

## **Abel Building Solutions – Air Conditioning Division- Service Department**

### **Maintenance of Air Conditioning Units**

#### **Scope of Works when Servicing an Air Conditioning Unit:**

- Visual Inspection- Check for unusual noise/vibration or visible leaks, compressor oil level and the sight glass.
- Check Equipment Start Up and Shut Down- This ensures that the unit's operating sequence is as designed.
- Inspect and Clean Air Filters- A dirty filter can substantially reduce the airflow over the evaporator coil. This results in inadequate cooling, higher energy usage and, in extreme cases, can lead to compressor failure.
- Lubricate All Moving Parts- Poor lubrication causes drag in motor and drive components. This results in noise, increase energy consumption and eventual motor and bearing failure.
- Clean Blower Wheels and Check Components- A dirty blower wheel cuts the air rather than pushes it. This results in reduced airflow and corresponding loss of cooling. Slack belts cause similar problems. The pulleys are also checked. Misaligned pulleys will wear both belts and pulleys, demanding early replacement.
- Chemically Clean Coils- Foreign material on coils restrict airflow and heat transfer thereby reducing cooling while increasing energy consumption. Cleaning these coils at high pressure with approved chemicals insures optimum heat transfer without destroying the coils.
- Check and Clean Electrical Connections- Loose and dirty connections are the major cause of electrical failures, which account for eighty percent of unit breakdowns. The resistance caused by loose connections or poor contacts will create excessive heat at these points leading to decreased voltage being supplied to the leads, causing premature failure.

- Clean Drain Pan and Flush Drain Lines- A clogged condensate drain can lead to extensive water damage to carpets, ceilings, computers and paperwork. At the very least a drain pan full of water can increase the humidity levels.
- Perform a complete performance evaluation on all components of packaged liquid chiller, including but not limited to, compressors, fan motors, transducers, EXVs, sensors, electro- mechanical components, moisture levels, chiller controls and refrigerant charge levels.
- Perform chilled water pump performance analysis.