DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK

CITY OF PORTLAND

BUILDING PERMIT

This is to certify that STEPHEN BUGDEN Located At 79 JORDAN ST

Job ID: 2012-10-5089-HVAC CBL: 429- H-016-001

has permission to Install a Weil-McLain Boiler in basement

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

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.

Job ID: 2012-10-5089-HVAC **Located At:** 79 JORDAN ST **CBL:** 429- H-016-001

Conditions of Approval:

Building

Equipment shall be installed in compliance with the manufacturer's specifications and the UL listing.

City of Portland, Maine - Building or Use Permit Application
389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

Job No:	Date Applied:	CBL:	
2012-10-5089-HVAC	**10/1/2012**	**429- H-016-001**	
Location of Construction: **79 JORDAN ST**	Owner Name: **STEPHEN BUGDEN**	Owner Address: **79 JORDAN ST PORTLAND, ME 04103**	Phone:
Business Name:	Contractor Name: **Caron & Waltz**	Contractor Address: **321 LINCOLN ST SOUTH PORTLAND MAINE 04106**	Phone: **799-2228**
Lessee/Buyer's Name:	Phone:	Permit Type: **HVAC**	Zone: **R-5**
Past Use: **Two Family Dwelling**	Proposed Use: **Same: Two Family Dwelling – to install Weil-McLain STG03 heating system**	Cost of Work: **$7,000.00**	CEO District:
		Fire Dept: ___ Approved ___ Denied ___ N/A Signature:	Inspection: Use Group: R-3 Type: 5B HVAC Signature:
Proposed Project Description: **Install a Weil-McLain Boiler in basement**		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Lannie			

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 electrial 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.

Zoning Approval

Special Zone or Reviews	Zoning Appeal	Historic Preservation
___ Shoreland	___ Variance	✓ Not in Dist or Landmark
___ Wetlands	___ 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 10/1/12	Date:	Date:

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

05/05/2011 10:37 2078748716 2012-10-5089 HVAC PAGE 01/01

OJB 97:50

FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT
HEATING OR POWER EQUIPMENT

429-H-16 R-5

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 81 JORDAN STREET Use of Building WALL 2 FAM RESIDENCE Date 9/27/12

Name and address of owner of appliance STEVE BAGDEN
81 JORDAN STREET, PORTLAND, ME 04103

Installer's name and address CAMPBELL WAITE
321 LINCOLN ST, SO. PORTLAND, ME 04106 Telephone 799-2228

Location of appliance:
- [X] Basement
- [ ] Floor
- [ ] Attic
- [ ] Roof

Type of Fuel:
- [X] Gas
- [ ] Oil
- [ ] Solid

Appliance Name: WEIL-MCLAIN STG03

U.L. Approved [ ] Yes [ ] No

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

IF NO Explain:

The Type of License of Installer:
- [ ] Master Plumber #
- [ ] Solid Fuel #
- [ ] Oil #
- [X] Gas # PNT1619
- [ ] Other

Type of Chimney:
- [X] Masonry Lined
  Factory built
- [ ] Metal
  Factory Built U.L. Listing #
- [ ] Direct Vent
  Type UL#

RECEIVED
OCT 01 2012
Dept. of Building Inspections
City of Portland Maine

Type of Fuel Tank
- [ ] Oil
- [ ] Gas

NO TANK

Size of Tank NA

Number of Tanks NA

Distance from Tank to Center of Flame NA feet.

Cost of Work: $ 6,785.00

Permit Fee: $ 90

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

Ratings

DOE MADE IN THE USA

SGO

Model	I=B=R Burner Cap. (GPH)	% DOE Seasonal Efficiency (AFUE)	DOE Heating Capacity (MBH)	Net I=B=R Steam Ratings (MBH)	Steam (Sq. Ft.)	Tankless Heater Intermittent Draw Rating (GPH)	Draft Loss Through Boiler (in. w/c)	I=B=R Chimney Size: Rectangular (in)	I=B=R Chimney Size: Round (in)	I=B=R Chimney Size: Height (ft.)	Approx. Shipping Weight (Lbs)
SGO-3	0.85	83.8	114	85	364	3.25	.010	8 x 8	8	15	660
SGO-4	1.20	84.0	144	108	450	3.75	.010	8 x 8	8	15	705
SGO-5	1.45	83.9	174	131	546	4.00	.015	8 x 8	7	15	820
SGO-6	1.75	83.7	210	158	658	4.25	.015	8 x 8	7	15	920
SGO-7	2.00	83.6	240	180	750	5.50	.015	8 x 8	8	15	990
SGO-8	2.30	x	266	200	833	5.75	.020	8 x 12	8	20	1090
SGO-9	2.55	x	295	221	921	6.00	.030	8 x 12	8	20	1195

Notes:

* Add "P" for packaged boiler (SGO-3 through SGO-8 only–Packaged water boiler not available). Add "A" for boiler only.

