

AHU Maintenance Schedule

Air Handling Unit maintenance inspections should be completed at the following intervals - Weekly | Monthly | 3-Months | 6-Months | 12-Months | 24 Months and 36 Months, here we detail what has been inspected and documented.

Project Name:	
Date:	
Equipment ID.	

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Who will complete the checks/maintenance?

If the building construction process is still ongoing or it is still within the defect's liability period, then the responsibility for the maintenance will be the general/main contractor.

Where the building/systems are outside of the defects liability period then the maintenance of the unit will be completed by the building facilities manager/operator.

Parts and Components to be Inspected

The following parts and components will be inspected under this work:

- Air Intake and Plenum
- General Ducting
- Attenuators
- Air Handling Unit Frame and Casing
- Dampers
- Mixing Box
- Filters
- Frost Coil
- Blower Fan and Direct Drive Motor
- Vibration Mounts
- Electrical Isolators
- Emergency Stop
- Dx System Compressor
- Dx System Evaporator
- Dx Condenser
- CHW Cooling Coil
- Condensate Tray and Pipework
- LTHW Heating Coil
- Electric Heater
- Steam Generator
- Humidifier
- Heat Exchanger/Thermal Wheel
- Pumps
- Control Valves
- Actuators
- Pressure Sensors
- Temperature Sensors
- Thermostats
- CO2 Sensor

- Smoke Detector
- Variable Speed Drive
- Air Handling Unit Control Panel
- Air Terminal Devices
- External Dx Unit

Standard Routine Maintenance Schedule




The routine and timings for the checks will be broken into the following time frames:




- Weekly inspections
- 1-month inspections
- 3-month inspections
- 6-month inspections
- 12-month inspections
- 24-month inspections
- 36-month inspections

Note: Prior to any works taking place on the equipment the following should be in place:




- Full Risk Assessments
- Electrical isolations including 'lock out tag out' of Equipment and Panels including documentation.




Weekly Inspection Checklist

				
W-1	Inspect	Unit - Observe and review the unit for any changes in operating conditions. If any are noted, they should be investigated further.	✓	✗
W-2	Inspect	Unit – Listen for any unusual noises. If any are noted, they should be investigated further.	✓	✗




					
W-3	Inspect	<p>Set Point – Visually Inspect temperature setting to ensure as per design/operational needs.</p> <p>If it is not, investigate as to why and reset if no reason provided.</p> <p><i>Note: changes could impact the buildings energy usage.</i></p>	✓	✗	
W-4	Inspect	Steam Generator – Inspect for damage and leakage.	✓	✗	
W-5	Inspect	Steam Humidifier – Check for damage and leakage	✓	✗	
W-6	Inspect	Steam Humidifier – Visually inspect water levels.	✓	✗	
W-7	Inspect	Steam Humidifier – Visually inspect the overall steam installation and supply pipework for any damage or leakage.	✓	✗	
W-8	Inspect	Steam Humidifier – Visually inspect drainage pipework for any blockages and obstructions.	✓	✗	
W-9	Inspect	Steam Humidifier Control Panel – Visually inspect electrical connections, components, and cables for damage/issues.	✓	✗	




Monthly Inspection Checklist




					
1M-1	Inspect	Filters - Visually inspect filter for dust, debris, foreign objects, moisture, and smells taking note of any issues. Replace filter if smells or contains moisture.	✓	✗	
1M-2	Inspect	Filters - Visually inspect filter frames and rails for contamination, foreign objects, corrosion, and damage. If anything noted, then clean or inspect/conduct remedial action.	✓	✗	
1M-3	Inspect	Filters - Take readings from the differential pressure devices/bms across the filters. Replace or clean if max differential pressure is exceeded.	✓	✗	
1M-4	Inspect	Strainer - Remove strainer mesh inspect for contamination, foreign objects, corrosion, and damage. If anything noted then clean or inspect/conduct remedial action.	✓	✗	
1M-5	Measure	Steam Humidifier – Take samples and analyse the	✓	✗	




				
		<p>water quality and conductivity serving the steam equipment to ensure it is in line with the manufacturer's requirements.</p> <p>Any noted issues should be investigated, and remedial action taken.</p>		




