



## Preventive Maintenance For Your Air Conditioning

### Risk Solutions

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### Introduction

Every year The Hartford Steam Boiler Inspection and Insurance Co. (HSB) investigates numerous air conditioning (A/C) unit failures. The primary reason for the majority of these failures is poor preventive maintenance prior to startup.

To help you achieve the reliable and uninterrupted service you expect from your A/C unit during the coming cooling season, we are offering the following recommendations:

### Crankcase

One of the most critical controls in the A/C unit is the crankcase heater. Preferably, the heater should be left energized while the equipment is idle. During spring start up the A/C units may operate below the evaporator temperatures. If spring or fall operation is required, a crankcase heater is required. An external crankcase heater can readily be installed if not factory supplied. The energized heater will minimize refrigerant migration, foaming of the oils and immediate compressor failure. It is vital that the crankcase heater be energized at least 8 hours before starting the A/C unit.

### Condenser

The unit's condenser should be cleaned at a minimum of once each year. If the condenser is located in a high dust and dirt area, it should be scheduled for more frequent cleaning. A clean condenser will prevent high head pressure which can shorten the life of the unit. This is a easy step to avoid external equipment failure.

### Electrical

- The motor magnetic starters should be inspected prior to startup
- The contacts may be deteriorated as the result of cycling of the compressor
- All terminal connections should be checked and tightened and all pitted contacts should be replaced



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## Mechanical

Because the operating and safety controls are the heart of the unit, they should be checked to see that they are properly calibrated and in working order. Like all electrical and mechanical equipment, these controls wear out and must be replaced.

The oil in the unit should be tested prior to starting the unit. The results of the analysis will let you know if the oil will hold up for the coming season. If there is any question about the oil quality, the oil should be replaced.

## Moisture

The A/C system should be equipped with a moisture indicator. This device will detect the presence of moisture within the system. If moisture is present, filter dryers should be installed or changed to remove this moisture. More importantly, the source of the moisture should be determined and preventive action taken to correct the condition. New refrigerants (post R-22), will attract moisture and can cause internal icing failures.

## Cost

- Even when machinery insurance is available, the deductible may still account for a considerable expense.
- Because we are talking about A/C units, we are usually talking about hot weather breakdowns.
- In addition, if you have tenants or are trying to run a business, you don't need the added headaches of irate customers because your system is down from minor maintenance oversights.

## HSB help

- A/C logs are available through your local HSB inspector. This information will help you schedule maintenance for your unit.
- All of the work outlined above can be handled at one pre-season inspection by a good A/C service contractor. Your HSB inspector will assist you in finding a local concern that will look after your A/C unit requirements.
- Please give us a call! We are ready to assist you in taking care of your A/C unit needs.

*Our advice is intended to complement the equipment manufacturers' recommendations not replace them. If you have doubts about any particular procedure, contact your equipment service representative.*