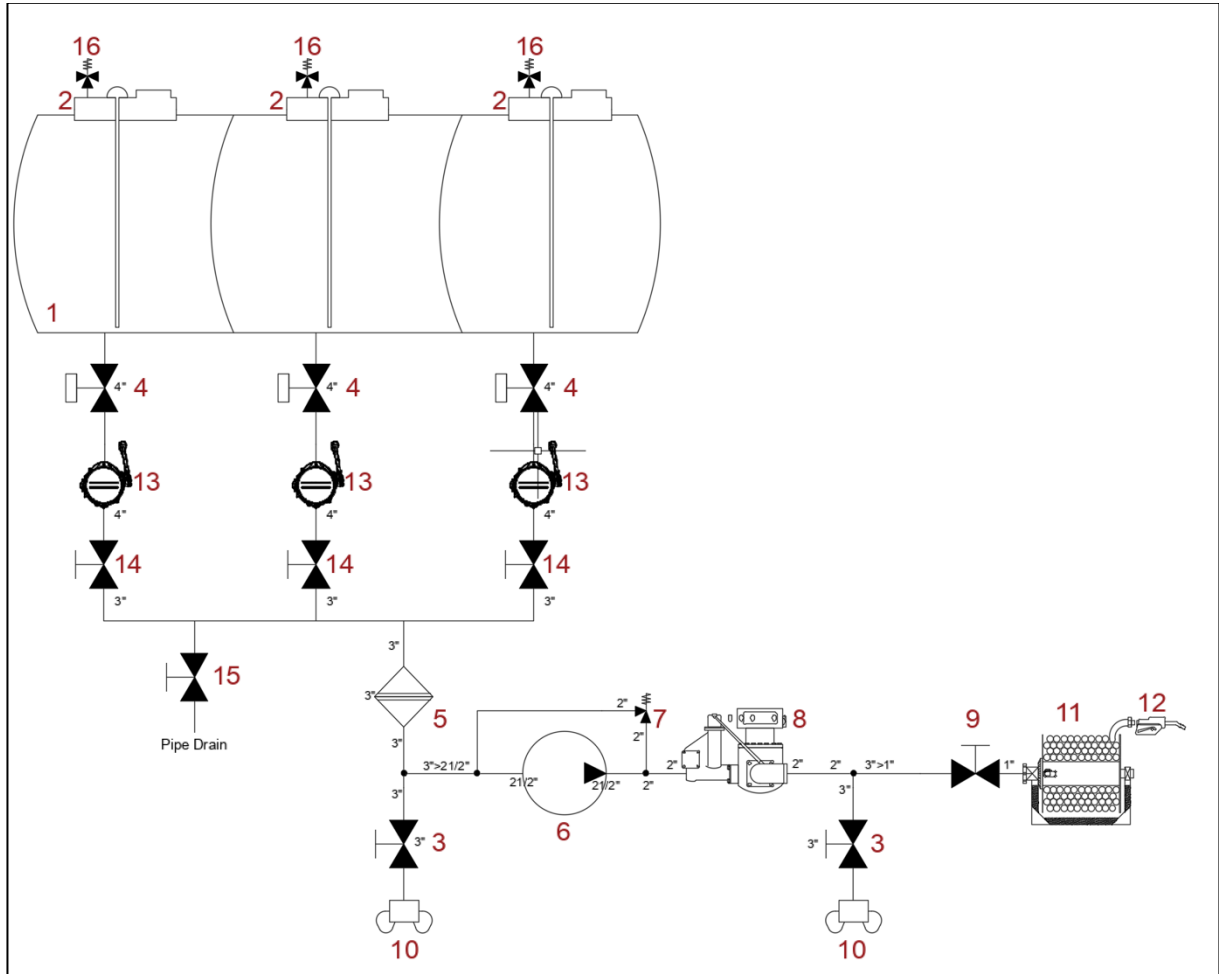
Do not use the inflammable liquid or toxic substance for cleaning works.



