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

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

| Permit No: | Issue Date: | CBL: |
|---|---|---|
| 10-0780 | | 340 D003001 |

| Location of Construction: | Owner Name: | Owner Address: | Phone: |
|---|---|---|---|
| 1445 FOREST AVE | MULKERN MICHAEL E | 1445 FOREST AVE | |
| **Business Name:** | **Contractor Name:** | **Contractor Address:** | **Phone** |
| | Wayne Halls Heating Service | PO box 6544 Scarborough | 2078830307 |
| **Lessee/Buyer's Name** | **Phone:** | **Permit Type:** | **Zone:** |
| | | HVAC | R-3 |

| Past Use: | Proposed Use: | Permit Fee: | Cost of Work: | CEO District: |
|---|---|---|---|---|
| 2 Unit Residential<br>Legal use - 2 Residential D, U | 2 Unit Residential - install 2 Peerles ECT boilers in basement | $100.00 | $8,000.00 | 5 |

**FIRE DEPT:** ☐ Approved ☐ Denied

Signature: N/A

**INSPECTION:** Use Group: R-3 Type: HVAC

IRC 2003

Signature:

**Proposed Project Description:**
install 2 Peerles ECT boilers in basement

**PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)**

Action: ☐ Approved ☐ Approved w/Conditions ☐ Denied

Signature: Date:

| Permit Taken By: | Date Applied For: |
|---|---|
| ldobson | 07/01/2010 |

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 information may invalidate a building permit and stop all work..

PERMIT ISSUED

JUL - 7 2010

City of Portland

## Zoning Approval

| Special Zone or Reviews | Zoning Appeal | Historic Preservation |
|---|---|---|
| ☐ Shoreland | ☐ Variance | ☑ Not in District or Landmark |
| ☐ Wetland | ☐ Miscellaneous | ☐ Does Not Require Review |
| ☐ Flood Zone | ☐ Conditional Use | ☐ Requires Review |
| ☐ Subdivision | ☐ Interpretation | ☐ Approved |
| ☐ Site Plan | ☐ Approved | ☐ Approved w/Conditions |
| Maj ☐ Min ☐ MM ☐ | ☐ Denied | ☐ Denied |
| Date: ok with conditions | Date: | Date: |

7/1/10

## 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 application 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

# CITY OF PORTLAND, MAINE
**Department of Building Inspections**

## Original Receipt

7.1 20 10

Received from Wayne Hall

Location of Work 1445 Forest Ave

Cost of Construction $_____ Building Fee:_____

Permit Fee $_____ Site Fee:_____

Certificate of Occupancy Fee:_____

**Total:** 100

Building (IL)___ Plumbing (I5)___ Electrical (I2)___ Site Plan (U2)___

Other HVAC

CBL: 340-D-3

Check #: 6525 **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

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| 10-0780 | 07/01/2010 | 340 D003001 |

| Location of Construction: | Owner Name: | Owner Address: | Phone: |
|---|---|---|---|
| 1445 FOREST AVE | MULKERN MICHAEL E | 1445 FOREST AVE | |
| **Business Name:** | **Contractor Name:** | **Contractor Address:** | **Phone** |
| | Wayne Halls Heating Service | PO box 6544 Scarborough | (207) 883-0307 |
| **Lessee/Buyer's Name** | **Phone:** | **Permit Type:** | |
| | | HVAC | |

| Proposed Use: | Proposed Project Description: |
|---|---|
| 2 Unit Residential - install 2 Peerles ECT boilers in basement | install 2 Peerles ECT boilers in basement |

**Dept:** Zoning **Status:** Approved with Conditions **Reviewer:** Marge Schmuckal **Approval Date:** 07/01/2010

**Note:** **Ok to Issue:** ✓

1) This is NOT an approval for an additional dwelling unit. You SHALL NOT add any additional kitchen equipment including, but not limited to items such as stoves, microwaves, refrigerators, or kitchen sinks, etc. Without special approvals.
2) This property shall remain a two family dwelling. Any change of use shall require a separate permit application for review and approval.
3) This permit is being approved on the basis of plans submitted. Any deviations shall require a separate approval before starting that work.

**Dept:** Building **Status:** Approved with Conditions **Reviewer:** Tammy Munson **Approval Date:** 07/07/2010

**Note:** after the fact permit **Ok to Issue:**

1) Installation shall comply with 2003 International Mechanical Code and State of Maine Oil and Solid Fuel Board Laws and Rules

**PERMIT ISSUED**

JUL - 7 2010

City of Portland

FILL IN AND SIGN WITH INK

PERMIT ISSUED

JUL - 7 2010

City of Portland

# APPLICATION FOR PERMIT
# HEATING OR POWER EQUIPMENT

340 DJ

*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 1445 FOREST AVE. Use of Building 2-FAMILY Date 6-29-10

Name and address of owner of appliance MIKE MULKERN 241 ELM ST. SO. PORTLAND ME. 04106

Installer's name and address WAYNE HALL'S HEATING SERVICE P.O. BOX 6544 Scarborough ME Telephone 883-0307

