



HEDDERMAN SERVICES

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## MECHANICAL INSPECTION

1634A Park St  
Houston, TX 77019



Inspector

**Scott Gillis**

TREC#22819

281-355-9911

[office@hedderman.com](mailto:office@hedderman.com)



# PROPERTY INSPECTION REPORT

Prepared For: Jim Pinckley

(Name of Clients)

Concerning: 1634A Park St, Houston, TX 77019

(Address or Other Identification of Inspected Property)

By: Scott Gillis - TREC#22819

(Name and License Number of Inspector)

04/15/2021 12:00

pm (Date)

## PURPOSE, LIMITATIONS AND INSPECTOR / CLIENT RESPONSIBILITIES

This property inspection report may include an inspection agreement (contract), addenda, and other information related to property conditions. If any item or comment is unclear, you should ask the inspector to clarify the findings. It is important that you carefully read ALL of this information.

This inspection is subject to the rules ("Rules") of the Texas Real Estate Commission ("TREC"), which can be found at [www.trec.texas.gov](http://www.trec.texas.gov).

The TREC Standards of Practice (Sections 535.227-535.233 of the Rules) are the minimum standards for inspections by TREC-licensed inspectors. An inspection addresses only those components and conditions that are present, visible, and accessible at the time of the inspection. While there may be other parts, components or systems present, only those items specifically noted as being inspected were inspected. The inspector is NOT required to turn on decommissioned equipment, systems, utility services or apply an open flame or light a pilot to operate any appliance. The inspector is NOT required to climb over obstacles, move furnishings or stored items. The inspection report may address issues that are code-based or may refer to a particular code; however, this is NOT a code compliance inspection and does NOT verify compliance with manufacturer's installation instructions. The inspection does NOT imply insurability or warrantability of the structure or its components. Although some safety issues may be addressed in this report, this inspection is NOT a safety/code inspection, and the inspector is NOT required to identify all potential hazards.

In this report, the inspector shall indicate, by checking the appropriate boxes on the form, whether each item was inspected, not inspected, not present or deficient and explain the findings in the corresponding section in the body of the report form. The inspector must check the Deficient (D) box if a condition exists that adversely and materially affects the performance of a system or component or constitutes a hazard to life, limb or property as specified by the TREC Standards of Practice. General deficiencies include inoperability, material distress, water penetration, damage, deterioration, missing components, and unsuitable installation. Comments may be provided by the inspector whether or not an item is deemed deficient. The inspector is not required to prioritize or emphasize the importance of one deficiency over another.

Some items reported may be considered life-safety upgrades to the property. For more information, refer to Texas Real Estate Consumer Notice Concerning Recognized Hazards or Deficiencies below.

THIS PROPERTY INSPECTION IS NOT A TECHNICALLY EXHAUSTIVE INSPECTION OF THE STRUCTURE, SYSTEMS OR COMPONENTS. This inspection may not reveal all deficiencies. A real estate inspection helps to reduce some of the risk involved in purchasing a home, but it cannot eliminate these risks, nor can the inspection anticipate future events or changes in performance due to changes in use or occupancy. It is recommended that you obtain as much information as is available about this property, including seller's disclosures, previous inspection reports, engineering reports, building/remodeling permits, and reports performed for and by relocation companies, municipal inspection departments, lenders, insurers, and appraisers. You should also attempt to determine whether repairs, renovation, remodeling, additions, or other such activities have taken place at this property. It is not the inspector's responsibility to confirm that information obtained from these sources is complete or accurate or that this inspection is consistent with the opinions expressed in previous or future reports.

ITEMS IDENTIFIED IN THE REPORT DO NOT OBLIGATE ANY PARTY TO MAKE REPAIRS OR TAKE OTHER ACTIONS, NOR IS THE PURCHASER REQUIRED TO REQUEST THAT THE SELLER TAKE ANY ACTION. When a deficiency is reported, it is the client's responsibility to obtain further evaluations and/or cost estimates from qualified service professionals. Any such follow-up should take place prior to the expiration of any time limitations such as option periods.

Evaluations by qualified tradesmen may lead to the discovery of additional deficiencies which may involve additional repair costs. Failure to address deficiencies or comments noted in this report may lead to further damage of the structure or systems and add to the original repair costs. The inspector is not required to provide follow-up services to verify that proper repairs have been made.