FUEL TANKER TRAILER

6. INSTALLATIONS

6.1 FUEL INSTALLATION

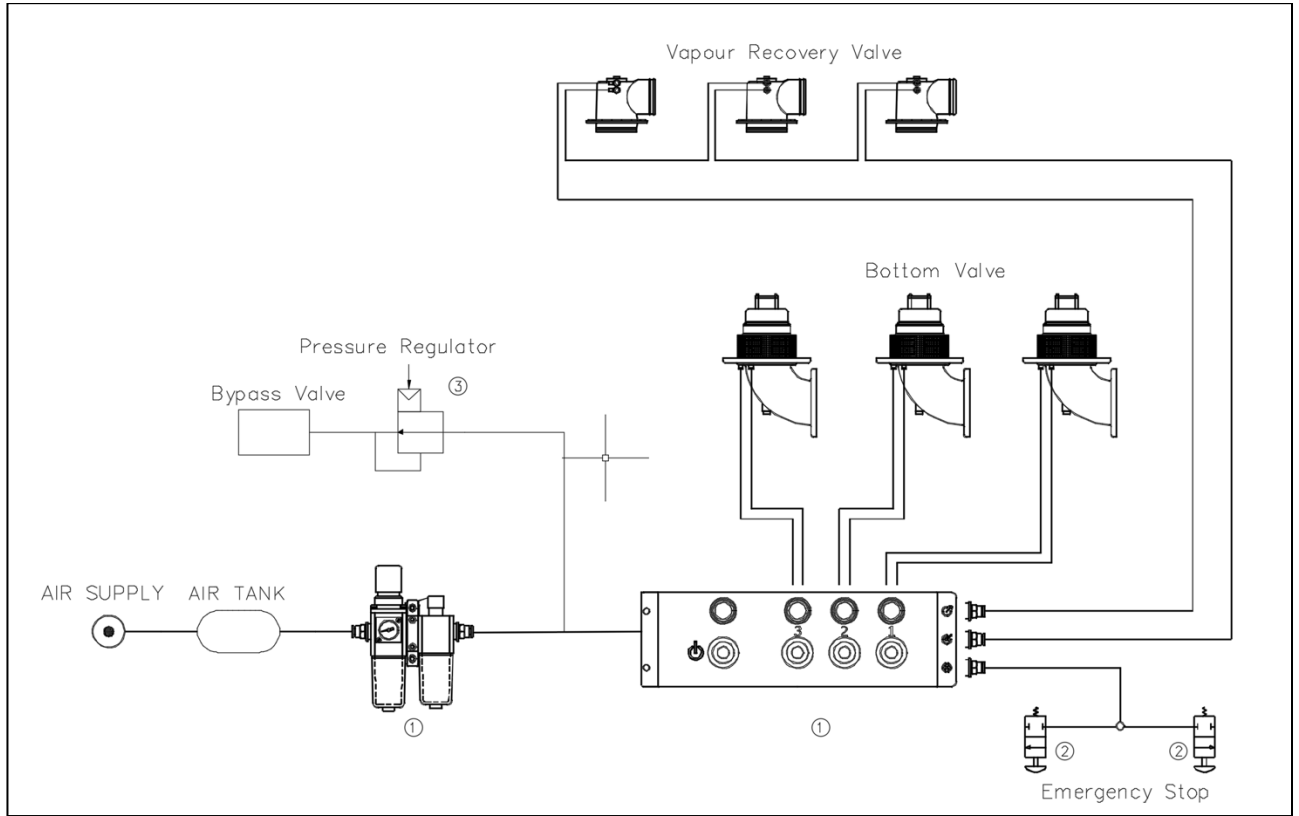


No.	Qty.	Part Name	Code
1	1	Fuel Tanker	45000lt
2	3	Manhole	Ø500 + Ø250 Cap +Pressure and Vacuum Breather Vent + Aluminum Gauging Dipstick
3	2	Ball Valve	Klepsan Both Side Female Thread PN16 3"
4	3	Pneumatic Bottom Valve	Both Side Flange 4" Karvansan
5	1	Filter	PFL212 21/2" Presizion
6	1	Fuel Pump	UNTPPY1212MSH 21/2" Presizion
7	1	Pneu. Bypass	MTS-PN-2 Bypass DN50 Flange
8	1	Fuel Flow Meter	PS-18E Electronic Counter Presizion
9	1	Ball Valve	Klepsan Both Side Female Thread PN16 1"
10	2	Camlock Coupling	3"x80 Male Thread Alu. + Blind Cap
11	1	Hose Reel	1"x30m Mites
12	1	Fuel Gun	1" Automatic Mites
13	3	API Valve + Blind Cap	Karvansan 4" API Valve + Blind Cap
14	3	Ball Valve	Güney Both Side Flange Connection PN16 3"
15	1	Ball Valve	Klepsan Both Side Female Thread PN16 1/2"
16	3	Vapour Recovery Valve	Pekersan N.C.

