ALDI HVACR Preventative Maintenance Checklist

****Please use caution on the rubber membrane roof.****

Please record data and comments as needed per PM ID on page 5

Store:	Date:	Q1	Q2	Q3	Q4
PM ID	**For all HVAC Units please perform the following on each Unit:**				
RTU1	Is there any physical damage to the units?				
RTU2	Are there any unusual vibrations or noise coming from the units?				
RTU3	Verify there are no active alarms				
RTU4	Flush drain pans and drain lines on all HVAC units				
RTU5	Install 6 month odor pan tabs				
RTU6	Verify P-trap is installed correctly, secure and clean				
RTU7	Replace HVAC filters with Merv 7 or better pleated filters				
RTU8	Verify economizer operation and wash metal filters				
RTU9	Replace worn or damaged belts and pulleys				
RTU10	Grease, oil, and check bearings				
RTU11	Check and clean blower wheels				
RTU12	Check and tighten all electrical connections and contactors				
RTU13	Verify that the Reclaim System, components and control strategy is working properly				
RTU14	Verify that the Reheat components and control strategy is working properly				
RTU15	Inspect condenser fan motors and blades. Tighten any set screws.				
RTU16	Inspect refrigerant filter drier components for rust----Replace if delta P >3				
RTU17	Visually inspect for any oil stains that are indicative of a refrigerant leak. Leak check unit with Bacharach PGM detector				
RTU18	Check all service valve caps and tighten				
RTU19	Ensure the crankcase heaters are operating correctly				
RTU20	Check sight glass oil levels on compressors (if applicable) and ensure proper levels for operation				
RTU21	Exercise each damper blade to maximum and minimum position to ensure that blades are operating properly				
RTU22	Verify all cabinet door seals are in good condition and replace if necessary				
RTU23	Make sure all panels are **reinstalled and secured and all disconnect switches are turned back on.**				
RTU24	Remove and clean all debris, material, etc. from Roof				
RTU25	Check VAV system (if applicable) and ensure it is operational, properly controlled and clean, and all sensors accurate				
	Seasonal Items Only				
RTU26	Wash all HVAC rooftop condensers				
RTU27	Check evaporators for cleanliness, spray with self rinse cleaner as needed				
RTU28	Start up and check operation of all stages on AC units				
RTU29	Check natural gas lines on roof for signs of damage or rusting. Report to ALDI as necessary				
RTU30	Check & Clean entire burner assembly and inspect heat exchangers for cracks, rust, etc. Record igniter resistance, and safteys operate correctly				
RTU31	Start up and check operation of all stages on the gas heating units (Fall)				
RTU32	Record the static inlet gas pressure **before** the unit while off **and** at full burn				
RTU33	Record the gas pressure **after** the gas valve on low **and** at full burn				
RTU34	For **electric heat only**, record the amps of each heating element				

ALDI HVACR Preventative Maintenance Checklist

	For HVAC Units Greater Than 5 Tons								
		Discharge PSI	**Suction PSI**	Comments					
RTU35	**Compressor 1**								
RTU36	**Compressor 2**								
RTU37	**Compressor 3**								
RTU38	**Compressor 4**								
RTU39	Record dehumidification Subcool and Superheat								
RTU40	Record comfort cooling Subcool and Superheat								
		L1 to L2	L1 to L3	L2 to L3					
RTU41	**Actual voltage**								
RTU42	**Amps**	**Amps**	**Amps**	**Amps**	**RLA, Voltage, Comments**				
RTU43	**Compressor 1**								
RTU44	**Compressor 2**								
	Sensor Calibration								
		Controller	**Actual**	**Offset**	Additional Comments:				
RTU45	Space Temp								
RTU46	WB / DewPt.								
RTU47	OAT								
RTU48	RAT								
RTU49	CO2								
	For Refrigeration Remote Condensing Units please perform the following on each Unit:								
CU1	Is there any physical damage to the units?								
CU2	Are there any unusual vibrations or noise coming from the units?								
CU3	Visually inspect condenser unit (and compressors if remote) for any oil stains that are indicative of a refrigerant leak								
CU4	Clean condenser coils								
CU5	Check and tighten all electrical connections, contactors, fan motors and blades in the condensing units and on the								
CU6	Record all refrigerant (if available) and oil levels (if available)								
CU7	Record suction pressure,discharge pressures, subcool, and superheat.								
CU8	Inspect drier and filter components and replace if necessary or if delta P > 2								
CU9	**Ensure all service valves (i.e.. Rotalock) are properly torqued per the below recommendations provided by Copeland with a torque wrench**								
CU10	Ensure all service caps have O-rings and are tight								
CU11	Ensure all panels are **reinstalled and secured and all disconnect switches are turned back on**								
CU12	Remove and clean all debris, material, etc. from roof								
CU13	Leak check condensing unit and compressors (if located elsewhere) with Bacharach PGM detector								
CU14	Check compressor amps and voltages and compare to nameplate rating								
		L1 to L2	L1 to L3	L2 to L3					
CU15	**Actual voltage**								
	Amps	**Amps**	**Amps**	**Amps**	**RLA, Voltage, Comments**				
CU16	**Compressor 1**								
CU17	**Compressor 2**								
CU18	**Compressor 3**								
CU19	**Compressor 4**								
CU20	**Compressor 5**								
CU21	**Compressor 6**								