Property conditions change with time and use. For example, mechanical devices can fail at any time, plumbing gaskets and seals may crack if the appliance or plumbing fixture is not used often, roof leaks can occur at any time regardless of the apparent condition of the roof, and the performance of the structure and the systems may change due to changes in use or occupancy, effects of weather, etc. These changes or repairs made to the structure after the inspection may render information contained herein obsolete or invalid. This report is provided for the specific benefit of the client named above and is based on observations at the time of the inspection. If you did not hire the inspector yourself, reliance on this report may provide incomplete or outdated information. Repairs, professional opinions or additional inspection reports may affect the meaning of the information in this report. It is recommended that you hire a licensed inspector to perform an inspection to meet your specific needs and to provide you with current information concerning this property.

### **TEXAS REAL ESTATE CONSUMER NOTICE CONCERNING HAZARDS OR DEFICIENCIES**

Each year, Texans sustain property damage and are injured by accidents in the home. While some accidents may not be avoidable, many other accidents, injuries, and deaths may be avoided through the identification and repair of certain hazardous conditions. Examples of such hazards include:

- malfunctioning, improperly installed, or missing ground fault circuit protection (GFCI) devices for electrical receptacles in garages, bathrooms, kitchens, and exterior areas;
- malfunctioning arc fault protection (AFCI) devices;
- ordinary glass in locations where modern construction techniques call for safety glass;
- malfunctioning or lack of fire safety features such as smoke alarms, fire-rated doors in certain locations, and functional emergency escape and rescue openings in bedrooms;
- malfunctioning carbon monoxide alarms;
- excessive spacing between balusters on stairways and porches;
- improperly installed appliances;
- improperly installed or defective safety devices;
- lack of electrical bonding and grounding; and
- lack of bonding on gas piping, including corrugated stainless steel tubing (CSST).

To ensure that consumers are informed of hazards such as these, the Texas Real Estate Commission (TREC) has adopted Standards of Practice requiring licensed inspectors to report these conditions as "Deficient" when performing an inspection for a buyer or seller, if they can be reasonably determined.

These conditions may not have violated building codes or common practices at the time of the construction of the home, or they may have been "grandfathered" because they were present prior to the adoption of codes prohibiting such conditions. While the TREC Standards of Practice do not require inspectors to perform a code compliance inspection, TREC considers the potential for injury or property loss from the hazards addressed in the Standards of Practice to be significant enough to warrant this notice.

Contract forms developed by TREC for use by its real estate license holders also inform the buyer of the right to have the home inspected and can provide an option clause permitting the buyer to terminate the contract within a specified time. Neither the Standards of Practice nor the TREC contract forms require a seller to remedy conditions revealed by an inspection. The decision to correct a hazard or any deficiency identified in an inspection report is left to the parties to the contract for the sale or purchase of the home.

INFORMATION INCLUDED UNDER "ADDITIONAL INFORMATION PROVIDED BY INSPECTOR", OR PROVIDED AS AN ATTACHMENT WITH THE STANDARD FORM, IS NOT REQUIRED BY THE COMMISSION AND MAY CONTAIN CONTRACTUAL TERMS BETWEEN THE INSPECTOR AND YOU, AS THE CLIENT. THE COMMISSION DOES NOT REGULATE CONTRACTUAL TERMS BETWEEN PARTIES. IF YOU DO NOT UNDERSTAND THE EFFECT OF ANY CONTRACTUAL TERM CONTAINED IN THIS SECTION OR ANY ATTACHMENTS, CONSULT AN ATTORNEY.

### **ADDITIONAL INFORMATION PROVIDED BY INSPECTOR**

*Hedderman Engineering Inc.:*

>It is the purpose of this report to give our client my educated and experienced opinion of the condition and function of the stated property as visually inspected by Hedderman Engineering Inc. The inspection performed on this property is of a general nature and includes the following systems: electrical, mechanical, and plumbing. This does not include any specialized inspections and/or inspections of any hazardous materials (such as done in environmental inspections) or any of the following; structural systems, mold, audio/visual components, hazardous materials and gases, rated walls, lead paint, destructive insects or pest, security items, water or air treatment systems, etc. This inspection is limited to those components which were visible and accessible at the time of the inspection. It is noted that this report contains the opinions of this inspector of the stated property as it appeared on the day of the inspection and is in no way a warranty of any component in the days and future following the inspection. All mechanical components are judged on the basis of age, condition, and the function of those items as they appeared on the day of the inspection and are not guaranteed to continue functioning in that manner in the future. It is recommended that the our client purchase a home warranty policy to protect oneself from both unexpected and anticipated problems that may occur in the future.