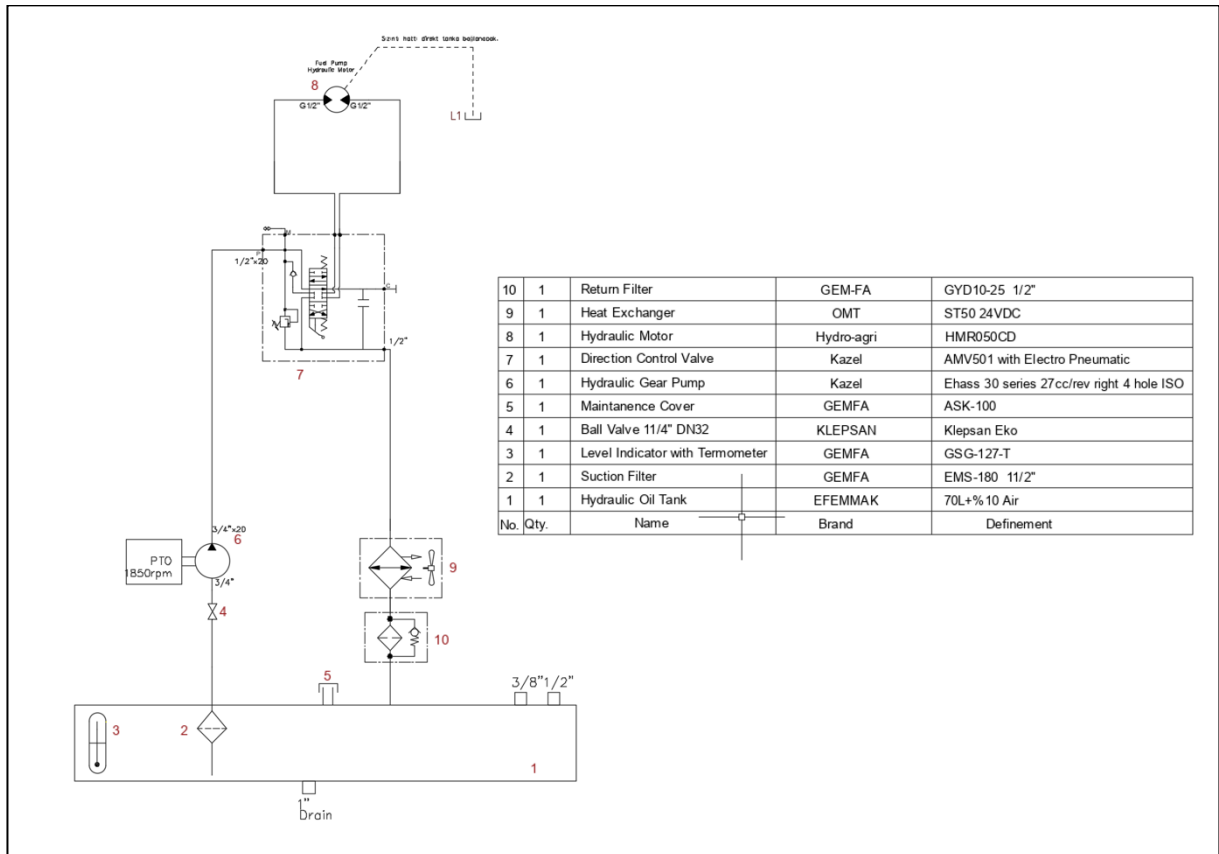


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6.2 PNEUMATIC INSTALLATION



6.3 HYDRAULIC INSTALLATION

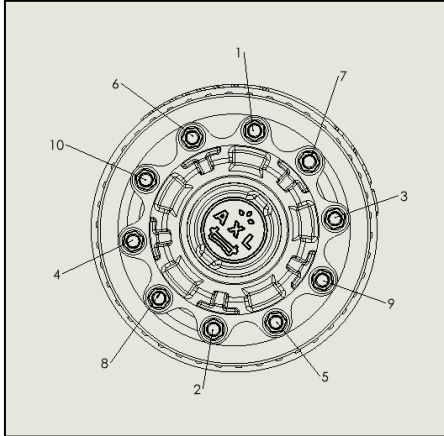




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7. PERIODIC MAINTENANCE AND CONTROLS

