

Daikin Maintenance Checklist Single Split, Multi Split, and SkyAir RXS & RKS

WARNING! ELECTRICAL SHOCK HAZARD! THIS EQUIPMENT IS TO BE SERVICED AND MAINTAINED BY QUALIFIED PERSONNEL!

Introduction:

This maintenance checklist is a guide for trained personnel to perform proper maintenance procedures with specialized Daikin equipment. It is not designed to be a site specific guide, nor is it designed to be the "final word" in how maintenance is performed on the equipment.

The images shown may not be your exact unit model, but is used as an example of the items referenced. Please refer to the specific manual that relates to your model.

Remember to always follow safety protocols, as well as state, and local codes when servicing, or performing maintenance on any piece of HVAC equipment.

Thank you for choosing Daikin!



Outdoor Unit

HEAT EXCHANGER:

Ensure the outdoor unit is kept clean, including the heat exchanger (coil) and the base pan drains. If the coil becomes clogged with dust, leaves or other debris, the system efficiency and performance may be affected. The coil can be easily cleaned with a soft brush. Although the use of clean water is preferred; If the heat exchanger is heavily soiled, a non-acidic, non-corrosive cleaning solution may be purchased from an HVAC wholesaler. If the aluminum fins are damaged, a fin comb will also need to be used to straighten the fins. Power washers or high velocity nozzles are not recommended due to likely fin damage. Clear the base pan drains to allow for proper drainage.





AIR INTAKE/AIR DISCHARGE

The air intake, and discharge sides of the unit require minimum clearances which can be found in the installation manual. These clearances prevent the recirculation of air that can negatively affect the performance and efficiency of the entire system.

Base pan drains:

Drains in the base pan of the outdoor unit must be clear of any dirt or debris to allow it to drain properly.



Electronic Expansion Valve (EEV):

Ensure the electronic expansion valve/s (EEV) are clean and secure, as corrosion or looseness can cause the valve to not operate properly . Remove the EEV head and inspect for signs of corrosion, also inspect the valve shaft body for corrosion. If any corrosion is present, clean as needed and replace the head. If needed, you may use a mild metal brush or steel wool to clean the valve body.



ELECTRICAL CONNECTIONS:

Check and tighten all power supply connections, including control voltages on remote controllers, and thermostats if applicable. Ensure all plugs are securely connected to their respective locations, and all wiring is free from damage such as cuts, and abrasions.

Failure to do so could result in a communication failure, or electrical shock.

Torque specifications for unit terminals are: Control and transmission wiring: 0.58 - 0.72 (lb·ft) Power supply: 0.87 - 1.06 (lb·ft)



Mounting Considerations:

Ensure the unit is mounted securely, and properly as per site requirement.



Outdoor Unit

INVERTER:

Cleanliness is important to the proper operation of any HVAC system.

The outdoor unit has aluminum fins on the under side of the inverter board.

The heat generated from the inverter board is dissipated when air passes through those fins.

Make sure the fins are free of dust and debris as it can cause an overheated condition and possible failure of the inverter board. You may use a soft, dry brush for cleaning the surface.

Avoid the use of water, or chemicals.

Backside of the inverter board where the fins are located



Area to be cleaned

OUTDOOR FANS:

The fan blades must also be checked for cleanliness as well as chips, or cracks.

Dirt or debris on the blades could cause the fan to operate outof-balance resulting in the possible failure of the outdoor fan motor. While chips, or cracks could result in one of the blades breaking off and damaging the outdoor coil.



Indoor Units

INDOOR HEAT EXHCANGER (COIL):

The indoor coil must be clean, as a dirty coil, or dirty intake filter will inhibit the proper flow of air across the coil thereby reducing its efficiency and ability to maintain space temp. Improper maintenance will cause higher operating costs and possible premature parts failure. A soft bristle brush can be used to clean any of the Daikin indoor coil models. Heavier concentrations of dirt and debris on the indoor coil can be cleaned with a non-acidic, non corrosive cleaner purchased from an HVAC wholesaler.



Ensure all flare connections are tightened within Daikin's specifications:

1/4"- 10.4 - 12.7 lb·ft 3/8"- 24.1 - 29.4 lb·ft 1/2"- 36.5 - 44.5 lb·ft 5/8"- 45.6 - 55.6 lb·ft

Filters:

Depending on the type of filter, it will need to be washed to remove all dirt, and debris, or replaced as a dirty filter can inhibit airflow and affect unit performance. Check the appropriate service manual for filter location, or optional locations.

Special considerations need to be made for Daikin's Photocatalytic Deodorizing Filter. Please refer to the manual for proper use and service.

