

# JEWELRY DISTRIBUTOR CASE STUDY

*For Testing, Adjusting, & Balancing by Melink Corporation*



## Project Introduction

A jewelry distributor operating a distribution center in Ontario had been enjoying optimal conditions for several years. However, a recent renovation project introduced comfort issues in the warehouse area. With the cause of these issues unclear, the jewelry distributor requested Melink Corporation to perform a comprehensive Testing, Adjusting, and Balancing (TAB) and investigate potential ductwork problems.

Melink Corporation was tasked with a customized scope of work that included standard TAB, a detailed ductwork investigation, and an as-built layout to demonstrate ductwork changes post-renovation.

## Solutions

Upon thorough inspection, Melink's technician identified several critical issues contributing to the discomfort in the warehouse. One Rooftop Unit (RTU) was non-functional due to a damaged fan motor, which was promptly repaired by the onsite team before the technician's departure. Several pulleys required immediate replacement, remote sensors were not installed, and Variable Frequency Drives

## Key Takeaways

- **Despite common misconceptions, newly installed HVAC equipment is not pre-balanced.**
- **Unchecked or unbalanced HVAC equipment can lead to significant issues, often resulting in higher repair costs compared to a regular TAB or maintenance.**
- **Verifying your HVAC equipment's installation & operation helps ensure peak performance.**

(VFDs) were found disconnected, hampering efficiency. Multiple units had damaged and leaking ductwork, and Outside Air (OA) dampers on several units were damaged, impacting airflow and ventilation. A comprehensive punchlist and recommendations were provided to the customer in our full report.

While onsite, the technician made several adjustments to improve the system's



performance and comfort levels in the warehouse. Key actions included reconnecting VFDs to restore efficiency, minor ductwork repairs to enhance airflow, and temporary solutions to damaged OA dampers to improve ventilation. In addition to these immediate improvements, the technician also provided the jewelry distributor with a detailed list of further actions required to fully address the airflow and comfort issues. This included replacing pulleys, installing remote sensors, and conducting extensive ductwork repairs.

Melink Corporation had a history of successful collaborations with this jewelry distributor, having previously conducted HVAC system commissioning and standard TAB services for their retail jewelry stores. This existing relationship facilitated a smooth transition into addressing the new issues within the distribution center environment.



*A section of rooftop unit ductwork that is dented and is not properly serving airflow to the connected diffuser.*



*An exhaust fan motor pulley that is secured with a screw.*

## Final Insights

The case study for the jewelry distributor's distribution center exemplifies Melink Corporation's expertise in addressing complex HVAC issues on a large scale. By performing a comprehensive TAB and ductwork investigation, Melink was able to identify and rectify immediate problems while providing a clear roadmap for future improvements. This proactive approach ensures enhanced comfort and efficiency, reinforcing Melink Corporation's reputation as a reliable partner for HVAC solutions. The project was completed on all brand-new equipment from the renovation, highlighting that new installations do not guarantee proper HVAC performance or correct installation. Melink's ability to handle large-capacity project sites and deliver effective solutions showcases their capacity to manage and optimize HVAC systems, regardless of the equipment's age.