ALDI HVACR Preventative Maintenance Checklist

	Modern Refrigeration Rack (Protocol, CDRU, Advansor CO2, IPAC, WPAC, ECO2Boost, Purity, etc.)				
	Condenser Service	**Q1**	**Q2**	**Q3**	**Q4**
Rack1	Is there any physical damage to the unit?				
Rack2	Are there any unusual vibrations or noise coming from the unit?				
Rack3	Visually inspect condenser slabs and valves for any oil stains that are indicative of a refrigerant leak				
Rack4	Inspect the condenser and ensure the fans (and inverter) are operating properly and spinning in the proper direction				
Rack5	Ensure exhaust fan (if present) for VFD control panel is operational				
Rack6	Ensure the VFD operating properly				
Rack7	Check and tighten all electrical connections, contactors, fan motors and blades for signs of wear or damage				
Rack8	If applicable, lubricate all bearings and drive shafts				
Rack9	Verify operation of split condenser (where applicable)				
Rack10	For water cooled systems, clean pre-screen and media pads (Note: Media pads should be swapped, replaced only if necessary)				
Rack11	Clean condenser coils with a self-rinse cleaner				
Rack12	For water cooled systems, flush and clean the sump and sump pump				
Rack13	For water cooled systems, disassemble flush and fill valves, clean and inspect. Replace diaphragms if needed.				
Rack14	Ensure all service caps have O-rings and are tight				
Rack15	Ensure the packing nut on all valves (split, ball, solenoid, etc.) are secure and service caps are present (i.e., ball valve				
Rack16	For split mode condensers, temporarily force unit into summer mode and ensure sufficient refrigerant levels for operation. Record refrigerant level				
Rack17	**Compressor Cabinet Service**				
Rack18	Is there any physical damage to the unit?				
Rack19	Are there any unusual vibrations or noise coming from the unit?				
Rack20	Visually inspect within the cabinet for any oil stains that are indicative of a refrigerant leak				
Rack21	Ensure vibration isolation mounts and clamps on compressors and piping are secured and in good working order				
Rack22	Visually inspect all hoses, flex tubes, compressor bodies, copper piping and tubes for wear or signs of rub-throughs				
Rack23	Check and tighten all electrical connections and contactors for signs of wear or damage				
Rack24	Check the oil management system (OMB) and ensure all fittings, sight glasses and service valves are properly torqued				
Rack25	Record the oil levels on each compressor and in the reservoir				
Rack26	Record the receiver refrigerant level				
Rack27	Check operation of oil separator and oil quality				
Rack28	Inspect oil filters, liquid driers, and suction filters. Replace all filters and O-rings as a set if pressure drop >5 psi				
Rack29	Test oil for water, acid and non-condensables annually. Take oil samples from either the oil separator or reservoir				
Rack30	Verify operation of crankcase heater				
Rack31	Check cabinet and controller vent exhaust fan(s) for proper operation				
Rack32	Ensure subcooler is operating optimally				
Rack33	Check refrigeration controller for active alarms and notices				
Rack34	Measure and record the suction and discharge pressures, compare to the Controller. Any offsets should be investigated and confirmed or properly corrected				
Rack35	Verify all temperature set points per the EMS user guide. Provide detailed explanation on differences				
Rack36	Verify floating head pressure control sequence is programmed and operational when applicable				
Rack37	Visually inspect the receiver for any oil stains that are indicative of a refrigerant leak				
Rack38	Visually inspect the receiver insulation (if any), piping, system components for any signs damage or deterioration				
Rack39	Ensure all service valves (i.e.. Rotalock) are properly torqued per the below recommendations provided by Copeland with a torque wrench				
Rack40	Ensure all service caps have O-rings and are tight				
Rack41	Ensure all valves (solenoid, liquid injection, stops, ball, etc., etc..) are secure and have service caps installed (i.e. ball				
Rack42	Ensure oil, drier filter housings and plate screws are properly torqued				