3-Month Inspection Checklist




					
3M-1	Inspect	Unit – Visually inspect the internal and external cleanliness of the unit. If anything noted, then conduct remedial action.	✓	✗	
3M-2	Inspect	Fan Motor – Inspect belts and pulley tensions, in line with the manufacturer's requirements, and for wear and tear. Any noted issues should be investigated, and remedial action taken.	✓	✗	
3M-3	Inspect	Fan Motor - Inspect motor bearings for vibrations, noise, overheating and lubrication. If anything noted, then conduct remedial action/lubricate.	✓	✗	
3M-4	Measure	Chilled Water - Take samples and analyse the water quality serving all wet coils to ensure it is in line with the original design requirements. Any noted issues should be investigated, and remedial action taken.	✓	✗	
3M-5	Measure	Heating Water - Take samples and analyse the	✓	✗	

					
		<p>water quality serving all wet coils to ensure it is in line with the original design requirements.</p> <p>Any noted issues should be investigated, and remedial action taken.</p>			
3M-6	Inspect	<p>Frost Coil - Visually inspect for contamination, foreign objects, corrosion, leakage, and damage.</p> <p>If anything noted, then clean or inspect/conduct remedial action.</p>	✓	✗	
3M-7	Inspect	<p>Cooling Coil - Visually inspect for contamination, foreign objects, corrosion, leakage, and damage.</p> <p>If anything noted, then clean or inspect/conduct remedial action.</p>	✓	✗	
3M-8	Inspect	<p>Evaporator - Visually inspect for contamination, foreign objects, corrosion, leakage, and damage.</p> <p>If anything noted, then clean or inspect/conduct remedial action.</p>	✓	✗	
3M-9	Inspect	<p>Evaporator - Visually inspect for any ice build-up.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	




					
3M-10	Inspect	Condenser - Visually inspect for contamination, foreign objects, corrosion, leakage, and damage. If anything noted, then clean or inspect/conduct remedial action.	✓	✗	
3M-11	Inspect	Compressor – Inspect the oil levels to ensure they are in line with the manufacturer’s requirements. If anything noted, then conduct remedial action.	✓	✗	
3M-12	Inspect	Condensate Drain - Visually inspect pan for contamination, foreign objects, corrosion, and damage. If anything noted, then clean or inspect/conduct remedial action.	✓	✗	
3M-13	Test	Condensate Drain Pan – Conduct flow test on drain pan, trap and pipework system. If anything noted, then conduct remedial action.	✓	✗	
3M-14	Inspect	Heating Coil - Visually inspect for contamination, foreign objects, corrosion, leakage, and damage.	✓	✗	




				
		If anything noted, then clean or inspect/conduct remedial action.		
3M-15	Inspect	Thermal Wheel – Visually inspect for contamination, foreign objects, corrosion, and damage. If anything noted, then clean or inspect/conduct remedial action.	✓	✗
3M-16	Inspect	Thermal Wheel – Visually inspect all seals for contamination, foreign objects, corrosion, damage and wear and tear. If anything noted, then clean or replace.	✓	✗
3M-17	Inspect	Thermal Wheel – Inspect bearing play, lateral movement or if out of balance. If anything noted, then conduct remedial action.	✓	✗
3M-18	Inspect	Thermal Wheel - Inspect motor bearings for vibrations, noise, overheating and lubrication. If anything noted, then conduct remedial action/lubricate.	✓	✗
3M-19	Inspect	Thermal Wheel – Inspect belts and pulley tensions, in line with the manufacturer's	✓	✗




					
		<p>requirements, and for wear and tear.</p> <p>Any noted issues should be investigated, and remedial action taken.</p>			
3M-20	Inspect	<p>Thermal Wheel – Visually inspect motor mountings for wear and tear/issues.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
3M-21	Inspect	<p>Thermal Wheel – Inspect the drive elements of the unit.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
3M-22	Inspect	<p>Thermal Wheel Condensate Drain - Visually inspect pan for contamination, foreign objects, corrosion, and damage.</p> <p>If anything noted, then clean or inspect/conduct remedial action.</p>	✓	✗	
3M-23	Test	<p>Thermal Wheel Condensate Drain Pan – Conduct flow test on drain pan, trap and pipework system.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
3M-24	Test	<p>Thermal Wheel – Conduct test on the operation and function of the exchanger ensuring it rotates and</p>	✓	✗	




					
		<p>operates in line with manufacturers requirements.</p> <p>If anything noted, then conduct remedial action.</p>			
3M-25	Inspect	<p>Steam Humidifier – Visually inspect the overall operation of the equipment including spray nozzle, pumps, control panel, drainage.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	