**Location of appliance:**

- ☒ Basement
- ☐ Floor
- ☐ Attic
- ☐ Roof

**Type of Fuel:**

- ☐ Gas
- ☒ Oil
- ☐ Solid

**Appliance Name:** 2- Peerless ECT

U.L. Approved ☒ Yes ☐ No

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

IF NO Explain: _____

**The Type of License of Installer:**

- ☐ Master Plumber # _____
- ☐ Solid Fuel # _____
- ☒ Oil # 5969
- ☐ Gas # _____
- ☐ Other _____

**Type of Chimney:**

- ☒ Masonry Lined
  Factory built STAINLESS LINER To be INSTALLED by PICKETT'S CHIMNEY 7-5-10
- ☐ Metal
  Factory Built U.L. Listing # _____
- ☐ Direct Vent
  Type _____ UL# _____

RECEIVED

JUL - 1 2010

Dept. of Building Inspections
City of Portland Maine

**Type of Fuel Tank**

- ☒ Oil
- ☐ Gas

**Size of Tank** 275 gallons

**Number of Tanks** 2

**Distance from Tank to Center of Flame** 6+ feet.

**Cost of Work:** $ 8,000.00

**Permit Fee:** $ 100

**Approved**

Fire: _____

Ele.: _____

Bldg.: _____

**Approved with Conditions**

☐ See attached letter or requirement

_____ Inspector's Signature

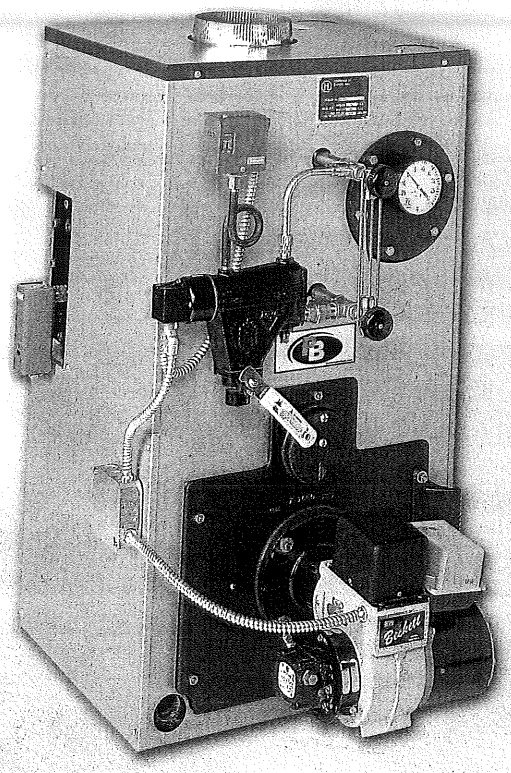
_____ Date Approved

**Signature of Installer** _____

White - Inspection Yellow - File Pink - Applicant's Gold - Assessor's Copy

# Series EC/ECT

## Oil Boilers



CHANGE FOR THE BETTER WITH ENERGY STAR

As an ENERGY STAR® Partner, PB Heat, LLC has determined that certain firing rates of this product meet the ENERGY STAR® guidelines for energy efficiency.

# Installation, Operation & Maintenance Manual

PeerlessBoilers.com

# Series EC/ECT

## Oil Boilers

# Installation, Operation & Maintenance Manual

**TO THE INSTALLER:**

*This manual is the property of the owner and must be affixed near the boiler for future reference.*

**TO THE OWNER:**

*This boiler should be inspected annually by a Qualified Service Agency.*


PeerlessBoilers.com

**PB HEAT, LLC**

P.O. BOX 447 • NEW BERLINVILLE, PA 19545-0447


Service Information

Name: _____

Address: _____

_____

Phone: _____

HI Division of gama

member

ASME



EC8000 R22 (6/06-5M)
Printed in U.S.A.

# 1. PREINSTALLATION

Read carefully, study these instructions before beginning work. It will save time. Study the included drawings. Save these instructions for reference.

This boiler must be installed by a qualified contractor.

The boiler warranty can be voided if the boiler is not installed, maintained and serviced correctly.

**NOTICE** **The equipment shall be installed in accordance with those installation regulations in force in the local area where the installation is to be made, including the current edition of *NFPA-31, Standard for the Installation of Oil-Burning Equipment*, and in *Canada, CSA B139, Installation Code for Oil Burner Equipment*. These shall be carefully followed in all cases. Authorities having jurisdiction shall be consulted before installations are made.**

**CAUTION** **Never burn garbage or paper in the unit, and never leave combustible material around it.**

**CAUTION** **Do not tamper with boiler controls.**

## A. CLEARANCES

**Table 1.1: Clearances from Jacket and Vent System**

| Required from Jacket to Combustible Construction | | Recommended From Jacket for Accessibility and Mounting Controls |
|---|---|---|
| Top | 5"* | 24" if Left Side Clearance less than 24" (to clean flueways from top). |
| Front | 16"* | 16" from jacket due to burner. |
| Left | 2"* | 24" if Top Clearance less than 24" (to clean flueways from left side). |
| | | 24" on steam with tankless coil. |
| | | 9" in area of boiler service switch and junction box. |
| Right | 2"* | 12" due to burner swing radius*. |
| Rear | 2"* | 9" for mounting relief valve. |
| **Vent Pipe (Single Wall)** - 9" to Combustible Construction. Clearance may be reduced using methods in NFPA 31. | | |
| **Vent Pipe (Double Wall)** - See Manufacturer's Instructions. | | |

* Consider also vent pipe clearance, including distance from edge of flue outlet to combustible construction (as applicable).

