# Prescriptive HVAC Tune-Up Requirements

## General Requirements

This prescriptive measure involves tuning up packaged air conditioning units, heat pump units (both air and ground source), packaged terminal air conditioning and heat pump units, and air- and water-cooled chillers at commercial and industrial sites. Only comfort cooling and comfort heating applications are eligible for this measure. All other HVAC applications (such as process cooling and heating) are ineligible for this measure but may be eligible for custom incentives.

All HVAC equipment receiving a tune-up must meet the following requirements:

* Equipment is not used for back-up or redundancy purposes.
* Equipment is installed and fully operational for at least 12 months prior to receiving a tune-up.
* Tune-ups for the same equipment will be eligible at maximum once every 5 years.

The following sections include specific eligibility requirements for a project based on the equipment type receiving the tune-up. In addition, HVAC checklists are provided for chillers, packaged units, split systems, and packaged terminal units. One checklist should be completed per system with the system tag number, manufacturer, and model number clearly denoted.

## Chiller Tune-Up

A copy of the chiller tune-up checklist must be provided by the contractor. If the following checklist is not used, at a minimum, the checklist provided must address the items included in the tune-up checklist below, where applicable. A completion date shall be provided on the checklist for each line item.

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Overall visual inspection to verify equipment is operating correctly and safely. | | |  | | |  |
|  | |  | Check all setpoints for proper settings, pressure, and function. | | |  | | |  |
|  | |  | Check and/or adjust the system pressure. | | |  | | |  |
|  | |  | Inspect and/or replace filters. | | |  | | |  |
|  | |  | Inspect and/or adjust belts and sheaves. | | |  | | |  |
|  | |  | Check and repair electrical contactors. | | |  | | |  |
|  | |  | Check and repair evaporator condition. | | |  | | |  |
|  | |  | If water-cooled unit, clean water-cooled chiller evaporator tubes. | | |  | | |  |
|  | |  | If water-cooled unit, clean water-cooled chiller condenser tubes. | | |  | | |  |
|  | |  | If air-cooled unit, clean the condenser coil and assess for fouling. | | |  | | |  |
|  | |  | Validate compressor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan(s) amp draw. | | |  | | |  |
|  | |  | Inspect and correct oil level and pressure at full load operation. | | |  | | |  |
|  | |  | Check liquid line temperature. | | |  | | |  |
|  | |  | Check suction pressure and temperature. | | |  | | |  |
|  | |  | Check refrigerant temperature and pressure. | | |  | | |  |
|  | |  | Add refrigerant as required. Record amounts and address leakage issues. | | |  | | |  |
|  | |  | Validate low pressure controls. | | |  | | |  |
|  | |  | Validate high pressure controls. | | |  | | |  |
|  | |  | Validate crankcase heater operation. | | |  | | |  |
|  | |  | Check and repair economizer operation. | | |  | | |  |
|  | |  | Validate sub-cooling and superheat. | | |  | | |  |
|  | |  | Validate suction temperature and pressure. | | |  | | |  |
|  | |  | Lubricate all motors. | | |  | | |  |
|  | |  | Check water quality for proper chemical balance. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Overall visual inspection to verify equipment is operating correctly and safely. | | |  | | |  |
|  | |  | Check all setpoints for proper settings, pressure, and function. | | |  | | |  |
|  | |  | Check and/or adjust the system pressure. | | |  | | |  |
|  | |  | Inspect and/or replace filters. | | |  | | |  |
|  | |  | Inspect and/or adjust belts and sheaves. | | |  | | |  |
|  | |  | Check and repair electrical contactors. | | |  | | |  |
|  | |  | Check and repair evaporator condition. | | |  | | |  |
|  | |  | If water-cooled unit, clean water-cooled chiller evaporator tubes. | | |  | | |  |
|  | |  | If water-cooled unit, clean water-cooled chiller condenser tubes. | | |  | | |  |
|  | |  | If air-cooled unit, clean the condenser coil and assess for fouling. | | |  | | |  |
|  | |  | Validate compressor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan(s) amp draw. | | |  | | |  |
|  | |  | Inspect and correct oil level and pressure at full load operation. | | |  | | |  |
|  | |  | Check liquid line temperature. | | |  | | |  |
|  | |  | Check suction pressure and temperature. | | |  | | |  |
|  | |  | Check refrigerant temperature and pressure. | | |  | | |  |
|  | |  | Add refrigerant as required. Record amounts and address leakage issues. | | |  | | |  |
|  | |  | Validate low pressure controls. | | |  | | |  |
|  | |  | Validate high pressure controls. | | |  | | |  |
|  | |  | Validate crankcase heater operation. | | |  | | |  |
|  | |  | Check and repair economizer operation. | | |  | | |  |
|  | |  | Validate sub-cooling and superheat. | | |  | | |  |
|  | |  | Validate suction temperature and pressure. | | |  | | |  |
|  | |  | Lubricate all motors. | | |  | | |  |
|  | |  | Check water quality for proper chemical balance. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Overall visual inspection to verify equipment is operating correctly and safely. | | |  | | |  |
|  | |  | Check all setpoints for proper settings, pressure, and function. | | |  | | |  |
|  | |  | Check all setpoints for proper settings, pressure, and function. | | |  | | |  |
|  | |  | Check and/or adjust the system pressure. | | |  | | |  |
|  | |  | Inspect and/or replace filters. | | |  | | |  |
|  | |  | Inspect and/or adjust belts and sheaves. | | |  | | |  |
|  | |  | Check and repair electrical contactors. | | |  | | |  |
|  | |  | Check and repair evaporator condition. | | |  | | |  |
|  | |  | If water-cooled unit, clean water-cooled chiller evaporator tubes. | | |  | | |  |
|  | |  | If water-cooled unit, clean water-cooled chiller condenser tubes. | | |  | | |  |
|  | |  | If air-cooled unit, clean the condenser coil and assess for fouling. | | |  | | |  |
|  | |  | Validate compressor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan(s) amp draw. | | |  | | |  |
|  | |  | Inspect and correct oil level and pressure at full load operation. | | |  | | |  |
|  | |  | Check liquid line temperature. | | |  | | |  |
|  | |  | Check suction pressure and temperature. | | |  | | |  |
|  | |  | Check refrigerant temperature and pressure. | | |  | | |  |
|  | |  | Add refrigerant as required. Record amounts and address leakage issues. | | |  | | |  |
|  | |  | Validate low pressure controls. | | |  | | |  |
|  | |  | Validate high pressure controls. | | |  | | |  |
|  | |  | Validate crankcase heater operation. | | |  | | |  |
|  | |  | Check and repair economizer operation. | | |  | | |  |
|  | |  | Validate sub-cooling and superheat. | | |  | | |  |
|  | |  | Validate suction temperature and pressure. | | |  | | |  |
|  | |  | Lubricate all motors. | | |  | | |  |
|  | |  | Check water quality for proper chemical balance. | | |  | | |  |

