



2019 Boiler / furnace / chiller tune-up checklist

These checklists are used to document the data required for your boiler, furnace and chiller tune-up applications. Please complete and include for every tune up that you perform at the same site. Refer to, and complete, application page 14 (boiler and furnace tune-ups) or page 8 (chiller tune-ups) for incentives and quantities.

Boiler / furnace tune-up addendum

Tune-up Checklist - Furnace/Boiler # 1

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Tune-up Checklist - Furnace/Boiler # 2

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Boiler / furnace tune-up addendum

Tune-up Checklist - Furnace/Boiler # 3

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Tune-up Checklist - Furnace/Boiler # 4

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Boiler / furnace tune-up addendum

Tune-up Checklist - Furnace/Boiler # 5

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Tune-up Checklist - Furnace/Boiler # 6

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Boiler / furnace tune-up addendum

Tune-up Checklist - Furnace/Boiler # 7

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Tune-up Checklist - Furnace/Boiler # 8

Site Name	Date of Tune-up
Manufacturer	Service (Space Heating, Process, Domestic Hot Water)
Model Number	Annual Hours of Operation
Serial Number	Unit Input Capacity (MBH)
Company Performing Tune-up	Technician Performing Tune-up

- Measure pre/post combustion efficiency using electronic flue gas analyzer
- Adjust combustion air flow and air intake as needed, reduce excessive stack temperatures
- Adjust burner and gas input, manual or motorized draft controls
- Clean burners, combustion chamber and heat exchanger surfaces
- Complete visual inspection of system piping and installation
- Check safety controls
- Check adequacy of combustion air intake
- Check for proper venting
- Check Draft Control Dampers
- Clean and inspect burner nozzles
- Include a copy of the combustion analyzer post test (boilers only)

Chiller tune-up addendum

Tune-up Checklist - Chiller #1

Site Name	Date of Tune-up
Manufacturer	Type (Ref. Charge/DX coil/Chiller)
Model Number	Annual Hours of Operation
Serial Number	Unit Size (Tons)
Company Performing Tune-up	Technician Performing Tune-up

Refrigerant Charging Correction on RTU AC

Unit must meet minimum efficiency per ASHRAE 90.1 2007, Table 6.8.1a

Unit rated charge (psig)		Efficiency of unit (EER/SEER)		Unit existing charge (psig)		Charge unit adjusted to (psig +/- 20% of rated charge)	
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DX Condenser Coil Cleaning

Airflow Readings Before Cleaning (CFM)

Average of all readings: _____

Airflow Readings After Cleaning (CFM)

Average of all readings: _____

Chiller Tune-Up (check one)

- Space Cooling** **Process Cooling**
- Inspect and correct oil level and pressure at full load operation
 - Clean the air-cooled condenser coil
 - Check and adjust the system pressure
 - Inspect and/or replace filter
 - Inspect and/or replace belt
 - Check and repair the electrical contractors
 - Check refrigerant temperature and pressure
 - Validate high pressure controls
 - Clean water cooled chiller condenser tubes
 - Check and repair economizer operation
 - Validate suction temperature and pressure
 - Patch and wash coat as required
 - Check for proper venting
 - Check and repair evaporator condition
 - Validate compressor amp draw
 - Validate supply motor amp draw
 - Validate condenser fan(s) amp draw
 - Check liquid line temperature
 - Check suction pressure and temp
 - Validate low-pressure controls
 - Validate crankcase heater operation
 - Clean water cooled chiller evaporator tubes (If performance warrants)
 - Validate sub-cooling and superheat
 - Inspect all refractory
 - Check safety controls
 - Lubricate all motors and Check coupling alignment

Chiller tune-up addendum

Tune-up Checklist - Chiller #2

Site Name	Date of Tune-up
Manufacturer	Type (Ref. Charge/DX coil/Chiller)
Model Number	Annual Hours of Operation
Serial Number	Unit Size (Tons)
Company Performing Tune-up	Technician Performing Tune-up

Refrigerant Charging Correction on RTU AC

Unit must meet minimum efficiency per ASHRAE 90.1 2007, Table 6.8.1a

Unit rated charge (psig)		Efficiency of unit (EER/SEER)		Unit existing charge (psig)		Charge unit adjusted to (psig +/- 20% of rated charge)	
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DX Condenser Coil Cleaning

Airflow Readings Before Cleaning (CFM)

Average of all readings: _____

Airflow Readings After Cleaning (CFM)

Average of all readings: _____

Chiller Tune-Up (check one)

