

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



# CITY OF PORTLAND

# BUILDING PERMIT

This is to certify that STEVE J SINCLAIR

Located At 111 PINELOCH DR

Job ID: 2012-01-3184-HVAC

CBL: 397- D-001-001

has permission to Replacing boiler w/System 2000

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

\_\_\_\_\_  
**Fire Prevention Officer**

\_\_\_\_\_  
**Code Enforcement Officer / Plan Reviewer**

THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY  
PENALTY FOR REMOVING THIS CARD

## BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: [buildinginspections@portlandmaine.gov](mailto:buildinginspections@portlandmaine.gov)

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
- **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
- **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUPIED.

**City of Portland, Maine - Building or Use Permit Application**

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No: 2012-01-3184-HVAC	Date Applied: 1/31/2012	CBL: 397- D-001-001	
Location of Construction: 111 PINELOCH DR	Owner Name: STEVE J SINCLAIR	Owner Address: 111 PINELOCH DR PORTLAND, ME 04103	Phone:
Business Name:	Contractor Name: Carl Coleman – Dodge Oil Co.	Contractor Address: 79 New Portland Rd., Gorham, ME 04038	Phone: (207)-839-5536
Lessee/Buyer's Name:	Phone:	Permit Type: HVAC - HVAC	Zone: R-2
Past Use: Single family	Proposed Use: Same – Single family – replace oil burner in basement	Cost of Work: 8000.00	CEO District:
		Fire Dept: <input type="checkbox"/> Approved <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: <i>R-3</i> Use Group: Type: <i>WDR</i>
		Signature: <i>[Signature]</i>	Signature: <i>[Signature]</i>
Proposed Project Description: Replacing boiler w/system 2000		Pedestrian Activities District (P.A.D.)	
Permit Taken By:	<b>Zoning Approval</b>		

	Special Zone or Reviews	Zoning Appeal	Historic Preservation
1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. 2. Building Permits do not include plumbing, septic or electrical work. 3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.	<input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan  <input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM Date: <i>OK 2/6/12</i> <i>ABM</i>	<input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied  Date:	<input checked="" type="checkbox"/> Not in Dist or Landmark <input type="checkbox"/> Does not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied  Date: <i>ABM</i>

**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the appication is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

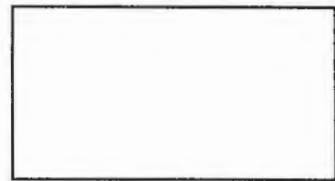
SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

R-2



FILL IN AND SIGN WITH INK

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



2012 40405

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 111 Pine Lock (397 Dool) Use of Building \_\_\_\_\_ Date 1/31/12

\* Name and address of owner of appliance Steve Sinclair

111 Pine Lock Drive Portland ME 04103

\* Installer's name and address Dodge Oil Co

79 New Portland Rd Gorham ME 04038 Telephone 207-839-5536

### Location of appliance:

- Basement
- Attic
- Floor
- Roof

### Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: System 2000

U.L. Approved  Yes  No

Will appliance be installed in accordance with the manufacture's installation instructions?  Yes  No

IF NO Explain: \_\_\_\_\_

### Type of Chimney:

- Masonry Lined
  - Metal
  - Direct Vent
- Factory built \_\_\_\_\_
- Factory Built U.L. Listing # \_\_\_\_\_
- Type \_\_\_\_\_

### Type of Fuel Tank

- Oil
- Gas

\* Size of Tank 275

\* Number of Tanks one

Distance from Tank to Center of Flame 10 feet.