6-Month Inspection Checklist




					
6M-1	Test	<p>Filters – Measure the differential pressure across all filters within the unit with calibrated instrument, cross reference with the BMS.</p> <p>Adjust setting if difference noted.</p> <p>Replace or clean if max differential pressure is exceeded.</p>	✓	✗	
6M-2	Inspect	<p>Attenuator - Visually inspect externally and internally for contamination, foreign objects, corrosion, damage and wear and tear.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
6M-3	Inspect	<p>Air Mixing Box - Visually inspect for contamination, foreign objects, corrosion, damage and wear and tear.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
6M-4	Test	<p>Air Mixing Box – Move damper blades to ensure they are not damaged, obstructed and move smoothly.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	




					
6M-5	Inspect	Air Mixing Box – Inspect damper bearings and linkage for any issues. If anything noted, then conduct remedial action.	✓	✗	
6M-6	Inspect	Fan Impeller - manually rotate the fan to check for any obstructions or issues. If anything noted, then conduct remedial action.	✓	✗	
6M-7	Inspect	Fan Motor – Visually inspect motor mountings and brackets for torque and wear/tear in line with manufacturers requirements. If anything noted, then conduct remedial action.	✓	✗	
6M-8	Inspect	Fan Motor – Inspect alignment of motor and shafts. If anything noted, then conduct remedial action.	✓	✗	
6M-9	Inspect	Fan Impeller – Inspect for misalignment, imbalance, vibrations, contamination, foreign objects, corrosion, and damage. If anything noted, then conduct remedial action.	✓	✗	
6M-10	Inspect	Equipotential Bonding – Inspect the bonding of the unit, parts, and components.	✓	✗	

				
		If anything noted, then conduct remedial action.		
6M-11	Inspect	Compressor – Visually inspect mountings and vibration elements. If anything noted, then conduct remedial action.	✓	✗
6M-12	Inspect	Electrical Heater – Visually inspect for contamination, foreign objects, corrosion, and damage. If anything noted, then clean or inspect/conduct remedial action.	✓	✗
6M-13	Test	Electrical Heater – Conduct test on the operation and function of the heater ensuring it operates in line with the design and manufacturers requirements. If anything noted, then conduct remedial action.	✓	✗
6M-14	Inspect	Steam Humidifier – Drain off steam cylinder and clean scale collection tank.	✓	✗
6M-15	Inspect	Control valves – Visually inspect to ensure that they are not damaged, contaminated or corroded. If anything noted, then conduct remedial action.	✓	✗




					
6M-16	Inspect	Actuators - Visually inspect to ensure that they are connected and not damaged, contaminated or corroded including wiring and connections. If anything noted, then conduct remedial action.	✓	✗	
6M-17	Inspect	Temperature Sensors - Visually inspect to ensure that they are clean, not damaged, corroded, or contaminated, including wiring. If anything noted, then conduct remedial action.	✓	✗	
6M-18	Inspect	Humidity Sensors - Visually inspect to ensure that they are clean, not damaged, corroded, or contaminated, including wiring. If anything noted, then conduct remedial action.	✓	✗	
6M-19	Inspect	Pressure Sensors - Visually inspect to ensure that they are clean, not damaged, corroded, or contaminated, including wiring. If anything noted, then conduct remedial action.	✓	✗	
6M-20	Inspect	Thyristors - Visually inspect to ensure that they are clean, not damaged,	✓	✗	




				
		<p>corroded, or contaminated, including wiring.</p> <p>If anything noted, then conduct remedial action.</p>		
6M-21	Inspect	<p>Smoke Detector - Visually inspect to ensure that they are clean, not damaged, corroded, or contaminated, including wiring.</p> <p>If anything noted, then conduct remedial action.</p>		
6M-22	Inspect	<p>Time Clock – Visually inspect the time clock settings for the unit and ensure they are set in line with the design intent.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗
6M-23	Inspect	<p>Control Panel - Visually inspect externally and internally to ensure that it is clean, not damaged, corroded, or contaminated, including wiring connections.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗
6M-24	Test	<p>Control Panel – Conduct lamp test on panel to ensure they illuminate.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗
6M-25	Inspect	<p>Fresh Air Ducting- Visually inspect to ensure free and</p>	✓	✗




					
		<p>clear and the flexible connection to the plenum/louvre is in good condition.</p> <p>If anything noted, then conduct remedial action.</p>			
6M-26	Inspect	<p>Insulation to Fresh Air Ducting - Visually inspect to ensure has no damage, torn and that the vapor barrier is unaffected.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
6M-27	Inspect	<p>Recirculating Air Ducting - Visually inspect to ensure free and clear and the flexible connection to the unit is in good condition.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
6M-28	Inspect	<p>Insulation to Recirculating Air Ducting - Visually inspect to ensure has no damage, torn and that the vapor barrier is unaffected.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
6M-29	Inspect	<p>Supply Air Ducting - Visually inspect to ensure free and clear and the flexible connection to the unit is in good condition.</p>	✓	✗	