>It is noted that Hedderman Engineering Inc. is not responsible for any problems found in the house during or after components are opened up, disassembled, uncovered, made visible, or made accessible by another entity after the inspection is completed.

>If a builder or service contractor examines an area of question and comes to the conclusion that there is no repair needed, have them present to you in writing that the item is in compliance with a prevailing code and is functioning properly, not in need of repair.

>It is the intent of this inspector to work in compliance with the Standards Of Practice For Real Estate Inspectors. It is not required of this company to exceed these standards. You may obtain a copy of the document referred to above by contacting the Texas Real Estate Commission. It is also noted that this inspection is not a "code inspection", but rather an inspection of the condition and function of the stated property.

>Although this report may include observations of some building code violations, total compliance with mechanical, plumbing, electrical codes, specifications, and/or legal requirements are specifically excluded. We do not perform "code" inspections, and since building codes change every few years, our inspections are not performed with the intention of bringing every item in the property into compliance with current code requirements. Rather, the standard of our inspections is a performance standard to determine if the items inspected are functioning at the time of the inspection, or are in need of repair. This is particularly applicable to Home Warranty policies, where the standards of the Home Warranty service company are often different than our stated performance standard for judging whether a piece of equipment is functional or in need of repair. If you intend to rely on a Home Warranty policy, then it is recommended that you contact the appropriate service companies for a more in-depth analysis of what may be required to meet their standards should a claim be made against the policy.

>If there are any questions or concerns please contact Hedderman Engineering, Inc. at 281-355-9911 or Office@HeddermanEngineering.com.

## I. STRUCTURAL SYSTEMS

**A. Foundation**

*Comments:*

**B. Grading and Drainage**

*Comments:*

**C. Roof Covering Materials**

*Comments:*

**D. Roof Structures & Attics**

*Comments:*

**E. Walls (Interior and Exterior)**

*Comments:*

**F. Ceilings and Floors**

*Comments:*

**G. Doors (Interior and Exterior)**

*Comments:*

**H. Windows**

*Comments:*

**I. Stairways (Interior and Exterior)**

*Comments:*

**J. Fireplaces and Chimneys**

*Comments:*

**K. Porches, Balconies, Decks and Carports**

*Comments:*

The structural portions of this property were inspected by an engineer from Hedderman Engineering Inc. per the inspection agreement between this firm and our client. All comments regarding the structure and property grade are found in the structure report that is created and provided by the engineers at Hedderman Engineering Inc.

According to HAR, the house was built in 1985.

*Orientation - House Facing South:*

For the purpose of the inspection, North is considered to be the rear of the house.

I = Inspected NI = Not Inspected NP = Not Present D = Deficient

I	NI	NP	D
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## II. ELECTRICAL SYSTEMS

**A. Service Entrance and Panels**

*Comments:*

*Electrical System Description :*

The electrical service is provided by a 120/240 volt, single-phase, 125-ampere underground service to an electric meter located at the east side of the house.

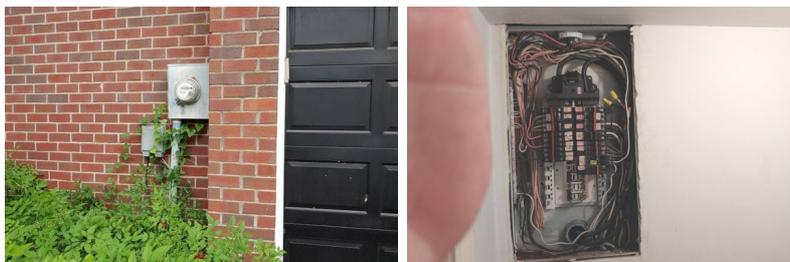
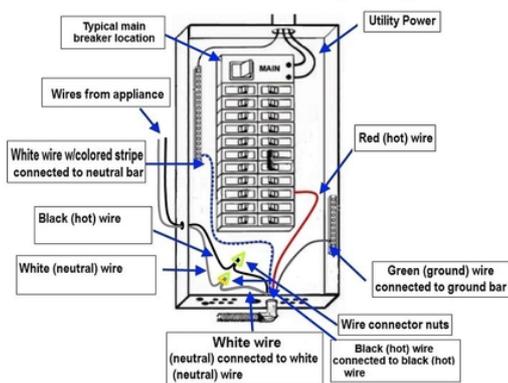
### Electrical Wiring Information

