

ROUTINE AND PREVENTIVE MAINTENANCE PROGRAMS

(Prepared Per ASHRAE Guidelines 4-1993)
Excerpted from HVAC Handbook by Robert Rosaler,
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CONVENTIONAL CONDENSATE TRAP

Traps located indoors or outdoors, with outdoor temperatures above freezing

1. Frequency and Time of Inspection and Service:

- (a) For systems that provide summer cooling and winter heating,

During Cooling Operation:

- # #
- Annually—at initial system start-up for cooling.
 - Semiannually—at initial system start-up and at other system start-up times, if facility is shut down periodically for a week or more, (e.g. schools).

During Heating Operation:

- Biweekly—between cooling system shut-down and at start-up for summer cooling.
- (b) For systems that provide summer cooling and winter cooling,
- Semiannually—at 6 month intervals. One inspection must be made at system start-up, and at periodic shut-down of facility for a week or more, (e.g., schools).

2. Maintenance Effort Required:

- (a) At each annual inspection (and semiannually, if need is indicated)
- Physically remove flow-blocking algae and/or debris, or replace trap
 - Flush with water
 - Treat with EPA approved biocide
 - Fill trap with water and add biocide tablets
- (b) At each biweekly inspection, (if need is indicated)
- Fill with water and add biocide tablets

3. Equipment and Material Needed:

- (a) Internal pipe scraper
- (b) New trap
- (c) Water hose
- (d) Biocide

4. Estimated Time Required:

- (a) Annually and semiannually:
- 5 minutes per inspection + 25 minutes travel time to and from maintenance shop and system site
 - 0 to 60 minutes per time serviced + 25 minutes travel time to and from maintenance shop and system site
- (b) Biweekly:
- 5 minutes per time serviced + 25 minutes travel time to and from maintenance shop and system site

Traps located outdoors, with outdoor temperatures below freezing

1. Frequency and Time of Inspection and Service:

- (a) For systems that provide summer and winter cooling and winter heating,
- ##### **During Cooling Operation:**
- Not possible to maintain a condensate trap during winter cooling under these conditions—flowing condensate will freeze in trap, block flow, and damage trap
- ##### **During Heating Operation:**
- Not possible to maintain a condensate trap during winter heating under these conditions unless the trap is filled with water, it will not hold a seal and when filled, water will freeze and block condensate flow.

CostGard™ CONDENSATE DRAIN SEAL

Drain seals located indoors or outdoors, with outdoor temperatures above or below freezing

1. Frequency and Time of Inspection and Service:

- (a) For all systems that provide summer cooling and winter heating,
- Annually—at the beginning of cooling operation, when condensate is flowing
 - Annually—during heating operation

2. Maintenance Effort Required:

- (a) If condensate is not flowing freely during cooling operation and/or condensate is standing in the pan,
- Check for debris inside the device and in the condensate drain line. If present, physically remove and flush inside with water.
 - Check operating pressures per HVAC system specification limits. If pressures are outside the defined limits, find the cause and remedy it.
- (b) If no air is being exhausted from the vent,
- Check operating pressures per HVAC system specification limits. If pressures are outside the defined limits, find the cause and remedy it.

3. Equipment and Material Needed:

- (a) Water hose
- (b) Pressure gauge

4. Estimated Time Required:

- (a) Less than 5 minutes per inspection + 25 minutes travel time to and from maintenance shop and system site
- (b) 0 to 30 minutes per time serviced + 25 minutes travel time to and from maintenance shop and system site