Residential Heating, Cooling and Water Heating Program

Central Air Conditioner Tune-Up Report

Consumers Energy
Count on Us®

First Name:	Last Name:	Consumers Energy Account Number:
Premise Address, City, ZIP (where equipment was serviced):		
Homeowner's Email (to receive rebate status updates):		
Contractor Name:		

☐ Natural Gas Furnace or ☐ Air Handler	Furnace or AHU Manufacturer _____ Rated TESP _____
☐ Condensing Unit or ☐ Heat Pump	Model # _____ Serial # _____
SEER (if known) _____	Condensing Unit Manufacturer _____ Tons _____
Service Date _____	Model # _____ Serial # _____
Indoor Coil (tons and ref. control only if in air handler)	Indoor Coil Manufacturer _____ Tons _____
	Metering Device ☐ TXV ☐ Fixed

Air conditioning tune-up services must be performed between April 1 and Sept. 30, 2024, to qualify.
Only one rebate is available for each qualifying cooling unit serviced within the measure life, which is five years.

	Test Results	Before	After*	Comments
Required	Fan Airflow (measured/verified)†	@	@	Ideally this system should have _____ CFM
	Coil Entering WB Temp†			Coil entering conditions – measure to 1 decimal place F
	Coil Leaving WB Temp†			Coil leaving conditions – measure to 1 decimal place F
	Coil Capacity	BTUH	BTUH	Btu = CFM x 4.5 x Δ Enthalpy
	÷ Equipment Nominal Btu	BTUH	BTUH	Manufacturer's rated nominal cooling BTUH
	Coil Capacity/System Nominal = System Effective Efficiency†	%	%	
Optional But Recommended	System Watts			Watts = measured volts x measured amps
	Room Return Air DB (opt)	°F	°F	Compare to coil entering DB (optional)
	Farthest Room Supply DB (opt)	°F	°F	Compare to coil leaving DB (optional)
	Charge Verification		**Added** / **Recovered**	**Quantity:** ☐ **Lb.** ☐ **Oz.**
	Condenser Entering Air DB	°F	°F	Outdoor air temperature
	Suction/Liquid Line Pressure			Needed to check refrigerant charge
	Suction/Liquid Line Temperatures			Needed to check refrigerant charge
	Actual/OEM Specified			☐ Superheat ☐ Subcooling ☐ Approach

*If initial readings are 85% or less, post-maintenance calculations are required.
†Mandatory values. System efficiency calculated on back of form.

Calculation Worksheet – Before

System Watts (Power):

Blower Motor Volts _____ x Amps _____ = _____ Watts

Compressor Volts _____ x Amps _____ = _____ Watts

Condenser Fan Volts _____ x Amps _____ = _____ Watts

Add the above to get total system watts _____

Converting Wet Bulb to Enthalpy (Measure all temperatures to first decimal place and record Enthalpy to two decimal places.):

Coil Entering WB _____ = _____ Btu/Lb Enthalpy a

Coil Leaving WB _____ = _____ Btu/Lb Enthalpy b

Coil Capacity: CFM _____ x 4.5 x (Enthalpy a - b _____) = _____ BTUH

System Effective Efficiency: Coil Capacity: _____ ÷ _____ Equipment Normal Capacity = _____ %

Complete these calculations to get coil capacity.

System efficiency is coil capacity ÷ nominal capacity.

Tune-Up Procedures – Check all that apply

As a minimum, the following were accomplished:

- ☐ Inspected filter, cleaned or replaced standard filters
- ☐ Cleaned condenser coil
- ☐ Inspected evaporator coil, recommended cleaning as needed
- ☐ Adjusted airflow
- ☐ Adjusted refrigerant charge
- ☐ Inspected electrical connections and wire

Comments:

_____

_____

_____

_____

_____

Calculation Worksheet – After (Required if "Before" efficiency is less than 85% of nominal)

System Watts (Power):

Blower Motor Volts _____ x Amps _____ = _____ Watts

Compressor Volts _____ x Amps _____ = _____ Watts

Condenser Fan Volts _____ x Amps _____ = _____ Watts

Add the above to get total system watts _____

Converting Wet Bulb to Enthalpy (Measure all temperatures to first decimal place and record Enthalpy to two decimal places.):

Coil Entering WB _____ = _____ Btu/Lb Enthalpy a

Coil Leaving WB _____ = _____ Btu/Lb Enthalpy b

Coil Capacity: CFM _____ x 4.5 x (Enthalpy a - b _____) = _____ BTUH

System Effective Efficiency: Coil Capacity: _____ ÷ _____ Equipment Normal Capacity = _____ %

Complete these calculations to get coil capacity.

System efficiency is coil capacity ÷ nominal capacity.

Notes

If the ductwork is installed in a hot, unconditioned space, a difference between the room return air and coil entering air temperatures could indicate delivered capacity loss from duct leakage and/or transmission gains. Duct sealing or insulating may be recommended to improve delivered capacity, comfort and efficiency.

A difference between the coil leaving temperature and the temperature delivered to a supply terminal usually indicates transmission gains through inadequate insulation. If the supply ducts leak, air will be lost to the unconditioned space.

If adequate coil airflow cannot be achieved by replacing a dirty filter or changing the blower speed, the problem is likely inadequate ductwork.

Technician (print name): _____ Technician Signature: _____

Date: _____