				
		If anything noted, then conduct remedial action.		
6M-30	Inspect	Insulation to Supply Air Ducting - Visually inspect to ensure has no damage, torn and that the vapor barrier is unaffected. If anything noted, then conduct remedial action.	✓	✗




12-Month Inspection Checklist




					
12M-1	Inspect	Intake Louvre – Visually inspect for contamination, foreign objects, corrosion, and damage. If anything noted, then conduct remedial action.	✓	✗	
12M-2	Inspect	Exhaust Louvre – Visually inspect for contamination, foreign objects, corrosion, and damage. If anything noted, then conduct remedial action.	✓	✗	
12M-3	Inspect	Unit – Visually inspect all screws and bolts on the unit are tight and secure	✓	✗	
12M-4	Inspect	Unit Door Seals – Visually inspect for contamination, foreign objects, corrosion, damage and leakage. If anything noted, then conduct remedial action.	✓	✗	
12M-5	Inspect	Unit Section Seals – Visually inspect for contamination, foreign objects, corrosion, damage and leakage. If anything noted, then conduct remedial action.	✓	✗	




				
12M-6	Inspect	Unit Casing - Visually inspect for moisture or condensation build up. If anything noted, then conduct remedial action.	✓	✗
12M-7	Change	Fan Motor – Change all belts. If anything noted, then conduct remedial action.	✓	✗
12M-8	Inspect	Fan Motor - Visually inspect for electrical connections and torque settings. If anything noted, then conduct remedial action.	✓	✗
12M-9	Test	Fan Motor – Take current readings from the motor whilst in operation and compare with manufacturers data sheet for the equipment. If anything noted, then conduct remedial action.	✓	✗
12M-10	Test	Emergency Stop – Test emergency stop button and its operation. If anything noted, then conduct remedial action.	✓	✗
12M-11	Test	Safety Switches – Test all safety switches and cut out devices.	✓	✗




					
		If anything noted, then conduct remedial action.			
12M-13	Inspect	Fan Impeller - Clean the fan, blades, and impeller, remove any rust from the shaft and recoat where necessary	✓	✗	
12M-14	Inspect	Fan Impeller - Adjust the fan if rubbing	✓	✗	
12M-15	Change	Filters – If not previously completed, change 1 st Level set	✓	✗	
12M-16	Test	Filters – Measure the differential pressure across all filters within the unit with calibrated instrument, cross reference with the BMS. Adjust setting if difference noted. Replace or clean if max differential pressure is exceeded.	✓	✗	
12M-17	Inspect	Frost Coil – Test coil flow rate with a calibrated instrument to ensure it is in line with the system design requirements, cross reference with the BMS where applicable. If anything noted, then investigate and conduct remedial action.	✓	✗	




					
12M-18	Inspect	<p>Cooling Coil – Test coil flow rate with a calibrated instrument to ensure it is in line with the system design requirements, cross reference with the BMS where applicable.</p> <p>If anything noted, then investigate and conduct remedial action.</p>	✓	✗	
12M-19	Inspect	<p>Heating Coil – Test coil flow rate with a calibrated instrument to ensure it is in line with the system design requirements, cross reference with the BMS where applicable.</p> <p>If anything noted, then investigate and conduct remedial action.</p>	✓	✗	
12M-20	Inspect	<p>Compressor – Inspect the rota lock valves ensuring they are free to move.</p> <p>If anything noted, then investigate and conduct remedial action.</p>	✓	✗	
12M-21	Inspect	<p>Compressor – Visually inspect the oil sump heater condition.</p> <p>If anything noted, then investigate and conduct remedial action.</p>	✓	✗	




					
12M-22	Inspect	<p>Compressor – Inspect the collector pipework and connections.</p> <p>If anything noted, then investigate and conduct remedial action.</p>	✓	✗	
12M-23	Test	<p>Compressor – Test the operation of the high-pressure sensor.</p> <p>If anything noted, then investigate and conduct remedial action.</p>	✓	✗	
12M-24	Test	<p>Compressor – Test the operation of the low-pressure sensor.</p> <p>If anything noted, then investigate and conduct remedial action.</p>	✓	✗	
12M-25	Test	<p>Compressor - Take current readings and power consumption whilst in operation and compare with manufacturers data sheet for the equipment.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-26	Inspect	<p>Compressor – Inspect refrigerant charge and oil levels.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	

