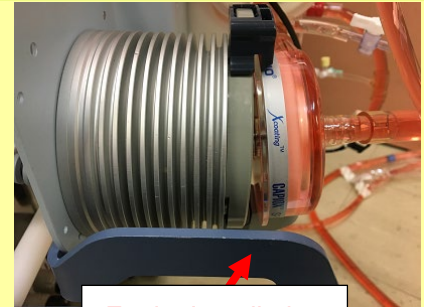


## Notes for Installing the Centrifugal Pump and the Drive Unit

### 【Case】

When the drive unit was visually inspected from the side after 24 hours from the start of ECMO, it was found that the centrifugal pump was floating above the drive unit.

In this case, ECMO was operated for 24 hours with a possible faulty installation, but there was no significant change from normal in the indicated flow rate relative to the rotational speed, even taking into account the afterload, and no particular damage or hemolysis of the centrifugal pump parts was observed.

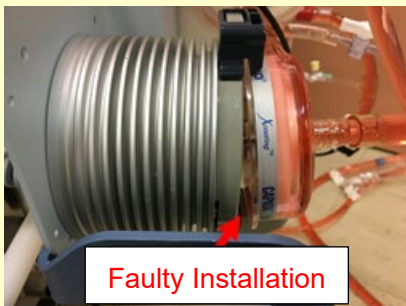


Faulty Installation



### 【Points to note】

If the centrifugal pump is not installed in the correct position, a gap may form between the drive unit and the centrifugal pump, causing abnormal motor speed and potential power transmission failure.



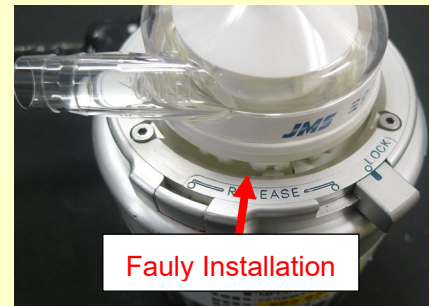
Faulty Installation

Capiox Centrifugal Pump



Faulty Installation

Mera Centrifugal Pump



Faulty Installation

Mixflow

If there is a gap between the centrifugal pump and the drive unit, even if there is no abnormality in the displayed flow rate, the centrifugal pump may be disconnected from the drive unit due to a slight shock to the main unit or tension applied to the circuit, such as during transportation, resulting in power transmission failure.



## Countermeasures

- Please follow each manufacturers' recommended method to mount the centrifugal pump to the drive unit.
  - Please double check the instructions for use for installation procedures.  
It is also effective to practice the installation method on a regular basis.
- Visual check from the front in one direction only may cause this kind of case, so please check visually from the side (horizontal direction) in multiple directions.
- This case is likely to occur during the setup prior to bypass, or in situations such as before and after transportation, so visual confirmation is recommended.
- Please review the checklist used at each facility.

**Caution: When a power transmission failure occurs, do not rush to return the drive unit to the proper state, but stop the drive unit once and install the centrifugal pump correctly to restore the proper state.**

➔ Attempting to install the centrifugal pump without stopping the drive unit may result in shaft misalignment or other damage to the centrifugal pump.