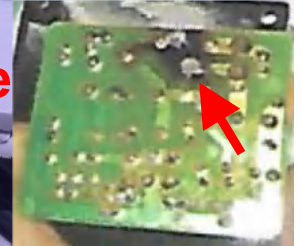


1. Applied model **Sudden Failure of**

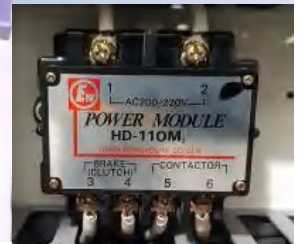
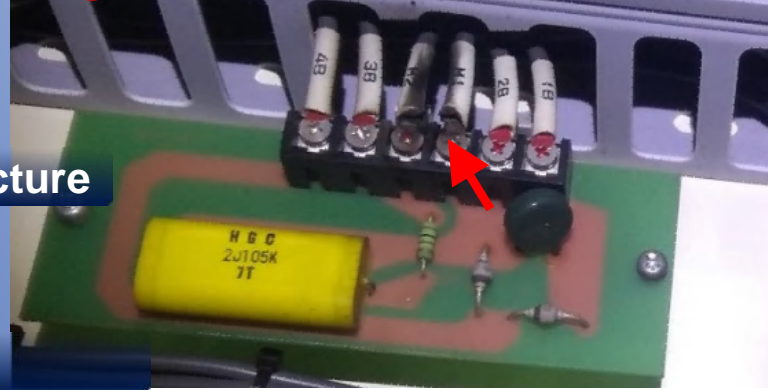
MSA, MSB,
MAA, MAB,
ML1, ML2,
MLA1, MLA2

Engine Room Overhead Crane



2. Date of manufacture

From 1995 up to Now



3. Outline

During operation of engine room crane, a trouble of hoisting motor suddenly happened and hoisting up and down became inoperative.

Travelling motor (FWD & AFT) and traversing motor (PORT & STBD) were in good condition.

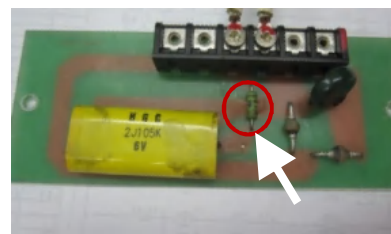
5A fuses were replaced to new ones since they were blown off. However, they were repeatedly blown off even if they changed to new spares. Other fuses found in good condition. Checking other parts such as relays, magnetic contactors and limit switches found in good condition.

Megger test found that the hoisting motor was also in good condition.

Upon detailed inspection of inside of the starter, it seemed that the part of the PCB (rectifier) was damaged.



Fuses repeatedly blew even if they were changed to new ones.



4. Cause

Due to the failure of magnetic brake or PCB (rectifier), the entire electric circuit to the magnetic brake caused an abnormality and the fuse which is a circuit protection parts was damaged.

5. Countermeasure

For avoiding malfunction of magnetic brake, adjust the brake gap by following the handling manual.

⚠ Renewal of PCB (rectifier) is the only method for repair. Please be careful as this kind of troubles cannot be repaired even temporarily without this part. PCB (Rectifier, Power module, Power unit) is a printed circuit board that converts AC voltage into DC voltage. If an abnormality occurs only in a specific motor, check if the PCB is not burnt and the input and output voltages are normal.

6. Maintenance



👉 The recommended period of PCB ("REF" in circuit drawing) usage is 5 years.

Electric circuit boards deteriorate over time and cause sudden failures, making it difficult to detect failures in advance.