					
12M-27	Test	Evaporator – Test function of the expansion valve. If anything noted, then conduct remedial action.	✓	✗	
12M-28	Test	Condenser – Test function of the expansion valve. If anything noted, then conduct remedial action.	✓	✗	
12M-29	Inspect	Refrigerant System – Check safety valve is in good condition. If anything noted, then conduct remedial action.	✓	✗	
12M-30	Inspect	Refrigerant System – Check for any leakage of refrigerant from pipework and joints. If anything noted, then conduct remedial action.	✓	✗	
12M-31	Inspect	Steam Humidifier – Inspect and clean the steam cylinder. If anything noted, then conduct remedial action.	✓	✗	
12M-32	Inspect	Steam Humidifier – Inspect and clean the humidifier. If anything noted, then conduct remedial action.	✓	✗	
12M-33	Test	Actuators – Inspect and test function, measuring input signals and checking	✓	✗	




					
		<p>operating and adjustment ranges.</p> <p>If anything noted, then conduct remedial action.</p>			
12M-34	Test	<p>Temperature Sensors – Check the calibration of each sensor cross referencing with a calibrated instrument and the BMS/controls.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-35	Test	<p>Humidity Sensors – Check the calibration of each sensor cross referencing with a calibrated instrument and the BMS/controls.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-36	Test	<p>Pressure Sensors – Check the calibration of each sensor cross referencing with a calibrated instrument and the BMS/controls.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-37	Test	<p>Anti-Frost Thermostat – Check the calibration and operation of sensor cross referencing with a calibrated instrument and the BMS/controls.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	

					
12M-38	Test	<p>CO₂ - Check the calibration and operation of sensor cross referencing with a calibrated instrument and the BMS/controls.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-39	Test	<p>Smoke Detector –Test operates inline with the design.</p> <p>If anything noted, then conduct remedial action.</p>			
12M-40	Inspect	<p>Variable Speed Drive – Check operation and settings are in line with design cross reference with the BMS /controls.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-41	Inspect	<p>Electrical Isolators – Check operation of all isolators [On/Off].</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-42	Inspect	<p>Control Panel – Visually inspect cable glands and terminals ensuring they are secure.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-43	Inspect	<p>Control Panel – Inspect to ensure wiring diagram is</p>	✓	✗	




					
		<p>available near to or inside the panel.</p> <p>If anything noted, then conduct remedial action.</p>			
12M-44	Inspect	<p>Control Panel – Visually inspect to ensure all protective covers are installed.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-45	Inspect	<p>Control Panel – Test that all switches operate as required.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-46	Test	<p>Control Panel – Test control functions of the unit in line with the design intent.</p> <p>If anything noted, then conduct remedial action.</p>	✓	✗	
12M-47	Inspect	<p>Fresh Air Ducting – Visually inspect the internal surfaces of the ducting in 2 locations for contamination, moisture, condensation foreign objects, corrosion, and damage.</p> <p>Add other areas if issues are noted.</p> <p>If anything noted, then add other areas, investigate and</p>	✓	✗	

					
		conduct remedial action where required.			
12M-48	Inspect	<p>Supply Air Ducting – Visually inspect the internal surfaces of the ducting in 2 locations for contamination, moisture, condensation foreign objects, corrosion, and damage.</p> <p>Add other areas if issues are noted.</p> <p>If anything noted, then investigate and conduct remedial action where required.</p>	✓	✗	
12M-49	Inspect	<p>Return Air Ducting – Visually inspect the internal surfaces of the ducting in 2 locations for contamination, moisture, condensation foreign objects, corrosion, and damage.</p> <p>Add other areas if issues are noted.</p> <p>If anything noted, then investigate and conduct remedial action where required.</p>	✓	✗	
12M-50	Inspect	<p>Grilles and Diffusers – Clean terminal devices</p>	✓	✗	

24-Month Inspection Checklist

					
24M-1	Change	Filters – If not previously completed, change 2 nd Level set	✓	✗	
24M-2	Test	Fire Dampers - Fresh air, recirculating air & supply air, test the fire dampers to ensure operates as per design.	✓	✗	
24M-3	Inspect	Hygiene – Check Air Handling Unit for hygienic cleanliness <i>[if has humidifier installed]</i>	✓	✗	

36-Month Inspection Checklist

				
36M-1	Inspect	Hygiene – Check Air Handling Unit for hygienic cleanliness <i>[if not have humidifier installed]</i>	✓	✗

-End of Checklist-