

HVAC Checklist - Long Form

Building: _____ File Number: _____

Completed by: _____ Title: _____ Date Checked: _____

Appendix B discusses HVAC system components in relation to indoor air quality.

Component	OK	Needs Attention	Not Applicable	Comments
Outside Air Intake				
Location _____ _____				
Open during occupied hours?				
Unobstructed?				
Standing water, bird droppings in vicinity?				
Odors from outdoors? (describe) _____ _____				
Carryover of exhaust heat?				
Cooling tower within 25 feet?				
Exhaust outlet within 25 feet?				
Trash compactor within 25 feet?				
Near parking facility, busy road, loading dock?				
Bird Screen				
Unobstructed?				
General condition?				
Size of mesh? (1/2" minimum)				
Outside Air Dampers				
Operation acceptable?				
Seal when closed?				

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Component	OK	Needs Attention	Not Applicable	Comments
Actuators operational?				
Outdoor Air (O.A.) Quantity <i>(Check against applicable codes and ASHRAE 62-1989.)</i>				
Minimum % O.A. _____				
Measured % O.A. _____ <i>Note day, time, HVAC operating mode under "Comments"</i>				
Maximum % O.A. _____				
Is minimum O.A. a separate damper?				
For VAV systems: is O.A. increased as total system air-flow is reduced?				
Mixing Plenum				
Clean?				
Floor drain trapped?				
Airtightness				
■ of outside air dampers				
■ of return air dampers				
■ of exhaust air dampers				
All damper motors connected?				
All damper motors operational?				
Air mixers or opposed blades?				

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Component	OK	Needs Attention	Not Applicable	Comments
Mixed air temperature control setting _____°F				
Freeze stat setting _____°F				
Is mixing plenum under negative pressure? <i>Note: If it is under positive pressure, outdoor air may not be entering.</i>				
Filters				
Type _____				
Complete coverage? (i.e., no bypassing)				
Correct pressure drop? (<i>Compare to manufacturer's recommendations.</i>)				
Contaminants visible?				
Odor noticeable?				
Spray Humidifiers or Air Washers				
Humidifier type				
All nozzles working?				
Complete coil coverage?				
Pans clean, no overflow?				
Drains trapped?				
Biocide treatment working? <i>Note: Is MSDS on file?</i> _____				
Spill contaminant system in place?				

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Component	OK	Needs Attention	Not Applicable	Comments
Face and Bypass Dampers				
Damper operation correct?				
Damper motors operational?				
Cooling Coil				
Inspection access?				
Clean?				
Supply water temp. _____°F				
Water carryover?				
Any indication of condensation problems?				
Condensate Drip Pans				
Accessible to inspect and clean?				
Clean, no residue?				
No standing water, no leaks?				
Noticeable odor?				
Visible growth (e.g., slime)?				
Drains and traps clear, working?				
Trapped to air gap?				
Water overflow?				

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Component	OK	Needs Attention	Not Applicable	Comments
Mist Eliminators				
Clean, straight, no carryover?				
Supply Fan Chambers				
Clean?				
No trash or storage?				
Floor drain traps are wet or sealed?				
No air leaks?				
Doors close tightly?				
Supply Fans				
Location _____				
Fan blades clean?				
Belt guards installed?				
Proper belt tension?				
Excess vibration?				
Corrosion problems?				
Controls operational, calibrated?				

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Component	OK	Needs Attention	Not Applicable	Comments
Control sequence conforms to design/specifications? (describe changes)				
No pneumatic leaks?				
Heating Coil				
Inspection access?				
Clean?				
Control sequence conforms to design/specifications? (describe changes)				
Supply water temp. _____°F				
Discharge thermostat? (air temp. setting _____°F)				
Reheat Coils				
Clean?				
Obstructed?				
Operational?				
Steam Humidifier				
Humidifier type				
Treated boiler water				
Standing water?				

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Component	OK	Needs Attention	Not Applicable	Comments
Visible growth?				
Mineral deposits?				
Control setpoint _____°F				
High limit setpoint _____°F				
Duct liner within 12 feet? (If so, check for dirt, mold growth.)				

Supply Ductwork

Clean?				
Sealed, no leaks, tight connections?				
Fire dampers open?				
Access doors closed?				
Lined ducts?				
Flex duct connected, no tears?				
Light troffer supply?				
Balanced within 3-5 years?				
Balanced after recent renovations?				
Short circuiting or other air distribution problems? Note location(s) _____ _____				

Pressurized Ceiling Supply Plenum

No unintentional openings?				
All ceiling tiles in place?				