7.1 AXLE MAINTENANCE



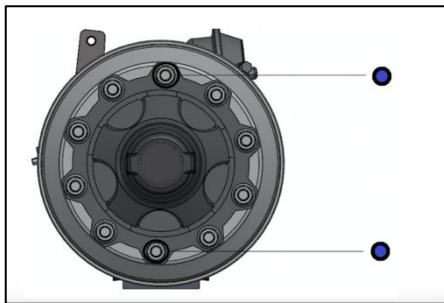
AFTER FIRST LOADING OR AFTER 1000 KM. DRIVING WHEEL NUT TORQUES MUST BE CHECKED.

TIGHTENING OF NUTS MUST BE IN ORDER AS GIVEN PICTURE.

TORQUE:

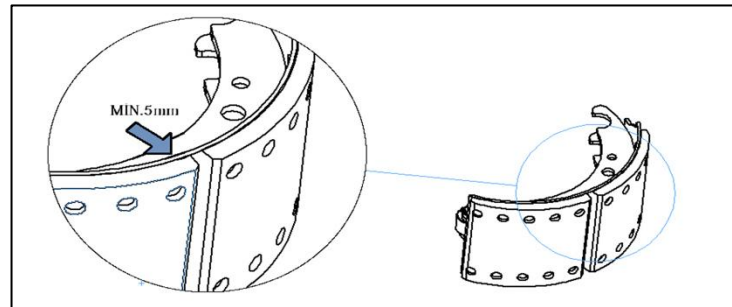
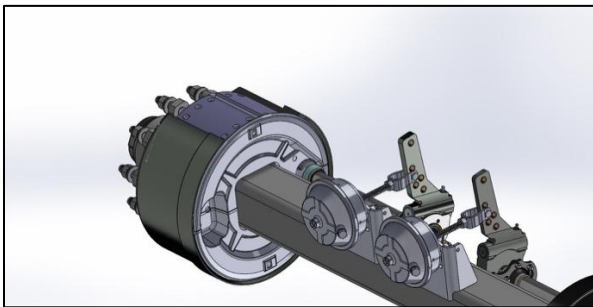
MIN. 650 NM , MAX 700 NM.

M22X 1.5 G10.9 BOLTS



IN RIM ASSEMBLY WHEEL RIM CENTER BRACKET MUST BE USED MIN. 2 NUTS MUST BE CENTERED. IN DOUBLE TYRE ASSEMBLY MUST BE USED DOUBLE WHEEL RIM CENTER BRACKET.