Unit may be installed on combustible flooring, provided the boiler is not set on carpet and a metal drip pan is placed under the appliance.

Unit may be installed in a closet with the above clearances. See also Section B, Air for Combustion and Ventilation.

## B. AIR FOR COMBUSTION AND VENTILATION

1. Be certain adequate facilities are available to provide air for satisfactory combustion and ventilation.

2. Appliances Located in Unconfined Spaces.
   a. For installation in unconfined spaces with conventional construction and larger areas such as basements, the supply of air for combustion and ventilation can usually be considered adequate.

3. Appliances Located in Confined Spaces.
   a. All air from inside the building: Provide two permanent openings communicating directly with an additional room. If all air for combustion and ventilation is to come from within the building: two openings, one near the ceiling and one near the floor of the boiler room shall be provided with the minimum free area of each opening equal to 140 sq. in. per gallon of oil burned.

   b. If all air for combustion and ventilation is to come from outside the building: two openings, one near the ceiling and one near the floor of the boiler room shall be provided with the minimum free area of each opening equal to 35 sq. in. per gallon of oil burned.

   If ducts are used to convey the air, areas of 35 sq. in. per gallon of oil burned for vertical ducts or 70 sq. in. per gallon of oil burned for horizontal ducts are to be provided. Ducts shall have the same area as the free area of the openings to which they are connected.





## C. CHIMNEY / VENT AND DRAFT CONTROL

**CAUTION** **An oil-fired unit shall be connected to a flue having sufficient draft at all times, to assure safe proper operation of the unit.**

1. Draft Requirement – Minimum draft required in the vent system is -.03" to -.05" W.C. depending on boiler model, see Table 7.1 (Section 7). This draft is necessary to provide the necessary draft over fire of -.01" to -.02" W.C. See discussion in paragraph 5 below regarding draft.

2. Use barometric provided to control draft. Follow manufacturer's instructions to locate and adjust the control.

3. Inspect the existing chimney or vent system. Make sure it is in good condition. Inspect chimney liner and repair or replace if necessary.

4. The vent system and installation must be in accordance with the current edition of the American National Standard ANSI/NFPA 211, "Chimneys, Fireplaces, Vents, and Solid Fuel Burning Appliances," or applicable provisions of the local building codes. See Table 7.1 (Section 7) for typical chimney size. If the vent system is not sized properly, the burner may not operate properly. This can cause poor combustion, sooting and odors to occur.

5. Background Information Regarding Draft:

   Modern boilers operate with higher efficiencies than older boilers. Smaller flueways, as well as bars, pins and fins are designed into modern boilers to transfer as much heat as possible from the hot gases to the water or steam and prevent heat loss up the chimney. However, these design features result in higher pressure, or draft loss, in the boiler.

   This draft loss must be taken into account when installing an oil boiler into a new or old chimney. New chimneys are less likely to have poor draft. However, they must have sufficient draft to support combustion. A -.06" draft is desirable and preferred. Older chimneys may require a replacement liner to have them perform well enough to support combustion.

For Example:

| | Old Installation | New Installation | Comments |
|---|---|---|---|
| Chimney Draft | -.04" | -.04" | No change, but older chimneys (especially unlined ones) have leaks which reduce draft. |
| Boiler Design Pressure Drop | +.01" | +.04" | Required for mandated efficiency increases. |
| Draft Over Fire | -.03" | 0.00" | The old installation would have had a higher temperature in the chimney [as high as 800 degrees vs. 400 degrees F], which would increase the draft. |

The above readings are "cold" readings (before the boiler and chimney are heated up).

Note also that the higher the firing rate on a unit which has multiple firing rates, the higher the draft required. For example, increasing the firing rate 1/4 gallon may increase the draft loss in a unit by approximately +.01".

## D. INSTALLATION SURVEY

For new and existing installations, a Water Installation Survey or a Steam Installation Survey is available from P.B. Heat, LLC. The surveys will provide information on how the boiler works with your specific system and will provide an overview of boiler system operation in general.

You can also use this survey to locate system problems which will have to be corrected. To obtain copies of these Surveys, contact your PB Heat representative or download it from PeerlessBoilers.com.

## E. PLANNING THE LAYOUT

Prepare sketches and notes of the layout of the installation. Include boiler location, venting system, existing piping and wiring. Show existing equipment that may interfere with installation of new equipment.