ALDI HVACR Preventative Maintenance Checklist

		L1 to L2	L1 to L3	L2 to L3						
Rack43	**Actual voltage**									
Rack44	**Amps**	**Amps**	**Amps**	**Amps**		**RLA, Voltage, Comments**				
Rack45	**Compressor 1**									
Rack46	**Compressor 2**									
Rack47	**Compressor 3**									
Rack48	**Compressor 4**									
Rack49	**Compressor 5**									
Rack50	**Compressor 6**									
Rack51	Leak Detection System - For multizone leak detection systems, replace filter elements at the end of the sampling tubes									
Rack52	Leak Detection System - For multizone leak detection systems, replace filter element located in the main controller unit									
Rack53	Leak check entire refrigeration system with Bacharach PGM leak detector (Condenser, Multi-decks, Compressor Cabinet, Walk-ins)									
Rack54	If the serviceable oil or drier filters have not been changed in 2 years, change them all as a set along with the O-rings							**Every 2 years**		
	Multi-Deck Cases, Walk-in Boxes and Spot Merchandisers									
MDU1	**Schedule minimally one annual cleaning of each multi-deck case per manufacturer's recommendations. Cleaning should include using a long wand attachment (NO pressure washers) to remove dust and debris from under the MDU bottom shelf and around the fan. Cleaning should also include removal of the back panels. This should be scheduled outside of a regular PM to accommodate operational schedules as product must be removed from the cases.**									Link to separate tab for MDU cleaning
MDU2	Inspect **MEAT** multi-deck cases for residue within the unit and clean as needed. Note: shelf cleaning should be performed regularly by store personnel									
MDU3	Inspect MDU fans for proper operation. Ensure there is sufficient airflow, no vibrations and clean									
MDU4	Visually check and tighten all electrical connections and refrigerant piping for any damage or corrosion									
MDU5	Verify proper superheat per coil. Record the settings per coil per MDU and provide with this report							Annually		
MDU6	Clean honeycombs, ensure lights and night curtains are clean and operational									
MDU7	Check and clean sump pump(s) in back room for meat/deli cases. Where accessible pull bottom pan on MDU cases to allow access to drain line, and clean drain of any obstructions or buildup									
	For EVAC systems, please see the detailed PM schedule below									
WICF1	Check and clean walk-in cooler/freezer/meat (if present) evaporator coils, fans, and guards									
WICF2	Check and flush cooler/freezer/meat cooler (if present) evaporator drains									
WICF3	Spray mold inhibitor on walk-in cooler evaporator coils and fan guards									
WICF4	Check amp draw and voltage for defrost heaters and ensure heaters are positioned for maximum heat transfer to the									
WICF5	Verify proper suction pressure settings with a guage confirm the same value on the Rack controller. Record all values and provide with this report									
WICF6	Verify proper superheat per coil. Record the settings and provide with this report									
WICF7	On defrost, ensure the liquid line solenoid valve closes									
WICF8	Check glass doors for ice buildup, cracks, condensation. Check frame heater wattage. Check for frame warpage									
WICF9	Check customer door LED's for burnt out diodes. Instructions found on linked document							Link to Order form		
WICF10	Check walk-in doors, gaskets and hinges for damage and ensure proper operation (Customer and stocking doors)									
	General									
RGEN1	Visually check refrigerant pipe insulation and bracing conditions throughout the store									
RGEN2	Inspect general exhaust fans for proper operation									
RGEN3	Ensure battery backup system is clean and operational. If battery >5 years old, recommend replacing battery									
	Spot Merchandiser Service									
AHT1	Are there any unusual vibrations, noise or smell coming from the compressor area?									
AHT2	Remove the side access panel and visually inspect for dust, debris or damage. Clean if necessary									
AHT3	Clean the condensation strainer located inside the unit above the compressor									

ALDI HVACR Preventative Maintenance Checklist

	EVAC Preventative Maintenance Schedule	(Click here for more details on the below items if needed)			
	Vacuum Central	**Q1**	**Q2**	**Q3**	**Q4**
CR1	Is there any physical damage to the unit?				
CR2	Are there any unusual vibrations or noise coming from the unit during operation?				
CR3	Visually inspect the central control unit electrical connections, contactors, fuses, wiring, foundation bolts, water seals for any visual signs of leaks, corrosion, "check valve" and vacuum pump operation				
CR4	Verify pump performance by manually cycling 1 pump at a time ensuring 22 inHg is obtained individually. When finished, ensure both pumps are set to on				
CR5	Central Vacuum leak test. Close 2 inch valve near tank inlet. Press pump test button until 22 inHg is obtained. Once the pump is off, wait 3 minutes, gauge should read > 21 inHg				
CR6	Remove water treatment filter, clean filter housing and O-ring. Apply silicone grease to O-ring, install new filter				
CR7	Clean inside of clean water reservoir by removing tank access cover. Rinse out with water hose, close drain when				
CR8	Check the Manual Motor Protectors (breakers) inside the control panel for functionality and ease of operation. Trip and reset 3 times to ensure proper operation				
CR9	Clean and inspect Collection Tank. Close the 2 inch ball valve at the top of the unit. Remove tank lid, clean and rinse the interior of the tank. Drain and clean all sensors and floats inside of the tank. Reassemble, turn on pumps. Once pumps are off, Verify >21 inHg after 5 minutes, open 2 inch ball valve	**Every 2 years**			
CR10	Vacuum pump seal and bearing replacement. If the central vacuum pump leak test on either pump fails to reach 21 inHg in 2 minutes or you see water leaking from either vacuum pump, contact EVAC for pump replacements	**Every 5 years**			
	Piping Network	**Q1**	**Q2**	**Q3**	**Q4**
CR11	Inspect the inlet header coming to the central vacuum for leaks, damage and proper bracing. Verify ball valves operate freely and check valves are not leaking or damaged				
CR12	Visually inspect piping during operation for leaks, stains and for proper bracing (are pipes moving, is drywall				
CR13	Piping leak test. Press pump test button until 22 inHg is obtained. After pumps are off, gauge should read >21 inHg after 5 minutes				
CR14	Check risers for leaks, signs of water damage and proper bracing				
CR15	Check Pinch valve and verify 2 vacuum hoses (source and pinch) are firmly connected. Visually check for signs of water leakage or damage				
CR16	Check Activators and verify 3 vacuum hoses (sense, vacuum and valve) are firmly connected. Press the test button on the side of the activator, pinch valve should open and close confirming activator and pinch valves are functional				
CR17	Check buffer boxes and ensure vacuum hose is firmly connected. Ensure no water leakage or damage is present				

Copeland Torque Settings (Version AE4-1219 R15)

	Size	Torque (in.lbs/Nm)
Flare nut	1/4	150 (17)
Flare nut	5/16	220 (25)
Flare nut	3/8	300 (34)
Flare nut	1/2	400 (45)
Flare nut	5/8	600 (68)
Rotalock	3/4-16	360-480 (41-54)
Rotalock	1-14	600-720 (68-81)
Rotalock	1 1/4-12	960-1200 (108-136)
Rotalock	1 1/2-12	1200-1400 (136-163)
Rotalock	1 3/4-12	1440-1680 (163-190)
Rotalock Sight Glass	1 1/4-12	300-360 (34-41)

Service Provider **Date of Completion**

DM/CM Spot Checked Completio **Y/N** ☐

All questions and comments should be directed to Refrig@ALDI.US

Time in: _____

Time out: _____

ALDI HVACR Preventative Maintenance Checklist

Service Technician Comments	
PM ID:	Notes:
Ex. RACK19	Receiver level at 25%