Cost of Work: \$ 7759 (8000)

Permit Fee: \$ \_\_\_\_\_

RECEIVED  
JAN 31 2012

Date of Building Inspection \_\_\_\_\_

### Approved

Fire: \_\_\_\_\_

Ele.: \_\_\_\_\_

Bldg.: \_\_\_\_\_

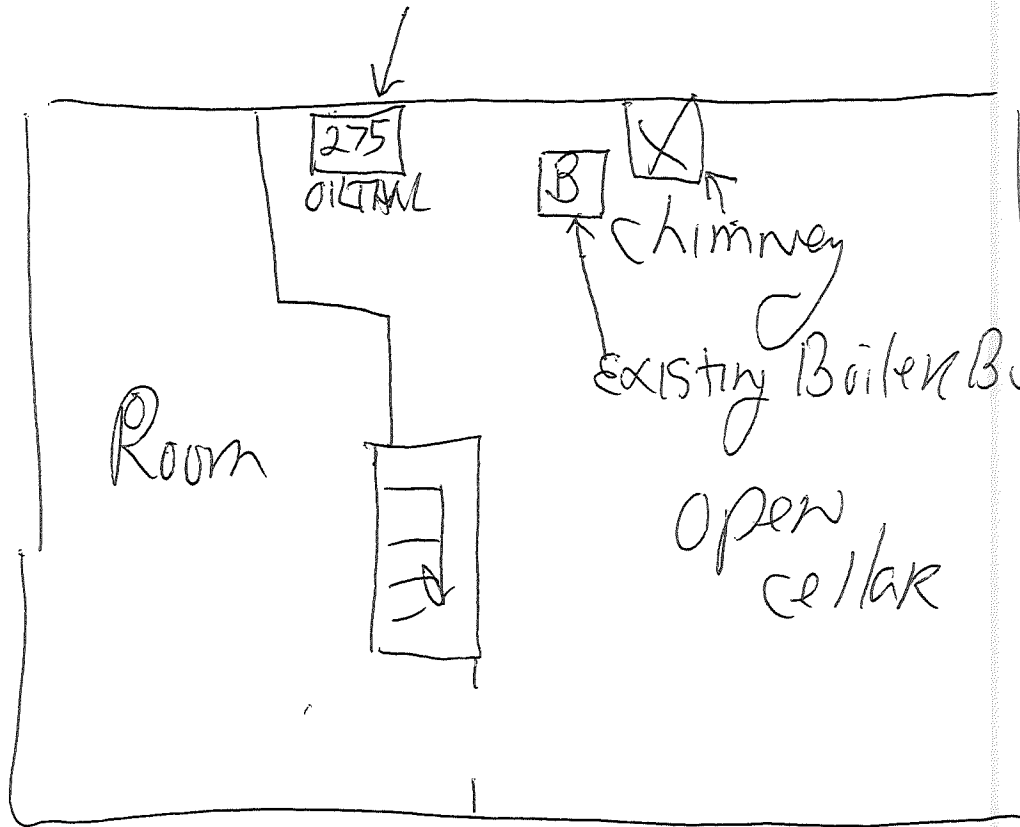
### Approved with Conditions

- See attached letter or requirement

Inspector's Signature \_\_\_\_\_

Date Approved \_\_\_\_\_

Signature of Installer Carl C Colema



Basement Plan

no Bulkhead  
Through  
house  
with Boiler  
IN + OUT

SINCLAIR JOB  
Dodge Oil Co.

79 New Portland Road, Gorham ME, 04038  
(tel) 207.839.5536 : (fax) 207.839.3225



# Fax

To: Braed From: Carl Coleman

Fax: 574-8949 Pages: 4

Phone: 839-5536 Date: 2/6/2012

Re: CC:

- Urgent
- For Review
- Please Comment
- Please Reply
- Please Recycle

• Comments:

Braed I think this is what you want

Thanks  
Carl C



"System 2000 operates very quietly...quieter than a microwave", as you promised." -Gerry and Lesley R., Brewster, MA

Home > Savings Analysis

CLICK FOR A HEATING EXPERT NEAR YOU.