(1) No. 2 fuel oil–Commercial Standard Specification CS75-56. Heating value of oil–140,000 BTU/Gal.

(2) Based on standard test procedures prescribed by the United States Department of Energy at combustion condition of 13.0% CO2 for SGO-3 and 13.5% CO2 for SGO-4 through 7.

(3) MBH refers to thousands of BTU per hour.

(4) Rating under "DOE Heating Capacity" for SGO-8 and -9 is I=B=R gross output. DOE ratings do not apply to boilers above 300 MBH.

(5) Net I=B=R ratings are based on net installed radiation of sufficient quantity for the requirements of the building and nothing need be added for normal piping and pickup. Steam ratings are based on a piping and pickup allowance of 1.333; water ratings on an allowance of 1.15. An additional allowance should be made for unusual piping and pickup loads. Consult a Weil-McLain representative.

(6) All boiler sizes use number 35-S-29 tankless heater. Tankless heater rating is in gallons of water per minute, heated from 40°F to 140°F with 200°F boiler water temperature–tested in accordance with I-W-H Testing and Rating Standard for Indirect Tankless Water Heaters Test with Boilers.

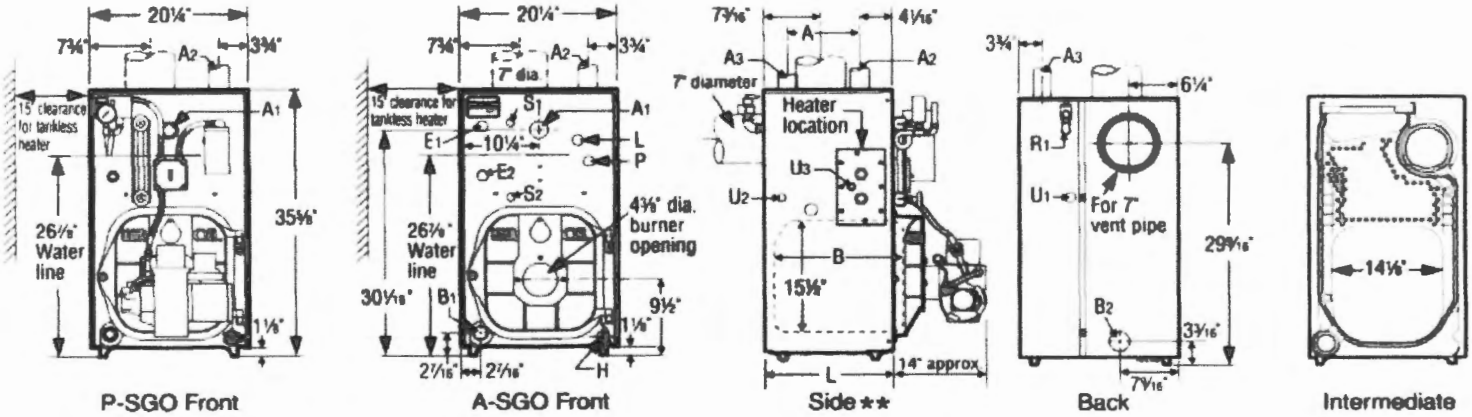
(7) Listed draft losses are for standard burner settings.

Dimensions

Model	Supply (inches): Steam	Supply (inches): Water	Return (inches): Steam	Return (inches): Water	Dimensions (inches)**: A	B	L	Tankless Heater #35-S-29: Inlet & Outlet (NPT) (in)	Tankless Heater #35-S-29: Temp Control (NPT) (in)
SGO-3	1-2 1/2	1-1 1/2	2	1 1/2	-	13 1/2	18 7/8	3/4	3/4
SGO-4	1-2 1/2	1-1 1/2	2	1 1/2	-	16 5/8	20	3/4	3/4
SGO-5	1-2 1/2	1-1 1/2	2	1 1/2	-	18 7/8	23 1/8	3/4	3/4
SGO-6	2-2 1/2	1-1 1/2	2	1 1/2	19	23	26 1/4	3/4	3/4
SGO-7	2-2 1/2	1-1 1/2	2	1 1/2	22 1/8	26 1/8	29 3/8	3/4	3/4
SGO-8	2-2 1/2	1-1 1/2	2	1 1/2	25 1/4	29 1/4	32 1/2	3/4	3/4
SGO-9	2-2 1/2	1-1 1/2	2	1 1/2	28 3/8	32 3/8	35 5/8	3/4	3/4

Crate Dimensions: Height - 39" Width - 23" Length (*SGO-3, -4) - 37" / (*SGO-5, -6) - 43"

Tapping Location	Size (inches)	Steam	Water
A_1	1 1/2	Side tapping	Supply
A_2	2 1/2	Supply	Piping to expansion tank or automatic air vent
A_3	2 1/2	Supply (SGO-6 thru 9)	Plugged
B_1	1 1/2	Plugged	Return
B_2	2	Return	Plugged
E_1	1/2	Pressure gauge & limit control (when probe L8000 is used)	Pressure/temperature gauge
E_1 & E_2	1/2	Low water cutoff (float-type)	--
H	3/4	Drain valve	Drain valve
L	3/4	Pressure gauge & limit control (when probe L8000 is used)	High limit/circulator control
P	3/4	Low water cutoff (probe-type)	Plugged
P_1	3/4	Relief valve	Relief valve
S_1 & S_2	1/2	Gauge glass	Plugged
U_1	1	Take-off for indirect-fired water heater or separate zone	Plugged
U_2	3/4	Tankless heater operating control (SGO-6 thru 9)	Plugged
U_3*	3/4	Tankless heater operating control (SGO-3 thru 5)	Tankless heater operating control



Standard and Additional Equipment

Standard Equipment:

Limited 10 Year Warranty on Boiler Sections
Factory Tested
Factory-Assembled Cast Iron Sections with the Following Parts Installed. (jacket and collector hood are not assembled on 7-, 8- and 9- section blocks.)
- Insulated Steel Jacket
- Aluminized Steel Flue Collector Hood with Flue Cap On Top Outlet
- Swing-Away Burner Mounting Door
- Refractory Blanket And Target Wall in Combustion Area
- Heater Opening Cover Plate

Electrical Junction Box With Wiring Harnesses
Junction Box Cover Plate With Service Switch
Two Vent Pipe Brackets
Drain Valve
Balanced Draft Damper

SGO Steam Boilers:

High Limit Pressure Control
Low Water Cutoff (Float or Probe Type -P Units Only
15 PSI ASME Relief Valve (boiler sections tested for 15 PSI working pressure)
Steam Pressure Gauge
Siphon
Gauge Glass, Cocks And Guard

Additional Equipment:

High-Efficiency Flame-Retention Oil Burner (Beckett AFG, Carlin EZ or Riello). Specify
2-Stage Fuel Unit (optional) If Required.
Tankless Heaters And Controls
Low Water Cutoffs (float or probe type)
W-M 5 & 10 Year Homeowner Protection Plan
W-M Indirect-Fired Water Heaters

WEIL-McLAIN

In the interest of continual improvements in product and performance, Weil-McLain reserves the right to change specifications without notice.

Connect breeching

General chimney requirements

- Designed for natural draft firing. Connect boiler to vertical chimney.
- Insufficient draft can cause flue gas leakage and carbon monoxide emissions, which will lead to severe personal injury or death.
- Use vent material approved by local codes for oil-fired burners. In their absence, refer to:
  - NFPA 31, Installation of Oil-Burning Equipment.
  - NFPA 211, Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances.
  - In Canada, refer to CSA B139, Installation Code for Oil-Burning Equipment.
- NFPA 211 requires chimney to be lined before connected to boiler.
- Inspect existing chimney before installing new boiler. Failure to do any of the following will result in severe personal injury or death:
- Clean chimney, including removal of blockage.
- Repair or replace damaged pipe or liner.
- Repair mortar and joints.
- To prevent downdrafts, extend chimney at least 3 feet above highest point where it passes through roof and 2 feet higher than any portion of building within 10 feet. Increase chimney cross-sectional area and height at least 4% per 1,000 feet above sea level.
- Minimum clearances from vent pipe to combustible material:
  - 6 inches — Type "L" double-wall vent
  - 9 inches — Single-wall vent
- Minimum chimney sizes should be used.

NOTICE Oversized chimneys, outside masonry chimneys and/or derated inputs can result in condensation in chimney.

