

Preventing a Shutdown at a Health Club Due to Major Equipment Failure



HVAC systems are crucial for health clubs to ensure optimal indoor air quality, maintain thermal comfort, and regulate humidity—all of which are essential for member health, safety, and optimal performance. This case study profiles how a PremiStar technician identified significant HVAC equipment problems on a routine visit to a leading international fitness club and marshaled the resources to prevent a shutdown.

Background



PremiStar provides HVAC equipment maintenance and emergency support for a leading international fitness club at four company-owned facilities throughout the Chicago-land area. On a Friday afternoon in July, with outside temperatures exceeding 80 degrees, a PremiStar HVAC technician performed a routine maintenance inspection, only to discover that the supply fan motor feeding the entire club was defective. With time constraints and the urgent need to diagnose and fix the issue before the weekend, the technician sprang into action, reaching out to five teammates for after-hours support.

Diagnosing the Problem



Despite prior commitments for the evening, all five teammates volunteered to assist and arrived on site to install a 50 hp blower motor in the AC air handler. As they proceeded with the repair, unexpected challenges arose when they discovered the Variable Frequency Drive (VFD) controlling the motor was also damaged.

The VFD is an electronic device that adjusts the speed of an electric motor, such as a fan or pump, by changing the frequency and voltage of the power supplied to it. This enables the system to precisely control airflow and other functions, resulting in improved temperature and humidity control, enhanced energy efficiency, and quieter operation.

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**System
Restoration**


Without hesitation, the team took immediate action, with one of them quickly sourcing a replacement VFD controller from a PremiStar supply house. Despite the late hours, they persevered and worked tirelessly until 1:00 a.m. to ensure the club would be operational the next day.

Unaware of the problem until it was brought to his attention, the fitness facility manager was elated with the quick thinking and after-hours restoration of the system, which prevented the club from having to close on a busy Saturday.

**Key
Takeaways**

Despite proper maintenance and diligent upkeep, key components of any HVAC system can fail unexpectedly. A preventive maintenance agreement with a trusted HVAC service provider helps prevent costly breakdowns, saves time and money, and extends the life of your equipment.

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