On this page:  
 Savings analysis  
 System sizing and selection tool  
 Save over \$1.00 per gallon  
 Home improvement investment  
 Compare heating fuels  
 Greenhouse gas savings

Saves more than other boilers:  
 Calculate my savings!  
 Dept. of Energy lab results  
 Proven reliability and performance  
 Virtually endless hot showers  
 Whisper quiet operation

Contact us

## Savings Analysis

Below is a sample savings analysis estimate comparing an existing tankless coil oil boiler, a boiler with an indirect water heater, and System 2000 based on the Department of Energy's Brookhaven National Laboratories study. Please contact your System 2000 heating professional to perform a savings estimate for your specific home, equipment, geography, current fuel prices and more. With your heating professional's help, you can even estimate your return on investment versus other alternatives!

		Heat and Hot Water System Upgrade Summary		
		Current System	New Upgrade Choice 2	Upgrade Choice 1
Location	Harrisburg, PA			
Home size	2,200 (square feet)			
Hot water use	Average			
Fuel Cost	\$3.29 per gallon			
		Typical cast iron boiler with hot water coil in boiler	Typical new cast iron boiler with 40 gallon indirect water heater	System 2000 (87.9% AFUE)
		Oil Heat	Oil Heat	Oil Heat
Fuel Type:		140000 BTU/hr	140000 BTU/hr	261,63,000 BTU/hr
Boiler Control:		Typical Boiler Control	Typical Boiler Control	Energy Recovery (Top Rated Control)
Estimated Annual Efficiency:		53%	58%	84%
AFUE Rating:		85.0%	86.5%	87.9%
Estimated Average Monthly Fuel Bill:		\$256	\$244	\$162
Estimated Annual Fuel Bill:		\$3,090	\$2,820	\$1,948
Estimated Draft Related Losses:		86 gallons	61 gallons	0 gallons
Estimated Fuel Use:		642 gallons	608 gallons	582 gallons
Estimated Summer Hot Water Fuel Use per Day:		0.8 gallons	0.7 gallons	0.2 gallons
Estimated 30 year reduction in pounds of carbon dioxide equivalent (greenhouse gas emissions)*:			36,010	231,878
Savings per gallon:			\$0.18	\$1.22
Equivalent Fuel Price:			\$3.11	\$2.07
Estimated Savings Percent:			0%	37%
Estimated Annual Savings:			\$174	\$1,150
Estimated 30 Year Fuel Savings:			\$5,214	\$34,504

**Summary:**

Your estimated savings by upgrading to System 2000 from the current system is about \$1150 per year, or \$85 per month. Estimated savings are approximately \$24504 and 231877 pounds of carbon dioxide (greenhouse gases) over a 30 year period. Estimated savings over option 2 are about \$29296 and \$1.05 per gallon.



VIEW BROCHURE VIEW VIDEO





## The Green Neighborhood

Strategic Conservation –  
A Powerful Tool to Save Energy and Cut Green House Gas Emissions

Conservation is a very important component in using our resources wisely, and using products that are designed to be very reliable, affordable, and save as much energy as possible is critical for our country's success and for future generations. Renewable energy is part of the solution, but conservation can provide much more cost effective, immediate, and dramatic results.

Saving 550 therms of natural gas saves 3.2 tons of CO<sub>2</sub> annually, and is like removing  $\frac{1}{2}$  the emissions from a car for an entire year. This will save almost 100 tons of CO<sub>2</sub> through 30 years of operation.

Saving 400 gallons of fuel oil saves about 4.4 tons of CO<sub>2</sub> annually. A typical home will reduce greenhouse gas emissions by over 4 tons per year - **more than an acre of forest, and 3/4 the emissions from a car for an entire year!** This will save over 130 tons through 30 years of operation.