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Component	OK	Needs Attention	Not Applicable	Comments
Barrier paper correctly placed and in good condition?				
Proper layout for air distribution?				
Supply diffusers open?				
Supply diffusers balanced?				
Noticeable flow of air?				
Short circuiting or other air distribution problems? <i>Note location(s) in "Comments"</i>				
Terminal Equipment (supply)				
Housing interiors clean and unobstructed?				
Controls working?				
Delivering rated volume?				
Balanced within 3-5 years?				
Filters in place?				
Condensate pans clean, drain freely?				
VAV Box				
Minimum stops _____ %				
Minimum outside air ____ % <i>(from page 2 of this form)</i>				
Minimum airflow _____ cfm				
Minimum outside air _____ cfm				

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Component	OK	Needs Attention	Not Applicable	Comments
Supply setpoint _____°F (summer) _____°F (winter)				
Thermostats				
Type _____				
Properly located?				
Working?				
Setpoints _____°F (summer) _____°F (winter)				
Space temperature _____°F				
Humidity Sensor				
Humidistat setpoints _____ % RH				
Dehumidistat setpoints _____ % RH				
Actual RH _____ %				
Room Partitions				
Gap allowing airflow at top?				
Gap allowing airflow at bottom?				
Supply, return each room?				

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Stairwells				
Doors close and latch?				
No openings allowing uncontrolled airflow?				
Clean, dry?				
No noticeable odors?				
Return Air Plenum				
Tiles in place?				
No unintentional openings?				
Return grilles?				
Balancing capability?				
Noticeable flow of air?				
Transfer grilles?				
Fire dampers open?				
Ducted Returns				
Balanced within 3-5 years?				
Unobstructed grilles?				
Unobstructed return air path?				
Return Fan Chambers				
Clean and no trash or storage?				
No standing water?				
Floor drain traps are wet or sealed?				

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No air leaks?				
Doors close tightly, kept closed?				
Return Fans				
Location _____				
Fan blades clean?				
Belt guards installed?				
Proper belt tension?				
Excess vibration?				
Corrosion problems?				
Controls working, calibrated?				
Controls sequence conforms to design/specifications? (describe changes)				
Exhaust Fans				
Central?				
Distributed (locations) _____ _____				
Operational?				
Controls operational?				
Toilet exhaust only?				
Gravity relief?				

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Component	OK	Needs Attention	Not Applicable	Comments
Total powered exhaust _____ cfm				
Make-up air sufficient?				
Toilet Exhausts				
Fans working occupied hours?				
Registers open, clear?				
Make-up air path adequate?				
Volume according to code?				
Floor drain traps wet or sealable?				
Bathrooms run slightly negative relative to building?				
Smoking Lounge Exhaust				
Room runs negative relative to building?				
Print Room Exhaust				
Room runs negative relative to building?				
Garage Ventilation				
Operates according to codes?				
Fans, controls, dampers all operate?				

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Garage slightly negative relative to building?				
Doors to building close tightly?				
Vestibule entrance to building from garage?				
Mechanical Rooms				
General condition?				
Controls operational?				
Pneumatic controls:				
■ compressor operational?				
■ air dryer operational?				
Electric controls?				
EMS (Energy Management System) or DDC (Direct Digital Control):				
■ operator on site?				
■ controlled off-site?				
■ are fans cycled "off" while building is occupied?				
■ is chiller reset to shed load?				
Preventive Maintenance				
Spare parts inventoried?				
Spare air filters?				
Control drawing posted?				

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PM (Preventive Maintenance) schedule available?				
PM followed?				
Boilers				
Flues, breeching tight?				
Purge cycle working?				
Door gaskets tight?				
Fuel system tight, no leaks?				
Combustion air: at least 1 square inch free area per 2000 Btu input?				
Cooling Tower				
Sump clean?				
No leaks, no overflow?				
Eliminators working, no carryover?				
No slime or algae?				
Biocide treatment working?				
Dirt separator working?				
Chillers				
No refrigerant leaks?				
Purge cycle normal?				
Waste oil, refrigerant properly disposed of and spare refrigerant properly stored?				
Condensation problems?				