Table 3 Minimum chimney sizes

Boiler model number	Minimum breeching diameter (note 3)	Minimum I=B=R chimney size		Minimum chimney height
		Rect.	Round	
WGO-2	5"	8" x 8" (note 1)	6"	15'
WGO-3				
WGO-4	6"			
WGO-5	6"	8" x 8" (note 1)	7"	15'
WGO-6	7"			
WGO-7				
WGO-8	7"	8" x 12" (note 2)	7"	20'
WGO-9				
Note 1	6¾" x 6¾" inside liner			
Note 2	6½" x 10½" inside liner			
Note 3	Flue collar on boiler is 7" diameter			

Connect breeching:

WARNING Long horizontal breechings, excessive number of tees and elbows or other obstructions restricting combustion gas flow can result in possibility of condensation, flue gas leakage and carbon monoxide emissions, which can lead to severe personal injury or death.

1. Install 2 flue pipe brackets.
2. Connect full-sized breeching when possible. See Minimum Chimney Size Table.
   - Back outlet — see Figure 7, page 17.
   - Top outlet — see Figure 8, page 17.
3. Connection must be made above bottom of chimney to avoid blockage. Breeching must not enter chimney far enough to cause obstruction. Use thimble or slip joint where breeching enters chimney to allow removal for cleaning.
4. When burner and boiler are properly installed, draft overfire will be approximately -0.01" to -0.02" W.C. Install barometric control in breeching, per control manufacturer's instructions, when excess draft needs to be relieved or to comply with applicable codes and regulations. Use draft gauge to adjust proper opening.
5. An induced draft fan for the chimney may be necessary if:
   - Excessive resistance to flow of combustion gases can be expected.
   - Cross-sectional area of chimney is smaller than minimum recommended.
   - Chimney height is less than recommended.

WARNING Seal all vent joints. Interlock burner with fan operation.

Connect breeching (continued)

Figure 7 Back outlet breeching connection

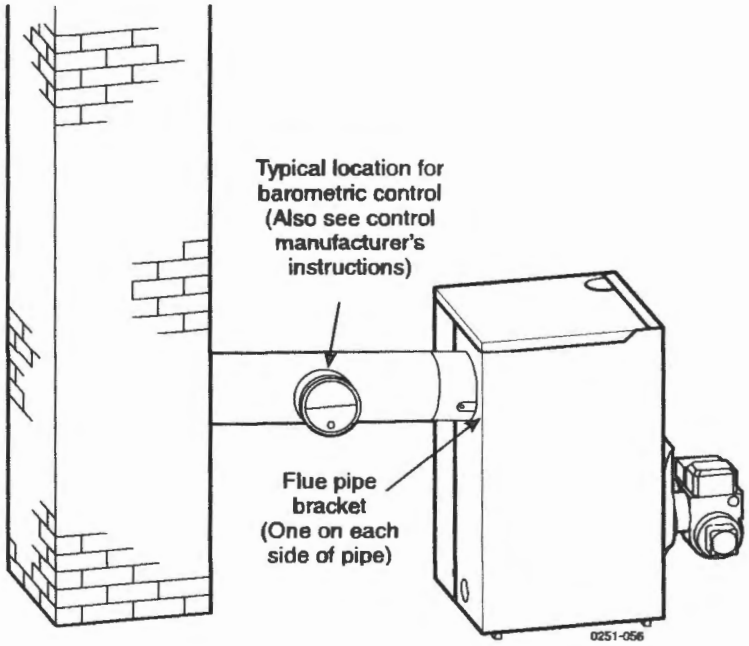
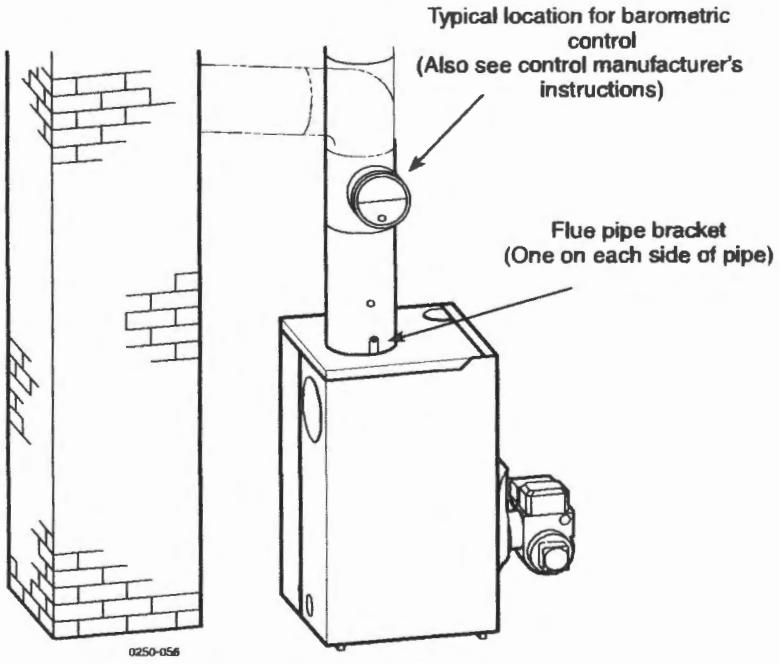


Figure 8 Top outlet breeching connection



WARNING SERVICE TECHNICIAN ONLY — read and follow completely.