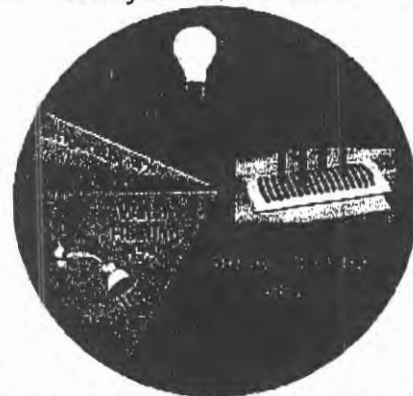
Savings from 10 residential System 2000 installations could be as good for the environment as taking 7 cars off the streets, or planting almost 11 acres of trees to absorb the carbon dioxide caused by the fuel consumption for one year.

**True or False:** Energy use of the average U.S. home creates almost twice the greenhouse gas emissions as the average car.

**True.** The average home releases more than 24,000 pounds of carbon dioxide (CO<sub>2</sub>) annually, almost twice as much as a typical car (11,500 pounds of CO<sub>2</sub> emissions), estimates the Environmental Protection Agency. This is due to emissions produced by power plants to generate the electricity used to run modern homes — plus home emissions from such things as oil- and gas-fired heat and hot water systems.

**Space heating and hot water costs are very substantial, and should be the first place people look to help save energy and fuel costs.**

In most cases, upgrading to System 2000, a high efficiency integrated heat and hot water system, will save much more than a hybrid car, and cost much less, too!



The above chart source data from Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 2001 Residential Energy Consumption Survey, New England and mid-Atlantic states. Figures are an average for all homes, specific home use may vary.

**Fuel Versatility** – Ready for the future... *today!* System 2000 is Bioheat (B5) compatible and flexible for today's volatile fuel markets – convert between fuels with a simple burner change for the only high efficiency oil / natural gas / propane compatible system available.

**Combined Heat and Hot Water  
Highest Efficiency  
Better than 95% AFUE Performance  
Natural Gas - Propane - Fuel Oil**



As an ENERGY STAR® Partner, Energy Kinetics has determined that this product meets ENERGY STAR® guidelines for energy efficiency. \*System 2000 has an AFUE rating of up to 87.9% and achieved the highest annual efficiency in the Brookhaven National Laboratory 2007 study "The Performance of Integrated Hydronic Systems."