BRAKE LINING THICKNESS CONTROL



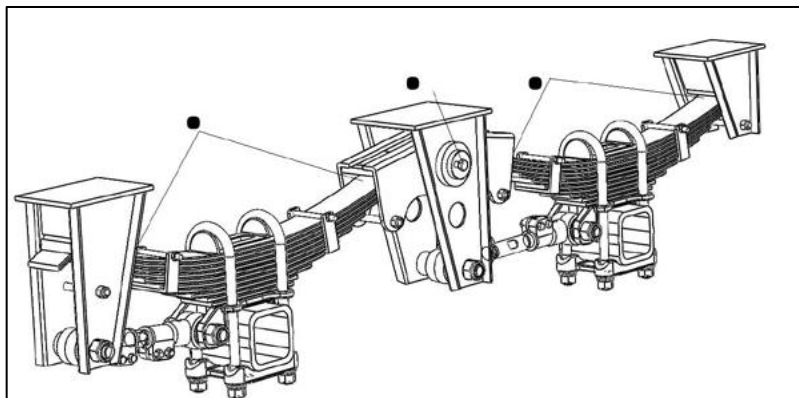
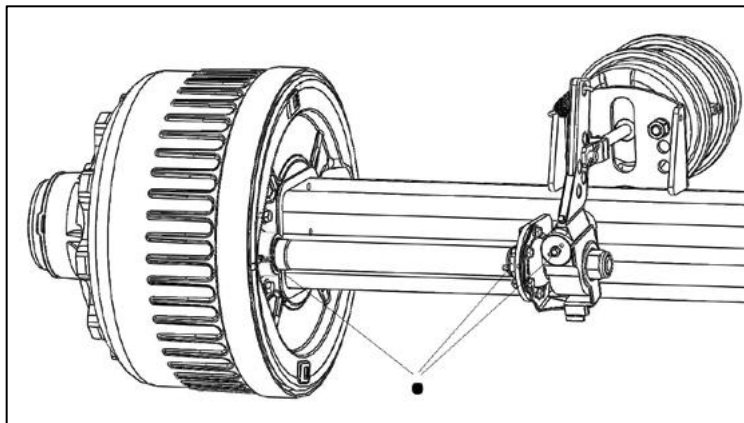
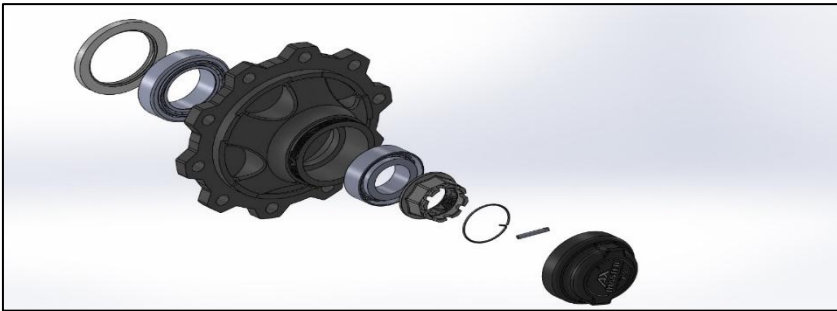
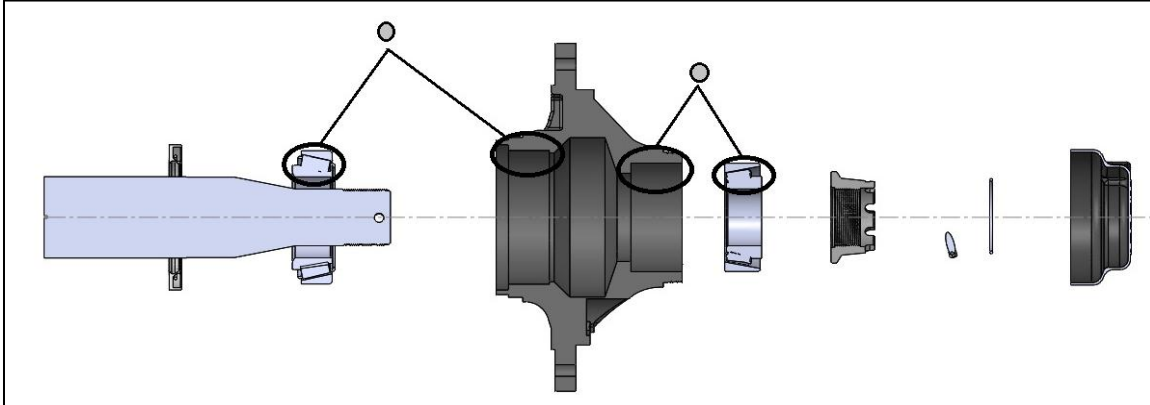
MIN. 5 MM. ALLOWED, WHEN REACHED 5 MM. LININGS MUST BE CHANGED IN CASE LATE MAINTENANCE DRUM WILL BE DAMAGED.



FUEL TANKER TRAILER

GREASING

EVERY 45 DAYS GREASING MUST BE DONE TO MENTIONED POINTS WHEN THERE IS NO LOAD ON AXLES.