## Packaged AC, Heat Pump, or Split-System Tune-Up

A copy of the packaged and split-system tune-up checklist must be provided by the contractor. If the following checklist is not used, at a minimum, the checklist provided must address the items included in the tune-up checklist below, where applicable. A completion date shall be provided on the checklist for each line item.

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and/or replace fan belts and sheaves. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Validate compressor motor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan motor amp draw. | | |  | | |  |
|  | |  | Validate evaporator fan motor amp draw. | | |  | | |  |
|  | |  | Check and adjust the refrigerant charge as required. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and/or replace fan belts and sheaves. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Validate compressor motor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan motor amp draw. | | |  | | |  |
|  | |  | Validate evaporator fan motor amp draw. | | |  | | |  |
|  | |  | Check and adjust the refrigerant charge as required. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and/or replace fan belts and sheaves. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Validate compressor motor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan motor amp draw. | | |  | | |  |
|  | |  | Validate evaporator fan motor amp draw. | | |  | | |  |
|  | |  | Check and adjust the refrigerant charge as required. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and/or replace fan belts and sheaves. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Validate compressor motor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan motor amp draw. | | |  | | |  |
|  | |  | Validate evaporator fan motor amp draw. | | |  | | |  |
|  | |  | Check and adjust the refrigerant charge as required. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and/or replace fan belts and sheaves. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Validate compressor motor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan motor amp draw. | | |  | | |  |
|  | |  | Validate evaporator fan motor amp draw. | | |  | | |  |
|  | |  | Check and adjust the refrigerant charge as required. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and/or replace fan belts and sheaves. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Validate compressor motor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan motor amp draw. | | |  | | |  |
|  | |  | Validate evaporator fan motor amp draw. | | |  | | |  |
|  | |  | Check and adjust the refrigerant charge as required. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and/or replace fan belts and sheaves. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Validate compressor motor amp draw. | | |  | | |  |
|  | |  | Validate condenser fan motor amp draw. | | |  | | |  |
|  | |  | Validate evaporator fan motor amp draw. | | |  | | |  |
|  | |  | Check and adjust the refrigerant charge as required. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

## Packaged Terminal AC (PTAC) or Packaged Terminal Heat Pump (PTHP) Tune-Up

A copy of the PTAC/PTHP checklist must be provided by the contractor. If the following checklist is not used, at a minimum, the checklist provided must address the items included in the tune-up checklist below, where applicable. A completion date shall be provided on the checklist for each line item.

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |

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| Tag | Enter# | | | Manufacturer | Enter Name | | Model | Enter Model # | |
| **Pass** | | **Fail** | **Check** | | | **Completion Date** | | | **Notes** |
|  | |  | Perform visual inspection of system and refrigerant lines. | | |  | | |  |
|  | |  | Check thermostat for proper operation. | | |  | | |  |
|  | |  | Inspect and/or replace air filter. | | |  | | |  |
|  | |  | Inspect and clean evaporator coil. | | |  | | |  |
|  | |  | Inspect and clean condenser coil. | | |  | | |  |
|  | |  | Inspect and clean evaporator fan and motor. | | |  | | |  |
|  | |  | Inspect and clean condenser fan and motor. | | |  | | |  |
|  | |  | Clean out condensate drain line. | | |  | | |  |