Photocatalytic Deodorizing Filter insert (Not to scale)

INDOOR FAN BLADES:

Daikin's indoor units have several types of indoor fan blades, but all need to be free of dirt, debris, cracks, and chips. Dirt and debris can cause the unit to vibrate which could lead to a possible fan motor failure, blade failure, and noise complaints from the customer, while chips and cracks could lead to evaporator coil damage if the fan blade breaks apart. A soft bristle brush can be used to clean any of Daikin's indoor coil models. Heavier concentrations of dirt and debris on the indoor fan blade can be cleaned with a non-acid, non corrosive cleaner purchased from an HVAC wholesaler.



Indoor Units

ELECTRICAL CONNECTIONS:

Check and tighten the power supply connections, and ensure all plugs are securely connected to their respective locations.

Failure to do so could result in a communication failure, or an external protection device alarm.

Torque specifications for these terminals are: Control and transmission wiring: 0.58 - 0.72 (lb·ft) Power supply: 0.87 - 1.06 (lb·ft)



THERMISTORS:

The Daikin thermistors are resistors that vary the level of resistance depending on the temperature sensed. These must be free of dirt, debris, corrosion, and cracks to be accurate. Reference the applicable service manual for thermistor types and locations.

CONDENSATE:

Mechanical drains must be clear of dirt, debris, sludge, etc. There are several ways to clear these drains and you, as the professional must choose the best course of action as there are too many variables to discuss in this module. Pan tablets are not recommended for Daikin systems. After cleaning, test with clean water to ensure proper drainage.

There are several pumps that can be used with the Daikin systems and they all must be maintained. The small pumps, sometimes referred to as "mini split" pumps have a reservoir and a filter that must be clear of any debris, sludge, etc. Refer to the manual specific for that particular pump for maintenance instructions.

Larger pumps must also be cleaned of any debris, sludge, etc.

Failure to properly maintain these pumps could result in property damage as well as upset customers.







D-checker

The Daikin D-checker tool allows the service technician to complete a full maintenance schedule by being able to observe and record operational data in "real time". The D-Checker will display all the thermistor values in the system along with other pertinent data. This data can also be recorded and saved for future use. Each year the system is inspected data from the previous visit can be compared to the data collected from the current visit. This will allow a comprehensive record of the systems operation from year to year.

The D-checker tool takes much of the human error out of the equation as well as unreliable, uncalibrated testing equipment, and allows all of the data to be read at one reliable station – Your computer. We recommend using the D-checker tool for all of your maintenance, and repair needs.



Notes

Outdoor Unit Maintenance Task List Note: please use proper personal protective equipment (ppe) and insulated tools when performing service or maintenance on energized equipmet.	Yes/No/NA
Has the property contact been properly notified of a possible interruption of cooling/heating?	
Check unit cabinet for signs of physical damage -	
Check the outdoor unit air intake and discharge clearances -	
Ensure the outdoor cabinet drains are clear -	
Check the condition of the heat exchanger, clean the heat exchanger and repair any fin damage -	
Make sure outdoor fan is free of dirt, debris, cracks, etc. and that it is securely connected to the fan motor -	
Ensure that the refrigeration piping insulation is not damaged -	
Ensure all refrigerant piping is insulated -	
Check for signs of refrigerant leakage, i.e. oil in base of unit and around brazed joints -	
Tighten all electrical connections -	
Check that all connectors are securely connected to the outdoor unit Printed Circuit Board (PCB) -	
Ensure all cabinet screws are secure -	
While operating, check of the system for any abnormal noise or vibration from the condensing unit -	
D-checker operational data observed, saved and logged -	
Indoor Unit Maintenance Task List	

INCOOR UNIT WAINTENANCE TASK LIST NOTE: PLEASE USE PROPER PERSONAL PROTECTIVE EQUIPMENT (PPE) AND INSULATED TOOLS WHEN PERFORMING SERVICE OR MAINTENANCE ON ENERGIZED EQUIPMET.	Yes/No
Check unit cabinet for signs of physical damage -	
Check the indoor unit air intake and discharge clearances -	
Check that the drain is not blocked -	
Check the condition of the heat exchanger clean the heat exchanger and repair any fin damage -	
Make sure indoor fan is free of dirt, debris, cracks, etc. and that it is securely connected to the fan motor -	
Ensure that the refrigeration piping insulation is not damaged -	
Ensure all refrigerant piping is insulated -	
Check for signs of refrigerant leakage, i.e. oil in drain pan of unit, and around flared joints -	
Tighten all electrical connections -	
Check that all connectors are securely connected to the indoor unit Printed Circuit Board (PCB) -	
Ensure all cabinet screws are secure -	
While operating, check for any abnormal noise or vibration -	
Check the set points for space heating and space cooling -	
Check the current time and day setting on the controller -	
All Heating and Cooling zones should be tested for proper operation -	

Notes

Company:

Name:

Date: