INSPECTION CONDITIONS

CLIENT & SITE INFORMATION:

DATE OF INSPECTION:

.

TIME OF INSPECTION:

.

CLIENT NAME:

.

MAILING ADDRESS:

.

CITY/STATE/ZIP:

.

PHONE #:

.

FAX #:

.

INSPECTION LOCATION:

.

CITY/STATE/ZIP:

.

INSPECTION SITE PHONE #:

.

CLIMATIC CONDITIONS:

WEATHER:

Clear.

SOIL CONDITIONS:

Damp.

APPROXIMATE OUTSIDE TEMPERATURE:

78 Degrees F.

BUILDING CHARACTERISTICS:

ESTIMATED AGE OF HOUSE:

1989, 13 Years old.

BUILDING TYPE:

Custom built Victorian reproduction.

STORIES:

2

SPACE BELOW GRADE:

Ground floor living area, Basement.

UTILITY SERVICES:

WATER SOURCE:

Public.

SEWAGE DISPOSAL:

WASTE DISPOSAL SYSTEM EXCLUDED: As agreed per our written contract, the inspection of on-site waste disposal systems is expressly EXCLUDED from this report as they are inaccessible for visual analysis. For your protection and prior to purchase, I advise that you research the type, location, performance history and past maintenance schedules with the owner of the property. Lastly, you should hire a local septic hauler to perform an observation pumping prior to purchase and at a minimum three year interval thereafter for preventative maintenance. While no one has the X-ray eyes needed to examine & evaluate all aspects of the buried disposal system, the pumping company is your best source of accurate information as they can empty the tank to check its physical condition, the depth of sludge levels and the ability of any drain field to percolate properly.0

UTILITIES STATUS:

All utilities on.

OTHER INFORMATION:

AREA:

Town.

HOUSE OCCUPIED?

Yes.

CLIENT PRESENT:

Yes.

PEOPLE PRESENT:

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PAYMENT INFORMATION:

TOTAL FEE:

.

PAID BY:

.

REPORT LIMITATIONS

This report is intended only as a general guide to help the client make his own evaluation of the overall condition of the home, and is not intended to reflect the value of the premises, nor make any representation as to the advisability of purchase. The report expresses the personal opinions of the inspector, based upon his visual impressions of the conditions that existed at the time of the inspection only. The inspection and report are not intended to be technically exhaustive, or to imply that every component was inspected, or that every possible defect was discovered. No disassembly of equipment, opening of walls, moving of furniture, appliances or stored items, or excavation was performed. All components and conditions which by the nature of their location are concealed, camouflaged or difficult

to inspect are excluded from the report.

Systems and conditions which are not within the scope of the building inspection include, but are not limited to: formaldehyde, lead paint, asbestos, toxic or flammable materials, and other environmental hazards; pest infestation, playground equipment, efficiency measurement of insulation or heating and cooling equipment, internal or underground drainage or plumbing, any systems which are shut down or otherwise secured; water wells (water quality and quantity) zoning ordinances; intercoms; security systems; heat sensors; cosmetics or building code conformity. Any general comments about these systems and conditions are informational only and do not represent an inspection.

The inspection report should not be construed as a compliance inspection of any governmental or non governmental codes or regulations. The report is not intended to be a warranty or guarantee of the present or future adequacy or performance of the structure, its systems, or their component parts. This report does not constitute any express or implied warranty of merchantability or fitness for use regarding the condition of the property and it should not be relied upon as such. Any opinions expressed regarding adequacy, capacity, or expected life of components are general estimates based on information about similar components and occasional wide variations are to be expected between such estimates and actual experience.

We certify that our inspectors have no interest, present or contemplated, in this property or its improvement and no involvement with tradespeople or benefits derived from any sales or improvements. To the best of our knowledge and belief, all statements and information in this report are true and correct.

Should any disagreement or dispute arise as a result of this inspection or report, it shall be decided by arbitration and shall be submitted for binding, non-appealable arbitration to the American Arbitration Association in accordance with its Construction Industry Arbitration Rules then obtaining, unless the parties mutually agree otherwise. In the event of a claim, the Client will allow the Inspection Company to inspect the claim prior to any repairs or waive the right to make the claim. Client agrees not to disturb or repair or have repaired anything which may constitute evidence relating to the complaint, except in the case of an emergency.

EXTERIOR - FOUNDATION - BASEMENT

Areas hidden from view by finished walls or stored items can not be judged and are not a part of this inspection. Minor cracks are typical in many foundations and most do not represent a structural problem. If major cracks are present along with bowing, we routinely recommend further evaluation be made by a qualified structural engineer. All exterior grades should allow for surface and roof water to flow away from the foundation. All concrete floor slabs experience some degree of cracking due to shrinkage in the drying process. In most instances floor coverings prevent recognition of cracks or settlement in all but the most severe cases. Where carpeting and other floor coverings are installed, the materials and condition of the flooring underneath cannot be determined.

WALLS:

MATERIAL:

Wood clapboards.

CONDITION:

Paint/finish needed.
Complete exterior restoration of finish is needed at this time.

TRIM:

MATERIAL:

Wood.

CONDITION:

Paint/finish needed.

CHIMNEY:

MATERIAL:

Metal, enclosed in wood.

CONDITION:

Flue is in need of cleaning.

BASEMENT/CRAWL SPACE:

ACCESSIBILITY:

Observation: FINISHED BASEMENT RESTRICTED ACCESS FOR INSPECTION. The basement of this home is approximately 60% finished.

Analysis: Be advised that finished floor, walls and ceilings at the basement level prevented visual analysis of the structural elements and mechanical systems of the home. Please understand that the home inspector did an earnest job where accessible to alert you regarding observed or suspected problems, but as he does NOT have X-Ray eyes, true conditions remain undetermined. Be advised that the removal of floor, wall or ceiling coverings may reveal hidden problems that were not disclosed in this report. (Note: As a precaution, I advise that foundations enclosing habitable space below grade level have perimeter drains to prevent potential water infiltration problems and interior damage. You might ask the owner if such drains are present and consider optional updating to today's new construction standards if moisture protection is desired.) (Be advised that average foundation windows are not sized as a safe second means of emergency egress. The lack of a proper 2nd means of egress may prevent basement bedroom occupancy.)

Observation: Inspection of the home revealed that suspected structural or mechanical system modifications were done.

(Plumbing, electrical)

Analysis: Generally, local building, wiring or plumbing permits are required when changes to the property exceed simply repair. Generally, alterations of such items as plumbing, wiring, structure, decks, porches, wood stoves etc., require that the owner obtain a permit and that municipal inspections and certificate of occupancy indicating approval be obtained. Be advised that work done without permit & inspections may be in violation of local ordinances and the owner could be subject to fines, problems with the building department, problems with the insurance company in the event of a loss or problems selling the house. This inspection is NOT a code compliance inspection, but I urge you to research the paper trail of permits and to consider these points when making decisions regarding purchase or simply when working on the home.

Recommendation: Ask the owner if the required permits were obtained and if local inspections were completed relative to the areas of concern. For peace of mind, you might visit or telephone the local building department, describe your concerns and ask about the history of the home prior to sale.

CRAWL SPACE:

Observation: The home has a crawl space present.

Analysis: CRAWL SPACE GENERAL EXPLANATION - a crawl space is frequently constructed in place of a full basement to reduce the over-all cost of construction. There is nothing wrong with a crawl space provided it's special characteristics are recognized and responsibly monitored. All areas within the crawl space may not have been inspected due to obstructions, low clearance or hazards to the inspector.

Firstly, the ground under the crawl space should be covered with a plastic vapor barrier to retard the migration of moisture from the ground into the space. Next, the crawl space should have at least two screened openings to allow moisture to ventilate (1 sq. ft. of vent area for each 1500 sq. ft. of crawl space). Without proper vapor retarders and ventilation, humidity may promote mold, mildew, fungus, decay, insect infestation and may be a respiratory irritant to the occupants within the living spaces above.

The crawl space should have an entry hatch measuring a minimum 18 inches by 24 inches to allow entry for annual inspection. Untreated wood should not be in direct soil contact - a minimum 18 inch clearance from soil to joists is advised and minimum 12 inch clearance between the soil and untreated girders. The use of treated lumber within a crawl space is preferable to untreated material. If proper clearances do not exist, you may desire to do limited excavation to improve clearances and to install floor hatches for further investigation. The crawl space should not contain debris or organic material which may promote pest activity.

Lastly, crawl spaces are usually unheated. Therefore, winterization of the crawl space is advised as follows: The floor frame should be insulated with a minimum of 3 1/2 inches of batt type fiberglass insulation with a vapor retarder facing the conditioned space above. Furthermore, water pipes and heating pipes and ducts should be insulated to prevent freeze-ups and heat loss.

BASEMENT WALLS - TYPE:

Poured concrete.

CONDITION:

Observation: HAIRLINE CRACKS NOTED - inspection of accessible portions of the foundation revealed thin hairline vertical shrinkage type cracks.

Analysis: In my opinion, such cracks are common with concrete or block foundations and generally pose no major problem in terms of reduction in load bearing capacity as the foundation carries the load in a vertical direction. Shrinkage cracks usually occur shortly after construction of within the first 1-2 years of the home. The shrinkage cracks are caused by the introduction of excessive water during the mixing or pouring of the concrete.

Recommendation: Shrinkage cracks should be sealed to prevent water infiltration, radon gas entry and possible wood boring insect access. My recommendations for repair include sealing the cracks from the outside and the inside. This will require a certain degree of excavation, but will insure that both sides of the crack are sealed. Professional epoxy injection service companies can be hired to repair foundation cracks with a long lasting sealant, or you can seal the cracks yourself with a hydraulic cement product or suitable caulk. Once repaired, the cracks should be monitored for unpredictable future movement.

BEAMS:

Beams are not fully visible.

FLOOR JOISTS:

2x10's, Appear serviceable.

COLUMNS/SUPPORTS:

Steel lolly Columns present.

BASEMENT FLOOR AND DRAINAGE:

Observation: NO SIGNS OF BASEMENT DAMPNESS. Where accessible at the basement level at time of inspection, no apparent signs of prior water infiltration were visible.

Analysis: **NOTICE: A BEST EFFORT WAS USED TO OBSERVE AND INFORM YOU OF VISIBLE DAMPNESS PROBLEMS WITHIN THE ACCESSIBLE PARTS OF THE BASEMENT. HOWEVER, THIS REPORT DOES NOT INSURE NOR GUARANTEE AGAINST FUTURE BASEMENT WATER INFILTRATION.0**

All basements are a hole in the ground that may suffer from dampness or seepage depending on seasonal weather conditions and drainage control measures employed or neglected. If ground water tables saturate soil near the foundation, or if negative drainage directs surface water towards the foundation, or if roof drainage lingers near the foundation; then hydrostatic water pressure can overcome foundation water resistance and infiltrate the basement.

To prevent false expectations regarding the home inspection, please understand that the inspection only took place on one day of the year. The inspector can NOT anticipate all climatic conditions and drainage conditions and predictions of wet basement difficulties. Stored goods and finished

surfaces prevent complete access for viewing symptoms of past seepage.

Recommendations: Due to the above reasons, you should ask the owner to disclose any past history of basement dampness or seepage. He or she is legally obligated to be honest and has the benefit of having experienced seasonal ownership of the home.

To reduce the possibility of wet basement difficulties a number of drainage issues should be understood. Firstly, all soil, lawn and garden areas along the perimeter of the foundation should have a positive slope away from the home to direct surface water away by gravity flow. If any negative drainage areas exist, then the basement is highly vulnerable for seepage. Secondly, all gutters & downspouts must be kept in a functional condition with downspout extensions or splash blocks that direct water away from the home. Once again, faulty gutters & downspouts make the basement vulnerable to seepage.

If wet basement difficulties are disclosed or discovered after occupancy, then each of the above outside drainage control measures should be reevaluated and repaired as required. Annual drainage inspection is recommended as conditions will change with the passage of time. Remember, no home inspector can guarantee a dry basement. You should try to avoid an expensive waterproofing job by common sense drainage control at the source of the water outside. Eliminate or reduce the water near the foundation and the basement will stay dry.

Lastly, if there is continued seepage after drainage improvements, then a sump pump installation should be considered or other control measures. Finished rooms below grade level should be protected by a drainage system beneath the foundation. As dampness can migrate through concrete without causing visible puddles of water, storage should be done with care by elevating important possessions. The use of a dehumidifier during summer months is advised.

ROOF SYSTEM

The foregoing is an opinion of the general quality and condition of the roofing material. The inspector cannot and does not offer an opinion or warranty as to whether the roof leaks or may be subject to future leakage. This report is issued in consideration of the foregoing disclaimer. The only way to determine whether a roof is absolutely water tight is to observe it during a prolonged rainfall. Many times, this situation is not present during the inspection.

ATTIC AND INSULATION:

ACCESSIBILITY AND CONDITION:

Observation: PULL-DOWN STAIRS - the attic was entered via pull-down stairs.

Analysis: Pull-down stairs are convenient but hardware should be inspected annually and the stairs should be insulated and weatherstripped to prevent moisture migration into the attic and condensation on the underside of the roof. Such moisture migration and condensation often promotes the formation of mildew in the attic. Pull-down stairs located near bathrooms often allow excessive heat loss and moisture migration into the attic. Caution should be used when opening and folding the stairs as there is a potential for personal injury.

INSULATION TYPE AND CONDITION:

Fiberglass batts, Insulation is installed between floor joists.

DEPTH AND R-FACTOR:

Not determined. Floor boards prevent primary viewing to determine true depth.

ROOF:

STYLE:

Gable.
The roof is ventilated by limited soffit vents and a gable end vent with the use if a fan on a humidistat.(Operational on the day of the inspection)
The attic was very hot/humid on the day of the inspection.
Although sufficient at the time the home was built, You may want to monitor this area and seek advise regarding increasing ventilation into this area in the near future.

Observation: INSUFFICIENT ATTIC VENTILATION - the present amount of attic ventilation is inadequate as compared to modern construction.

Analysis: This will trap heat and humidity in the attic space causing higher cooling expenses and reducing roof design life.

Recommendation: While the amount of ventilation may be typical for a home of this age, you would be wise to update the attic ventilation system now or at time of next scheduled roof replacement. A roofer can provide you with ventilation options and estimates for updating. (Todays building ventilation requirements state that: Attics with a ceiling vapor barrier shall have a screened opening of at least 1 SF of free vent area for each 300 SF of ceiling space. Attics without a ceiling vapor barrier shall have a screened opening of at least 1 SF for each 150 SF of ceiling area.)

TYPE:

ASPHALT SHINGLES PRESENT: As viewed, the gable roof structure appears to be covered with asphalt and fiberglass composition shingles.

Analysis: This material is the most common roof covering used in this part of the country and typically provides many years of service when installed properly and maintained. However, asphalt shingles are NOT designed to last the life of the home and will require eventual routine age replacement. Replacement should be a budgeted item and should be scheduled before leakage occurs. The service life of the material varies and depends on variable such as: the initial shingle weight or quality, the steepness or pitch of the roof, the amount of attic ventilation, the number of roofing layers and the orientation of the home to the sun. (Note: Average weight shingles last approximately 15-20 years, heavy duty shingles last 25-30 years.)