FUEL TANKER TRAILER

		AXLE GROUP MAINTENANCE SCHEDULE					
FOR 9/14 TON DISC AND DRUM BRAKE AXLES							
CONTROL SCALE	WHICHEVER COMES FIRST			İLK	PERİYODİK KONTROLLER		
			TIME > KILOMETER >	1 MONTH 5.000	3 MONTHS 30.000	6 MONTHS 60.000	12 MONTHS 120.000
1	CHECK THE TIGHTNESS OF ALL WHEEL LUG NUTS.		AXL	AFTER THE FIRST LOADED JOURNEY AND AFTER THE FIRST 50 AND 100 KM OF TIRES CHANGE			
2	CHECK FOR UNEVEN TIRE WEAR		AXL		X		
(-)	CHECK BOLTS AND NUTS ACCORDING TO RECOMMENDED TORQUES		AXL	X		X	
(-)	VISUALLY INSPECT ALL PARTS FOR DAMAGE AND WEAR		AXL			X	
(-)	CHECK, CLEAN AND GREASE THE HUBS AND BEARINGS WITH NEW GREASE.		AXL				X
2	CHECK THE FUNCTIONING OF THE BRAKE ADJUSTERS		AXL		X		
3	REMOVE, CLEAN AND OIL THE BRAKE ADJUSTERS		AXL			X	
2	CHECK PAD WEAR. (FOR DRUM BRAKES)		AXL		X		
4	CHECK AND LUBRICATE THE CAMSHAFT AND ITS GUARD.		AXL			X	
2	CHECK DISC BRAKE PAD THICKNESS		AXL		X		
2	CHECK FOR CRACKS IN BRAKE DISCS		AXL		X		
2	CHECK BRAKE CALIPER GUIDE SYSTEM		AXL			X	
CONTROL FREQUENCY SCALE							
1	REGULAR MAINTENANCE BEFORE SETTING OUT ON THE ROAD						
2	REGULAR MAINTENANCE ON SHORT DISTANCE TRIPS						
3	TIGHTEN CHECKS IN SEVERE CONDITIONS						
4	EVERY BRAKE PAD CHANGE						



FUEL TANKER TRAILER

 EFEMMAK TORQUE CARD	
WHEEL NUTS	
U BOLT NUTS	
SPRING PIN NUTS	
AIRBAGS UPPER BOLTS	
AIRBAGS LOWER BOLTS	
AIRBAGS LOWER THREADED SCREW	
SHOCK ABSORBER NUTS	
S CAMSHAFT BEARING NUTS (M16)	
BRAKE CHAMBER CONNECTING NUTS (M16)	
AXLE NUT	
HUB COVER	
LIFTING AXLE ARM BRACKET NUT	
LIFT AXLE CYLINDER PISTON NUT	
WHEEL BOTS	
PLATE BOLTS	
LANDING LEGS	
KING PIN BOLTS	

AXL	
DRUM	DISK
Nm	
M22X1,5 / 630 (CROSS)	
M22 / 550 M24 - 10.9 QUALITY / 650	
M30 / 900	
M12 / 90	
M16 / 280	
14	
M24 / 690	
M10 / 66	
205	
450	
Until Torque Limits	
M30/180	
M10 / 66	
M 22 10.9 QUALITY / 600 ± 20 Nm M 16 10.9 QUALITY / 190 ± 10 Nm	
M16X1,5 - 8.8 QUALITY / 150 - M16 - 10.9 QUALITY / 190	
OMS	M14 - QUALITY 10.9 / 190 ± 10 Nm
SAF	
JOST	
CAYIROVA	



FUEL TANKER TRAILER

7.2 FUEL FILLING AND DISCHARGE COMPONENTS

Refer to the manufacturer documents as attached.

7.3 WET KIT HYDRAULIC SYSTEM

FIRST 50 HOURS

Check all connections, oil level and retighten connections and add oil if necessary

DAILY

Every day check the oil level, any leakage in the system and all connections are properly fit

EVERY 100 HOURS

Control the oil level in tank, add oil if necessary, check all hydraulic components and retighten connections if necessary.

EVERY 750 HOURS

Change the return filter

EVERY 1500 HOURS

Wash the oil tank, change the hydraulic oil. Clean the suction filter, if it has damage on it change it.

Oil brand	Hydraulic system oil
Petrol Ofisi	HYDRO OIL HD 46

7.4 FUEL FILTER

7.5

- **AFTER FIRST OPERATION**

Check the fuel filter and clean if necessary

- **AFTER FIRST 50 HOURS OPERATION**

Check the fuel filter and clean or replace if necessary

- **EVERY 100 HOURS**

Check the fuel filter and clean if necessary

- **EVERY 500 HOURS**

Change the fuel filter