

# User's Manual

## Transformer transportation instruction



## 1. General

This manual includes instructions for loading, unloading and transportation of the transformer. When using the instructions, you should combine the specific structure of the transformer, refer to the instructions for the relevant components, strictly follow the technical requirements of the instructions, and make a record of the entire process. If you have any questions or unclear points, please directly Contact the manufacturing company for timely and proper handling.

## 2. Transformer lifting requirements

### 2.1 Lifting for transformer body

2.1.1 The lifting equipment, spreaders and the foundation of the loading and unloading site must be able to withstand the lifting weight of the transformer.

2.1.2 When hoisting the transformer, the rope should be hung in the hoisting position so that the four slings are stressed at the same time.

2.1.3 The angle of the sling is not more than 60 ° during lifting. If this requirement cannot be met due to the limitation of the lifting height, the lifting beam should be used for lifting.

2.1.4 If you need to change the direction of the trolley or add bars at the bottom of the box during transportation, you need to use a jack to jack up the transformer at the position specified in the outline dimension drawing before proceeding. The jack bracket on the lower fuel tank is used for jacking up the main body of the transformer. When jacking up the main body, all jack brackets must be used at the same time. All jacks should be raised and lowered synchronously to prevent the main body from tilting and overturning.

2.1.5 Reference drawing: 5000kva 44/12.47KV outline drawing

## 3. Transformer shipping requirements

### 3.1 Loading

When is necessary to transport the transformer to its installation site, please follow these steps in order to avoid any damages to its structure or accidents to the personnel responsible of such operation:

- Select preferably, as means of transportation a "trailer" of a low platform

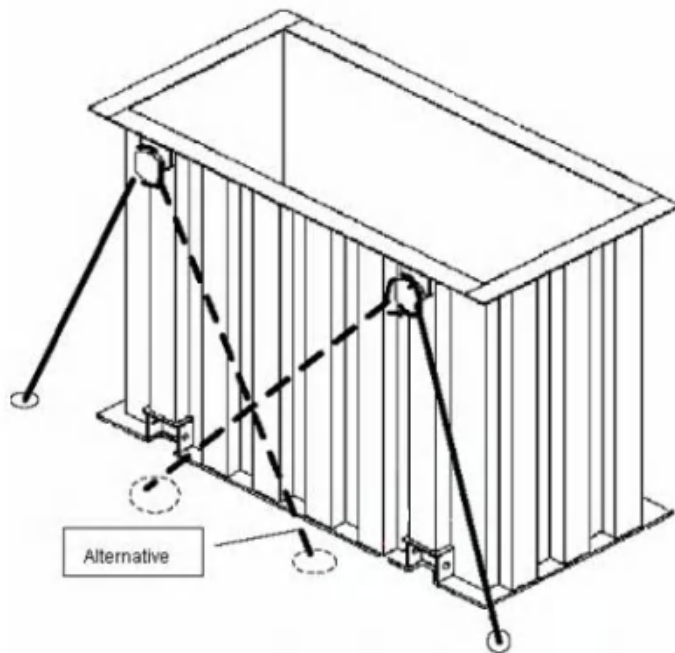


Figure 1. Tie-down hooks of the trailer

- Before the delivery of the transformer is strongly recommended to make a detailed revision of the route in order to anticipate to any possible obstacles (low clearance bridges), dangerous slopes, conditions of the highway, etc.
- As indicated in figure 2 the transformer must go as centered as possible in relation to the trailer.

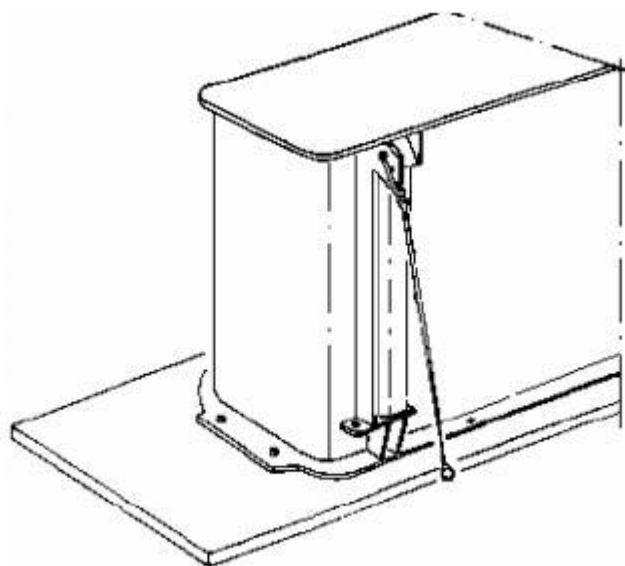


Figure 2. Position of the transformer on the trailer

- Check the condition of the tie-down hooks of the trailer and verify that they are in good condition.
- The expansion tank (if it is to be delivered with the transformer), must be placed behind the cabin of the truck.
- In each corner there should be at least two (2) tie-down hooks to secure the tank.
- Use when possible a steel chain or cable properly tensed. Never use either rope or any other material that may stretch. Each cable must offer a minimal resistance to traction of 15 tons.
- During transportation there should not be any slopes greater than 25° longitudinal and 30° transverse.

### **3.2 Unloading:**

- Before unloading the transformer from the vehicle observe if there are any missing pieces or deformations. If so, inform the manufacturer of these irregularities before starting any repair.
- When lifting the transformer, the suspension cables have to be maintained almost parallel to avoid any bending of the hooking bolts or other parts of the structure.
- When a transformer can not be handled by means of a crane, it may be moved by sliding it on skates or on rollers, but being careful of not to damage the base or of not to tilt it.
- The transformer should never be lifted or moved by placing levers or hydraulic jacks under the purge valve, cooling oil drainage, connections of the radiators or any other devices.
- When large transformers are moved on rollers, beams must be supplied to distribute the forces on the base.