During ownership, you should conduct an annual roofing inspection to make sure that the condition of the roof is functional or fulfilling it's objective of shedding water before leakage occurs. Look for missing or loose materials, split shingles, areas of storm damage, blown-off shingles, curling shingles, loss of granules, exposed felt mat or other age defects and perform repairs as required to extend service life.

ROOF ACCESS:

Viewed from ground with binoculars.

ROOF COVERING STATUS:

Observation: CONSULT A ROOFER - inspection of the roof coverings revealed that repairs are needed to restore function.
There is a significant sag over the skylight of the second floor full bathroom.
I suspect previous leakage and possible roof sheathing deterioration.

Analysis: Roof defects may allow leakage.

Recommendation: Prior to commitment, I recommend that you ask a licensed roofer to perform a more detailed ON-ROOF inspection to determine precise repair specifications and cost estimates. Notice: Further on roof inspection by a roofer may reveal defects not disclosed in this report.

EXPOSED FLASHINGS:

TYPE AND CONDITION:

Metal, The potential for water entry is present at the skylight over the second floor bathroom.
There is also an area over the front doghouse style dormer that appears to be an area that collects water/snow.
On the day of the inspection we noted a large stain on the wall of the second floor bathroom that appears to be a previous leak.
I recommend you inquire of the homeowner in regards to the stain and the recent trim work around the skylight.

Observation: STAINS NOTED AT INTERIOR OF SKYLIGHT - inspection of the interior areas at or adjacent to the skylight revealed visible water stains.

Analysis: This condition indicates that previous leakage has occurred.

Recommendation: If the owner is available, I suggest that you inquire about the stains. People often forget to close their skylights allowing leakage, but flashing leaks are also common. Depending on the results of your research, further flashing

evaluation may be needed.

Observation: WATER STAINS - inspection of the interior wall surfaces revealed water stains at:Bathroom second floor.

Analysis: The stains appear to have been caused by prior roof or flashing leakage.

Recommendation: As all stains do not indicate a current problem, you should discuss the history of the stains with the owner, who is obligated to provide honest disclosure, to see if the source of the moisture has been identified and corrected. If your research does not provide satisfactory data, then a roofer should be hired to perform closer on-roof inspections.

GUTTERS & DOWNSPOUTS:

TYPE & CONDITION:

Full.
Missing downspout- Driveway side upper roof.

GUTTER MAINTENANCE: Functional gutters & downspouts are an important part of the roof drainage control system and should be inspected and cleaned annually to properly direct water away from the home. Failure to follow a maintenance schedule will promote rot to all lower building components and may also cause wet basement problems or cause soil erosion. If trees are nearby, the use of gutter screen guards may reduce clogging from tree debris. Each gutter should have a downward pitch for water to flow by gravity. Gutters should be securely fastened to the building and should have sufficient downspouts to handle the flow and direct water away from foundation areas.

PLUMBING

Water quality or hazardous materials (lead) testing is available from local testing labs. All underground piping related to water supply, waste, or sprinkler use are excluded from this inspection. Leakage or corrosion in underground piping cannot be detected by a visual inspection. The temperature pressure relief valve, at the upper portion of the water heater, is a required safety valve which should be connected to a drain line of proper size terminating just above floor elevation. If no drain is located in the floor a catch pan should be installed with a drain extending to a safe location. The steam caused by a blow-off can cause scalding. Improper installations should be corrected.

MAIN LINE:

MATERIAL:

Observation: PLASTIC SERVICE PIPE - as seen in the basement or crawl space, the main plumbing service pipe leading from the street line to the home appears to be made of plastic.

Analysis: In my opinion, this is a desirable and corrosion resistant type of water service piping material often used in new construction.

CONDITION:

Water meter is located in utility area, Shutoff Valve is operational, Water pressure appears adequate at 55 P.S.I.

Observation: SEDIMENT FILTER PRESENT - there is a privately installed and maintained water filter attached to the supply piping to remove sediment. (Rust/Dirt filter)

Analysis: Filters of this type remove some of the rust & sediment that is present in most public water supplies.

Recommendation: You should discuss the maintenance of this device with the owner prior to purchase. Generally, the cartridge requires replacement 2-4 times per year depending on local water quality.
Inquire of the homeowner as to type and model number filter needed for replacement.

SUPPLY LINES:

MATERIAL:

Copper.

CONDITION:

Minor corrosion is noted, No leakage is noted, but monitor in the future.

WASTE LINES:

MATERIAL:

Plastic (ABS)

CONDITION:

No leakage is noted, but monitor in the future.

Observation: SEWER PIPE HOLE NOT PLUGGED AT FOUNDATION - as viewed in the unfinished portion of the basement or crawl space, the hole where the sewer or waste pipe passes through the foundation is not cemented closed.(Minor repair)

Analysis: This condition may allow water or radon gas to infiltrate the basement.

Recommendation: I advise that the hole be cemented closed as required.

HOSE FAUCETS:

OPERATION:

Frost proof type.

WATER HEATER:

TYPE:

Bradford White, Jetglas
LP GAS.
GAS HOT WATER HEATER PRESENT: The domestic hot water in this home is produced by a standard gas fired hot water heater.

In my opinion, a gas fired hot water heater is a desirable means of making hot water due to its fast recovery rate. Most such appliances have capacities or 30, 40 or 50 gallons, and an average service life of between 7-10 years. As a home owner, you should expect future replacement of this appliance, you should understand its operational controls and which parts to monitor for maintenance and safety.

Firstly, there is a cold water supply pipe leading to the tank with a shut-off valve near the tank to isolate it during maintenance or replacement. There should also be a small vacuum breaker valve after the shut-off valve to protect the public water supply from back-flow contamination.

The tank itself may be composed of different interior components such as copper, glass lined, stainless steel, etc. - all of which present differing warranty time periods per each manufacturer.

The cold water enters the tank as water exits the tank, and is directed toward the base of the tank where a gas heater elevates the temperature of the water to the desired setting on the temperature control box. For energy conservation reasons, you should experiment by adjusting the control knob to the lowest setting at which you can still obtain adequate hot water and never above 130 degrees F. to prevent personal injury by scalding.

A second pipe also exits the top of the hot water heater distributing hot water to the fixtures & faucets. To prevent heat loss, this pipe should be fully insulated. You can easily distinguish which pipe is the cold water supply pipe and which is the hot water pipe simply by feeling the two or by reading the stamped labels at the top of the tank.

A gas pipe also is connected to the hot water heater. Usually this pipe is composed of black iron for strength. You should locate a shut off valve in the gas piping followed by a union fitting and a drip leg "T" before the pipe is connected to the gas valve. The gas shut-off valve is necessary to shut-down the appliance during service or replacement.

Most gas fired hot water heaters have a pilot that remains lighted to ignite the main burner when hot water is called for. Occasionally, pilots blow out due to back-drafting of air down the chimney or during power failures. If the pilot should go out, follow the manufacturer's posted directions for re-lighting the pilot. If the pilot will not stay lighted, then a safety device known as the thermocouple probably needs maintenance

replacement.

The tank also has two other attached devices of which you should be familiar. At the base of the tank, there is a drain valve for flushing sediment or for emptying the tank. Draining accumulated minerals from the base of the tank several times a year will aid the rate of heat transfer and thereby improve fuel efficiency. (Note: Be advised that a seldom used drain valve may not seal tightly when closed - be alert for drip leaks.

Near the top six inches of the tank is a primary safety device known as the temperature / pressure relief valve. The relief valve is designed to open and quickly eject excess temperature and pressure should the hot water malfunction. The relief valve should have a 3/4 inch dia. drain pipe directed towards the floor to prevent personal injury if the valve should open. While there is a trip lever on the valve for testing its function, be advised that tripping the valve may leave a drip leak as it closes. I advise the placement of a small bucket beneath the drain pipe.

Combustion gas exits the top of the tank and then rises to the chimney via metal connector piping. Be advised that any signs of scorching on the draft deflector, pipe fittings or insulation near the draft deflector or gas burner may indicate that combustion gases are not properly venting to the outdoors and that back-drafting is suspected. Back-drafting of combustion gases can allow deadly carbon monoxide to enter the home.

DANGER! GASOLINE OR OTHER FLAMMABLE LIQUIDS SHOULD NEVER BE STORED NEAR THE OPEN FLAME OF A GAS FIRED HOT WATER HEATER. INSULATION BLANKETS SHOULD NEVER COVER THE BURNER CONTROLS OR TOUCH THE FLUE PIPE AS EITHER COULD CAUSE FIRE.

THINGS TO WATCH WHICH MAY INDICATE NEEDED REPAIR OR REPLACEMENT:
1. Watch the pipe connections to the tank for signs of corrosion.
2. Watch the cold water shut-off valve & vacuum breaker & relief valve for signs of corrosion or drip leaks.
3. Watch the ring or metal joint around the perimeter of the base of the tank for signs of corrosion.
4. Watch for accumulations of debris in the burner area.
5. Watch for scorching marks at the draft deflector and burner area.
6. Watch for back-drafting problems.
7. Watch for leaks.
8. Watch for corrosion of the connector piping leading the the chimney.
9. Watch for diminished hot water.

SIZE:

38 Gallons, 37,500 B.T.U's..

LOCATION:

Utility room.

CONDITION:

Unit is approximately 1 year old.
Pressure relief valve noted, not tested, Flue vent intact, A water shutoff valve is installed .
Unit was operational on the day of the inspection.

FUEL SYSTEM:

METER/TANK LOCATION-CONDITION:

Underground LP storage tank present on the property
The true condition and tank material is undetermined and beyond the scope of a home inspection as described by the Mass. 266MCR Rules and regulations.

Supplier of propane is E. Austin & Gas.
508 865-2585
I recommend an inspection of the underground equipment as a safety priority and for peace of mind prior to your occupancy.

Conditions seen above ground.
Observation: LP COPPER LINE POORLY RUN - a small diameter copper tubing running from the liquid propane (LP) tank to a gas appliance is poorly run as observed on the exterior of the home.(Line hangs down the side of the foundation to the underground tank.)

Analysis: While the appliance may be operational, the LP piping run appears to be poorly installed.

Recommendation: I advise reinstallation of this copper LP gas pipe.

HEATING - AIR CONDITIONING

The inspector is not equipped to inspect furnace heat exchangers for evidence of cracks or holes, as this can only be done by dismantling the unit. This is beyond the scope of this inspection. Some furnaces are designed in such a way that inspection is almost impossible. The inspector can not light pilot lights. Safety devices are not tested by the inspector.
NOTE: Asbestos materials have been commonly used in heating systems.
Determining the presence of asbestos can ONLY be preformed by laboratory testing and is beyond the scope of this inspection. Thermostats are not checked for calibration or timed functions. Adequacy, efficiency or the even distribution of air throughout a building cannot be addressed by a visual inspection. Electronic air cleaners, humidifiers and de-humidifiers are beyond the scope of this inspection. Have these systems evaluated by a qualified individual. The inspector does not perform pressure tests on coolant systems, therefore no representation is made regarding coolant charge or line integrity. Subjective judgment of system capacity is not a part of the inspection. Normal service and maintenance is recommended on a yearly basis. Determining the condition of oil tanks, whether exposed or buried, is beyond the scope of this inspection. Leaking oil tanks represent an environmental hazard which is sometimes costly to remedy.

HEATING SYSTEM DESCRIPTION:

LOCATION OF PRIMARY UNIT:

Basement.

SYSTEM TYPE:

FURNACE GENERAL EXPLANATION: The central heating system for this home consist of a forced hot air furnace.

NOTICE: As a responsible home owner, you should understand the simple mechanics that transfers heat from the fuel being burned within the furnace and its distribution to the rooms being heated. Also should important is an understanding of maintenance and safety issues, plus the advantages & disadvantages of a furnace ownership.

DESIGN LIFE: Firstly, don't have false expectations. A furnace is not designed to last the life of the home and will require future replacement and occasional repair. Just like an automobile, it is a mechanical device with a variable average service life and a need for maintenance. Most furnaces reach the end of their economic life within 15-20 years, while some may fail sooner. Within the furnace, their are also components that may require parts replacement to maintain the function of the appliance.

OPERATION: The mechanical operation of a furnace is fairly simple to grasp. When the thermostat calls for heat, fuel (gas or oil) is burned within a fire chamber and combustion gases are drafted through the flue pipe to the chimney and exterior. The heat generated by combustion is transferred to a heat exchanger - a large metal hood, drum or box above the fire. The heat exchanger is the heart of the appliance and may be composed of many different materials and may be configured in numerous shapes depending on the manufacture and requirements of the installation. When the heat exchanger reaches a certain temperature, a fan control box instructs the fan or blower unit to turn on causing directed air movement. Return air is filtered, blown around the hot heat exchanger and then forced through supply ducts to registers providing heat to the living spaces. Return air leaves the living spaces from individual room return ducts or one central return duct to be re-filtered and re-cycled again. The process of air movement will continue until the thermostat is satisfied. The fan and burner will cycle on & off in response to pre-set control limits. You may even notice the fan still operating after the burner has shut-down - this is normal, the

fan will shut-off when the heat exchanger has cooled to the off setting of the fan control. To prevent fire, an upper high limit control will shut the system down if it should overheat.

As mentioned above, the heat exchanger is the heart of the furnace and is the prime component that limits the over-all service life and safety of the appliance. Unfortunately, the heat exchanger can NOT be fully evaluated by the home inspector without disassembly or specialized testing. **The true condition of the heat exchanger is undetermined and is EXCLUDED from this report per out contract.0 The constant expansion & contraction of the metal heat exchanger as the furnace cycles on & off can cause hidden metal fatigue type cracks. Be advised that one of the by-products of combustion is deadly carbon dioxide. A defective heat exchanger with hidden cracks or holes can allow poisonous combustion gases to enter the living spaces of the home causing death by asphyxiation.**

RECOMMENDATION: To determine the true condition of the furnace heat exchanger, specialized testing is advised prior to commitment that is beyond the scope of a limited visual home inspection. I advise that you hire a heating contractor to perform a diagnostic smoke test on the furnace to evaluate the heat exchanger for hidden cracks, holes and combustion gas leakage. If you fail to follow this advice, then there is always the risk that the utility company will "red tag" the furnace as UNSAFE due to newly discovered heat exchanger defects and risk of carbon monoxide poisoning. You should further research the condition of the furnace for informed purchase consideration.0

Furthermore, you should obtain a service contract that includes annual inspection & testing of the heat exchanger, along with inspection of the flue venting system, cleaning & tune-up of the burner and any other needed maintenance. While cracks in heat exchangers can sometimes be repaired by welding, new cracks may soon appear. For that reason, a faulty heat exchanger usually calls for furnace replacement. Be wary of odors, a change in the color of the flame, a flame that leans to one side when the fan is operating and of soot accumulations at registers. For peace of mind, the installation of a carbon monoxide detector is advised regardless of whether the fuel is gas or oil.

MAINTENANCE: Annual maintenance contracts are recommended, including heat exchanger evaluation and inspection of the flue pipe and chimney connections. The filter should be checked annually and should be cleaned or replaced monthly by the owner. Some furnaces utilize washable filters and others use disposable filters. To access the filter, some manufacturers provide a slot in the return duct next to the furnace, while others require the removal of the cover at the blower unit. Filter sizes are printed on the edge of the filter. Notice: Prior to removing the cover of the blower compartment, the electrical service switch at the side of the furnace should be shut-off to prevent contact with the blower unit of fan belt within the cabinet. The furnace should not be operated with the cover removed from the blower unit as combustion gases may be back-drafted from the combustion chamber into the duct system.

For energy conservation, all duct connections should be sealed and supply ducts insulated. Ducts themselves should be kept clean to prevent the growth of dust mites that cause respiratory irritation. Nothing should be

stored next to the furnace.

FURNACE ADVANTAGES & DISADVANTAGES: In terms of advantages, a forced hot air furnace is cheaper to install initially, it has a fast response to the call for heat, and air can be filtered or air conditioned. A furnace also requires little maintenance and there is no worry about water leaks.

Disadvantages include: dry heat, possible hot & cold spots in living spaces, distracting air movement, difficulty in zoning the building, and potential for heat exchanger failure and entry of poisonous combustion gases into the living spaces.

FUEL TYPE AND NOTES:

LP Gas, Not tested for leakages.

CAPACITY OF UNIT:

100,000 B.T.U's.
Model # G1404/5-100-6
Serial 5888H02827
Lennox Pulse Furnace.
Lennox Industries announced in 1997, a free program to inspect Lennox pulse furnaces installed from 1982-1989 to check for carbon monoxide leaks.
According to Lennox, dealers have received an increase of instances of corrosion in some of the pulse furnace exchangers in units installed before 1990.
The inspection was free, but if the furnace needed cleaning or replacement of the heat exchangers the owner would be responsible for the labor expenses. Lennox only covered under this warrantee the parts.
This program ended on July 1, 1999.

At this time , I recommend you inquire of the homeowner as to if he took advantage of this free inspection and if he did what if any repairs were made on his behalf by Lennox.
If this unit was not inspected, I strongly recommend that this unit is inspected prior to your occupancy by a Lennox representative to identify if any safety repairs are needed at this time.
I am enclosing with the hard copy of this report the Lennox notice to consumers for your review.

APPROXIMATE AGE IN YEARS:

13 years old.

SECONDARY HEATING SYSTEM:

Wall unit servicing the octagon living room.

ADDITIONAL HEATING SYSTEMS:

Observation: HUMIDIFIER NOT OPERATIONAL - ABANDONED - the forced hot air furnace has an attached automatic humidifier that appears to be abandoned and NOT FUNCTIONAL at this time.(Water shutoff at time of inspection)

Analysis: I recommend that you discuss the humidifier with the owner to gather the facts regarding its history. Be advised that a functional humidifier may help to

condition the supply air leading the to living spaces, but it also raises moisture levels around the heat exchanger causing reduction in furnace design life due to oxidation or rust and premature heat exchanger failure.

The humidifier is not functional because it was shutdown. Be advised that a nonfunctional humidifier raises suspicion regarding leaks that may have damaged the heat exchanger. A failed heat exchanger will require furnace replacement. An automatic humidifier requires monthly disassembly and cleaning to prevent the accumulation of mineral scale, bacteria and water leaks.

Recommendation: In my opinion, you would be wiser to disconnect the humidifier and use portable room humidifiers that can more easily be cleaned. I advise that the heat exchanger be evaluated by a HVAC technician as its true condition is undetermined and beyond the scope of this limited visual inspection.

HEATING SYSTEM CONDITION:

PRIMARY UNIT:

Unit was operational by wall thermostat on the day of the inspection.
Unit was not tested for carbon monoxide.

BURNERS/HEAT EXCHANGERS:

The heat exchanger portion of a gas or oil fired heater is difficult to access without disassembly, and cannot be adequately checked during a visual inspection. We recommend a service contract be placed on the unit and a heating contractor called to verify the condition of the heat exchanger prior to settlement date.

PUMP/BLOWER FAN:

System lacks cleaning. Fan compartment is dirty.

COMBUSTION AIR:

Appears serviceable.

VENTING:

Appears serviceable.

AIR PLENUM:

Appears serviceable.

AIR FILTERS:

Suggest cleaning/changing filter.
Unit has a 193/4 x 241/4 x 47/8 Glassfloss Cartridge Filter.
Inquire of the homeowner as to source to buy this filter and frequency of changing.

GENERAL SUGGESTIONS:

Observation: NO MAINTENANCE TAGS POSTED - at the time of inspection, I did NOT observe any recent maintenance tags posted near or on the furnace.

Analysis: The lack of tags may indicate that heating system maintenance has been postponed. Regardless of type or fuel source, all heating systems should receive annual servicing and inspection by a licensed HVAC technician. Systems not serviced and inspected may continue to operate, but they do so at a reduced fuel efficiency and reduced safety level.

Recommendation: In my opinion, you should have the furnace professionally serviced and inspected as soon as you move into the home and then establish an annual service date thereafter to insure efficient and safe function.

AIR CONDITIONING:

TYPE:

None.