- Space Cooling** **Process Cooling**
- Inspect and correct oil level and pressure at full load operation
 - Clean the air-cooled condenser coil
 - Check and adjust the system pressure
 - Inspect and/or replace filter
 - Inspect and/or replace belt
 - Check and repair the electrical contractors
 - Check refrigerant temperature and pressure
 - Validate high pressure controls
 - Clean water cooled chiller condenser tubes
 - Check and repair economizer operation
 - Validate suction temperature and pressure
 - Patch and wash coat as required
 - Check for proper venting
 - Check and repair evaporator condition
 - Validate compressor amp draw
 - Validate supply motor amp draw
 - Validate condenser fan(s) amp draw
 - Check liquid line temperature
 - Check suction pressure and temp
 - Validate low-pressure controls
 - Validate crankcase heater operation
 - Clean water cooled chiller evaporator tubes (If performance warrants)
 - Validate sub-cooling and superheat
 - Inspect all refractory
 - Check safety controls
 - Lubricate all motors and Check coupling alignment

Chiller tune-up addendum

Tune-up Checklist - Chiller #3

Site Name	Date of Tune-up
Manufacturer	Type (Ref. Charge/DX coil/Chiller)
Model Number	Annual Hours of Operation
Serial Number	Unit Size (Tons)
Company Performing Tune-up	Technician Performing Tune-up

Refrigerant Charging Correction on RTU AC

Unit must meet minimum efficiency per ASHRAE 90.1 2007, Table 6.8.1a

Unit rated charge (psig)		Efficiency of unit (EER/SEER)		Unit existing charge (psig)		Charge unit adjusted to (psig +/- 20% of rated charge)	
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DX Condenser Coil Cleaning

Airflow Readings Before Cleaning (CFM)

Average of all readings: _____

Airflow Readings After Cleaning (CFM)

Average of all readings: _____

Chiller Tune-Up (check one)

- Space Cooling** **Process Cooling**
- Inspect and correct oil level and pressure at full load operation
 - Clean the air-cooled condenser coil
 - Check and adjust the system pressure
 - Inspect and/or replace filter
 - Inspect and/or replace belt
 - Check and repair the electrical contractors
 - Check refrigerant temperature and pressure
 - Validate high pressure controls
 - Clean water cooled chiller condenser tubes
 - Check and repair economizer operation
 - Validate suction temperature and pressure
 - Patch and wash coat as required
 - Check for proper venting
 - Check and repair evaporator condition
 - Validate compressor amp draw
 - Validate supply motor amp draw
 - Validate condenser fan(s) amp draw
 - Check liquid line temperature
 - Check suction pressure and temp
 - Validate low-pressure controls
 - Validate crankcase heater operation
 - Clean water cooled chiller evaporator tubes (If performance warrants)
 - Validate sub-cooling and superheat
 - Inspect all refractory
 - Check safety controls
 - Lubricate all motors and Check coupling alignment

Chiller tune-up addendum

Tune-up Checklist - Chiller #4

Site Name	Date of Tune-up
Manufacturer	Type (Ref. Charge/DX coil/Chiller)
Model Number	Annual Hours of Operation
Serial Number	Unit Size (Tons)
Company Performing Tune-up	Technician Performing Tune-up

Refrigerant Charging Correction on RTU AC

Unit must meet minimum efficiency per ASHRAE 90.1 2007, Table 6.8.1a

Unit rated charge (psig)		Efficiency of unit (EER/SEER)		Unit existing charge (psig)		Charge unit adjusted to (psig +/- 20% of rated charge)	
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DX Condenser Coil Cleaning

Airflow Readings Before Cleaning (CFM)

Average of all readings: _____

Airflow Readings After Cleaning (CFM)

Average of all readings: _____

Chiller Tune-Up (check one)

- Space Cooling** **Process Cooling**
- Inspect and correct oil level and pressure at full load operation
 - Clean the air-cooled condenser coil
 - Check and adjust the system pressure
 - Inspect and/or replace filter
 - Inspect and/or replace belt
 - Check and repair the electrical contractors
 - Check refrigerant temperature and pressure
 - Validate high pressure controls
 - Clean water cooled chiller condenser tubes
 - Check and repair economizer operation
 - Validate suction temperature and pressure
 - Patch and wash coat as required
 - Check for proper venting
 - Check and repair evaporator condition
 - Validate compressor amp draw
 - Validate supply motor amp draw
 - Validate condenser fan(s) amp draw
 - Check liquid line temperature
 - Check suction pressure and temp
 - Validate low-pressure controls
 - Validate crankcase heater operation
 - Clean water cooled chiller evaporator tubes (If performance warrants)
 - Validate sub-cooling and superheat
 - Inspect all refractory
 - Check safety controls
 - Lubricate all motors and Check coupling alignment