Before installing boiler

DANGER **Homeowner — STOP!** The procedures and information on this and following pages are intended only for a qualified service technician who has the necessary equipment to inspect and adjust boiler and burner. A homeowner should never attempt these procedures. The service technician must also read pages 1 through 7 before proceeding.

Installations must comply with

- United States
  - State and local plumbing, heating and electrical codes.
  - National codes where applicable.
- Canada
  - Canadian Standards Association, CSA B139, Installation Code for Oil-Burning Equipment.
  - CSA C22.1 Canadian Electrical Code Part One.
  - Applicable local or provincial codes.

Before selecting boiler location

Check for nearby connections to:

- System water piping.
- Chimney. See page 16. Boiler can be top or back vented.
- Combustion and ventilation air supply. See page 9.
- Oil supply. See page 26 for oil line routing.
- Electrical power.

- Check area around boiler. Remove any combustible materials, gasoline and other flammable liquids.

Provide clearances around boiler (see Figure 2)

NOTICE Jacket cap must be in place on boiler to avoid requiring an 9" minimum clearance from back or top of boiler to combustible material.

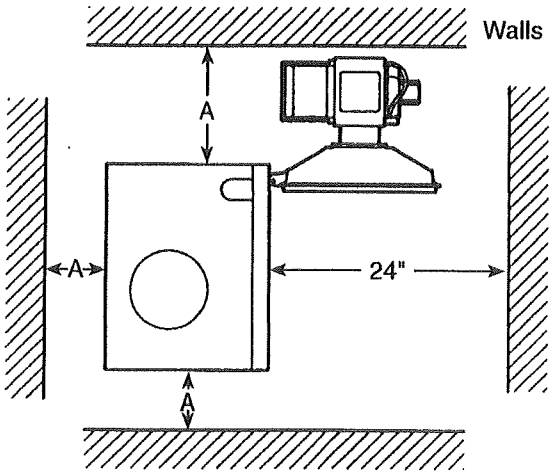
- MINIMUM clearances from vent pipe to combustible material
  - 6 inches — Type "L" double-wall vent*
  - 9 inches — Single-wall vent*

NOTICE Flue pipe clearances must take precedence over jacket clearances.

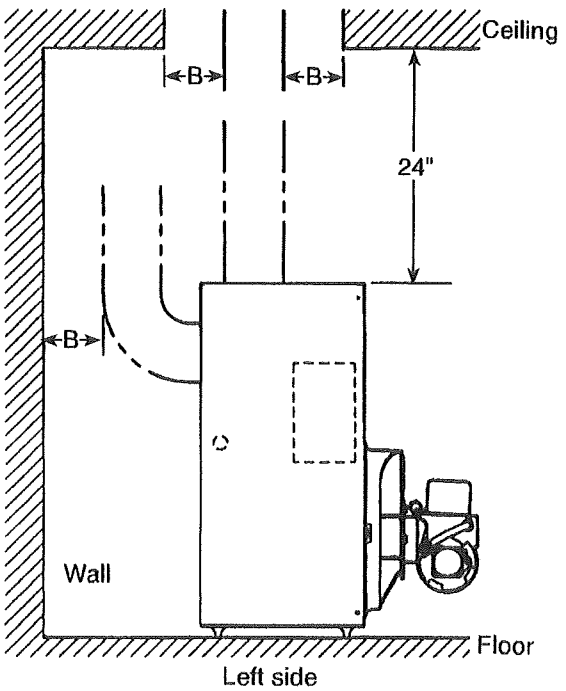
- Recommended SERVICE clearances
  - 24 inches — Front and top
  - 6 inches — Left side, back and right side
  - 12 inches — Right side for burner door swing radius
- Special close clearances (alcove, closet, under counters, etc.) — see Appendix, page 32.

WARNING Failure to keep boiler area clear and free of combustible materials, gasoline and other flammable liquids and vapors can result in severe personal injury, death or substantial property damage.

Figure 2 Recommended service clearances



Top View



Left side

A Provide 6" minimum clearance for service, provide 12" minimum clearance for burner door swing.
B Minimum clearance from vent pipe to combustible material: 6" for type "L" double-wall vent, 9" for single-wall vent.