It's got to be

**SYSTEM  
2000**

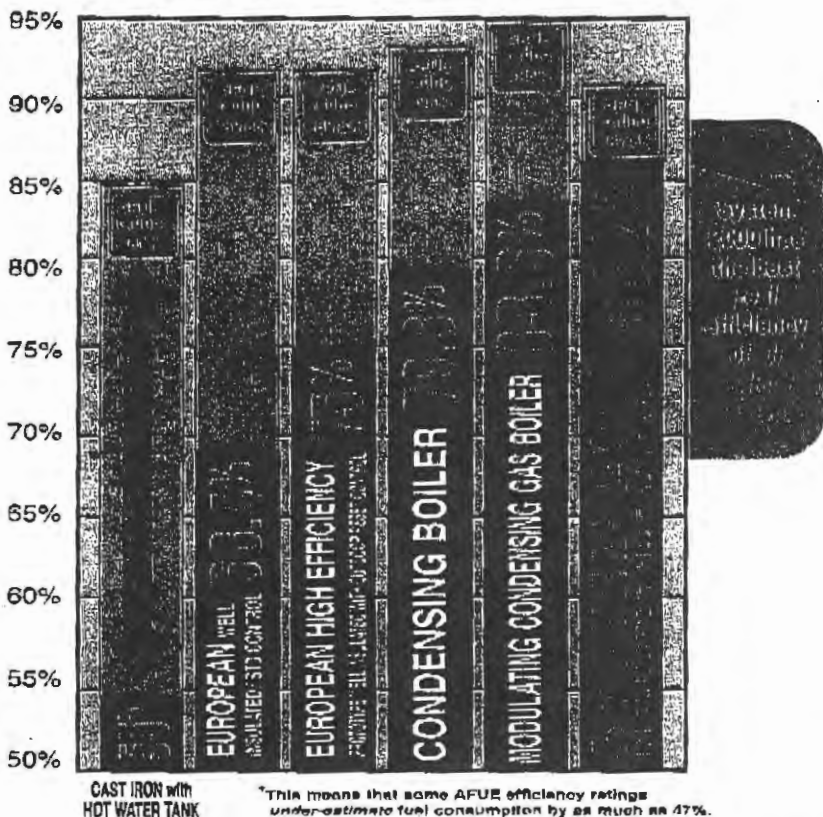
**Call us Today!  
800 323-2066**

Energy Kinetics, Inc. · 51 Molasses Hill Rd. · Lebanon, NJ 08833 · [www.energykinetics.com](http://www.energykinetics.com)



Under contract with the United States Department of Energy, Brookhaven National Labs confirms: U.S. energy guide (AFUE) ratings miss significant areas of energy loss.

REAL EFFICIENCIES (THE BNL FINDINGS):<sup>2</sup>



The REAL efficiency rating for System 2000 is 85%! Compare this to the other real ratings for conventional boilers, shown in the blue boxes and chart on these pages

For the best energy cost savings,

Low chimney loss

System 2000 minimizes chimney loss with a unique counterflow design that incorporates over ten feet of heat transfer passage.

Almost no jacket loss

System 2000 has 2-4" of insulation all around, and is raised 18" off the cold floor.

Near zero idle loss

System 2000 had the lowest idle loss of all systems tested in the important, independent Brookhaven National Labs study.

Plus, the System 2000 patented spiral boiler holds only 2.5 gallons of water and heats up six times faster than the competition. Combined with our high performance hot water system, System 2000's Hybrid Energy Recovery® captures heat that other boilers simply waste, and virtually eliminates idle loss while meeting all your heat and hot water needs.

No draft regulator or draft hood loss

System 2000's advanced design does not require draft regulation and uses outside air for combustion.

THE ELECTRIC HOT WATER ENERGY PIT:

With conventional gas and oil systems, it's possible to make general comparisons on efficiency. However, estimating the efficiency of electric hot water is more complicated because electric power is drastically more expensive than either gas or oil.

For example, a typical electric water heater can legally display an energy guide sticker that states its efficiency rating is 93%. On the surface, this sounds impressive. However, that rating means only that once electricity is connected to the heater, 93% of the electricity is converted to heat. What is not represented in this energy guide rating is this staggering fact: electricity itself is 3 to 5 times more expensive than either oil or gas.

That means electric hot water usually costs 3 to 5 times more than SYSTEM 2000 hot water!



The real efficiency of making hot water with electricity is an embarrassing 28%.

<sup>2</sup> Data and conclusions are drawn from the report "Performance of Integrated Hydronic Heating Systems," Paper and presentation by Brookhaven National Laboratory, Upton, New York, under contract No. DE-AC02-88CH10898 with the United States Department of Energy by Dr. T. Butcher, and "Chimney Related Energy Losses in Residential Oil-Fired Heating Systems (1987)," Available on request.



# CITY OF PORTLAND, MAINE

Department of Building Inspections

## Original Receipt

1/31 20 12

Received from ~~Steve~~ Dodge Oil

Location of Work 111 Pameloch Dr

Cost of Construction \$ 8000 Building Fee: \_\_\_\_\_

Permit Fee \$ \_\_\_\_\_ Site Fee: \_\_\_\_\_

Certificate of Occupancy Fee: \_\_\_\_\_

HVAC/Oil Total: 100 —

Building (IL) \_\_\_\_\_ Plumbing (I5) \_\_\_\_\_ Electrical (I2) \_\_\_\_\_ Site Plan (U2) \_\_\_\_\_

Other \_\_\_\_\_

CBL: 397 0001

Check #: \_\_\_\_\_ Total Collected \$ 100 —

**No work is to be started until permit issued.  
Please keep original receipt for your records.**

Taken by: (Signature)

WHITE - Applicant's Copy  
YELLOW - Office Copy  
PINK - Permit Copy