<u>Service Wires</u>	<u>Branch Circuit Wires</u>	<u>Grounded or Ungrounded System</u>
1/0 Aluminum	Copper	Grounded

### Breaker Panel Information

<u>Location</u>	<u>Manufacturer</u>	<u>Rating</u>
Garage	Federal Pacific	200-amperes

Circuit Breaker Wiring Diagram



*Breakers - Routine Check:*

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I NI NP D

It is a general recommendation that all circuit breakers be tripped off and on at least once a year to ensure that they are still physically able to trip off. Occasionally, the points on a breaker will fuse to the main bus in the panel, preventing the breaker from tripping off, even if there is an overload on the circuit. If this condition occurs, it can be a fire hazard.

*AFCI Breakers Not Present - Home built pre-AFCI :*

The breaker panel(s) did not contain any Arc Fault Circuit Interrupters (AFCI). This is an “as-built” condition, that does not meet current building code standards. AFCI devices are intended to protect against fires caused by electrical arcing in the wiring, by shutting off the power to the circuit when an electrical arc is detected in the circuit. Homes built prior to 2002 were not required by the National Electrical Code (NEC) to be protected by AFCI devices. Since this home was built prior to 2002, the breaker panel is not required to be retrofitted with new AFCI breakers. If adding AFCI breakers is desired, it is recommended that you contact an electrician for further information.

*GFCI Breaker - Functional:*

The Ground Fault Interrupt Circuit breaker was operating properly at the time of the inspection and tripped off when the test button was pushed. The breaker protects the following items: Not labeled

Seller claims breaker panel was replaced in May of 2022.

**1: Federal Pacific Breaker Panel**

It is a general recommendation that all circuit breakers be tripped off and on at least once a year to ensure that they are still physically able to trip off. Occasionally, the points on a breaker will fuse to the main bus in the panel, preventing the breaker from tripping off, even if there is an overload on the circuit. If this condition occurs, it can be a fire hazard. This is particularly true on Federal Pacific Electric breaker panels, as they are well known in the industry for having this problem. It is recommended that an electrician be contacted to provide a cost estimate to replace the breaker panel, as Federal Pacific has lost their UL Listing, and are no longer manufactured in the USA. It is recommended that you research Federal Pacific breaker panels online for further documentation regarding these conditions.

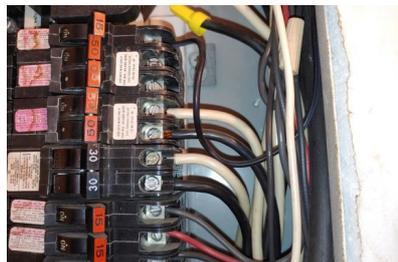
**Obtain Cost Estimate**

**2: Power Wire - White insulation**

We observed one or more white wires that were used as a power wires, and were connected to a circuit breaker. Typically, the white wires are the grounded/neutral conductors, and if they are used as a power conductor, they must be permanently marked or wrapped with black or red tape to identify them as a “hot” ungrounded conductor.

**Obtain Cost Estimate**

**E3407.3**



**3: Breaker Panel - Foreign material**

Foreign material was observed in the panel box, which can be a safety hazard, and it is recommended that the panel be cleaned

**Obtain Cost Estimate**

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**4: Breakers - Not Labeled**

All of the breakers were not labeled to identify the circuits they were protecting. It is recommended that an electrician be contacted to specifically identify each circuit.

**Obtain Cost Estimate**

**5: Breaker Panel - Not bonded**

The breaker panel was not bonded to the grounding bus inside. Should a short circuit occur, the breaker panel would become energized rather than sending the short circuit to ground.

**Obtain Cost Estimate**

**6: Low Voltage Block - Not Present**

A low voltage grounding block for the low voltage service was not installed at the grounding rod. A grounding block may need to be installed for low voltage network service, such as phone and cable.

**Obtain cost estimate**



**B. Branch Circuits, Connected Devices, and Fixtures**

*Comments:*

*Type of Wiring: Copper - Non-metallic sheathed*

*Ceiling Fans - Functional :*

No items that were in need of repair were observed for the operation of the ceiling fan(s) at the time of the inspection.