DUCTWORK:

TYPE:

Insulated sheet metal, Flexible Round.
One zone for the home, Did not view any damper controls on the ductwork.

DUCTS/AIR SUPPLY:

Appears serviceable.

ELECTRICAL SYSTEM

Any electrical repairs attempted by anyone other than a licensed electrician should be approached with caution. The power to the entire house should be turned off prior to beginning any repair efforts, no matter how trivial the repair may seen. Aluminum wiring requires periodic inspection and maintenance by a licensed electrician. Operation of time clock motors is not verified. Inoperative light fixtures often lack bulbs or have dead bulbs installed. Light bulbs are not changed during the inspection, due to time constraints. Smoke Alarms should be installed within 15 feet of all bedroom doors, and tested regularly.

SERVICE:

TYPE AND CONDITION:

Underground, 110/220 Volt, Circuit breakers, 200 Amps.

ELECTRICAL PANELS:

MAIN PANEL LOCATION AND NOTES:

Basement.

Inspector Notes:

Circuit and wire sizing correct so far as visible, Grounding system is present.

 # OF 11O VOLT CIRCUITS:

10-15 Amp., 2- 15 Amp. GFCI., 1- 20 Amp. GFCI., 12- 20 Amp.

 # OF 220 VOLT CIRCUITS:

None, LP Gas is utilized.

CONDUCTORS:

ENTRANCE CABLES:

Aluminum- OK.

BRANCH WIRING:

Copper.

SWITCHES & OUTLETS:

CONDITION:

A representative sampling of switches and outlets was tested. As a whole, outlets and switches throughout the house are in serviceable condition.

Observation: Inspection of the home revealed that suspected structural or mechanical system modifications were done.
(Basement is under renovations- Basement is in process of being renovated- plumbing, electrical is unfinished.)

Analysis: Generally, local building, wiring or plumbing permits are required when changes to the property exceed simply repair. Generally, alterations of such items as plumbing, wiring, structure, decks, porches, wood stoves etc., require that the owner obtain a permit and that municipal inspections and certificate of occupancy indicating approval be obtained. Be advised that work done without permit & inspections may be in violation of local ordinances and the owner could be subject to fines, problems with the building department, problems with the insurance company in the event of a loss or problems selling the house. This inspection is NOT a code compliance inspection, but I urge you to research the paper trail of permits and to consider these points when making decisions regarding purchase or simply when working on the home.

Recommendation: Ask the owner if the required permits were obtained and if local inspections were completed relative to the areas of concern. For peace of mind, you might visit or telephone the local building department, describe your concerns and ask about the history of the home prior to sale.

INTERIOR

The condition of walls behind wall coverings, paneling and furnishings cannot be judged. Only the general condition of visible portions of floors is included in this inspection. As a general rule, cosmetic deficiencies are considered normal wear and tear and are not reported. Determining the source of odors or like conditions is not a part of this inspection. Floor covering damage or stains may be hidden by furniture. The condition of floors underlying floor coverings is not inspected. Determining the condition of insulated glass windows is not always possible due to temperature, weather and lighting conditions. Check with owners for further information. All fireplaces should be cleaned and inspected on a regular basis to make sure that no cracks have developed. Large fires in the firebox can overheat the firebox and flue liners, sometimes resulting in internal damage.

INTERIOR WALLS:

MATERIAL & CONDITION:

FLOORS:

TYPE & CONDITION:

KITCHEN - APPLIANCES - LAUNDRY

Inspection of stand alone freezers and built-in ice makers are outside the scope of the inspection. No opinion is offered as to the adequacy of dishwasher operation. Ovens, self or continuous cleaning operations, cooking functions, clocks, timing devices, lights and thermostat accuracy are not tested during this inspection. Appliances are not moved during the inspection. Portable dishwashers are not inspected, as they require connection to facilitate testing.

Laundry appliances are not tested or moved during the inspection and the condition of any walls or flooring hidden by them cannot be judged. Drain lines and water supply valves serving washing machines are not operated. Water supply valves may be subject to leaking if turned.

WASHER AND DRYER:

CLOTHES WASHER:

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BATHROOMS

Shower pans are visually checked for leakage, but leaks often do not show except when the shower is in actual use. Determining whether shower pans, tub/shower surrounds are water tight is beyond the scope of this inspection. It is very important to maintain all grouting and caulking in the bath areas. Very minor imperfections can allow water to get into the wall or floor areas and cause damage. Proper ongoing maintenance will be required in the future.

BATHROOM AREA:

CONDITION OF SINK:

GROUNDS

This inspection is not intended to address or include any geological conditions or site stability information. For information concerning these conditions, a geologist or soils engineer should be consulted. Any reference to grade is limited to only areas around the exterior of the exposed areas of foundation or exterior walls. This inspection is visual in nature and does not attempt to determine drainage performance of the site or the condition of any underground piping, including municipal water and sewer service piping or septic systems. Decks and porches are often built close to the ground, where no viewing or access is possible. These areas as well as others too low to enter, or in some other manner not accessible, are excluded from the inspection and are not addressed in the report. We routinely recommend that inquiry be made with the seller about knowledge of any prior foundation or structural repairs.

EXTERIOR STAIRS/STOOPS:

CONDITION:

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