CENTRAL AIR CONDITIONER
TUNE-UP REPORT

Consumers Energy
Count on Us®

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

❑ 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 September 30, 2018, to qualify.
Only one rebate is available for each qualifying heating and cooling unit purchased or serviced.

	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 percent or less, post-maintenance calculations are required.
†Mandatory values. System efficiency calculated on back of form.

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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 percent 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: _____

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