*Light Fixtures - Functional:*

The light fixtures throughout the house were operated and were observed to be functional at the time of the inspection.

*Outlets - Some inaccessible:*

Some of the receptacle outlets in the home were inaccessible and could not be reached for inspection due to furniture, heavy storage items, personal effects, or conditions outside the control of the inspector.

**1: GFCIs Not present throughout property**

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It was observed that all of the required outlets were not equipped with Ground Fault Circuit Interrupt devices as specified by the National Electrical Code. Have an electrician install the devices at the locations specified in the National Electric Code, including at; all of the kitchen counter tops, outlets below the kitchen sink, the bathrooms, all counter tops with sinks, the garages, and the exterior.

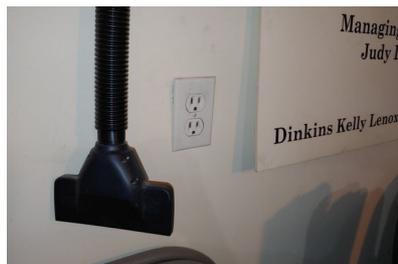
**Obtain Cost Estimate**

## 2: Outlet - Loose in wall

Garage

An outlet was loose on the wall and needs to be secured.

**Obtain Cost Estimate**



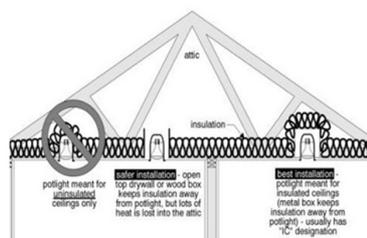
Garage

## 3: Recessed lights - Unknown IC rating

The recessed lights did not have clearance to the attic insulation to prevent overheating. Typically, a minimum clearance of three inches is recommended for safety purposes. It is noted that some recessed light fixtures are rated for contact with insulation. Further investigation is recommended with an electrician to determine if these lights need clearance from the insulation.

**Further investigation is recommended.**

**Obtain Cost Estimate**



## 4: Switch - Function unknown

Master Bedroom

A switch whose function we could not determine was observed. Further investigation with the homeowner and/or a service company is recommended.

**Obtain Cost Estimate**

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<b>I   NI   NP   D</b>
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Two switches unknown function

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### **5: Smoke and Carbon Monoxide Detectors**

We could not determine if the smoke and/or carbon monoxide detectors are connected to the security alarm system as is common practice, therefore, to avoid triggering the security alarm we did not operationally check each device. Further investigation is recommended with a service company who specializes in this field to determine if the devices are interconnected as currently required and functioning properly. For safety purposes, it is recommended that smoke detectors and carbon monoxide detectors be replaced every ten years. Further investigation is recommended.

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### **6: Carbon Monoxide Detectors - Current standards not met**

Carbon monoxide detectors were not installed at all of the currently required locations and it is recommended that approved carbon monoxide detectors be installed. Currently, carbon monoxide detectors are required outside each sleeping area.

**Obtain Cost Estimate**

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### **7: Low Voltage Systems - Not inspected**

It is pointed out that low voltage systems, low voltage wiring, and low voltage connections were not included in the scope of the inspection and were not checked, including: audio/visual systems, alarm systems, data lines, and phone lines. If further investigation is desired, it is recommended that a service company be contacted.

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### III. HEATING, VENTILATION & AIR CONDITIONING SYSTEMS

**A. Heating Equipment**

*Comments:*

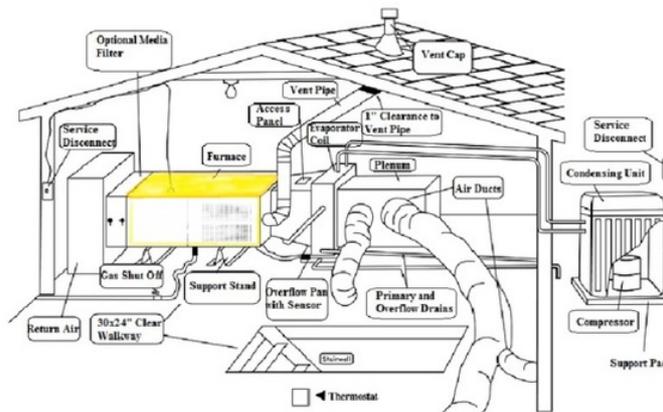
*Type of System: Forced Air*

*Energy Sources: Natural Gas*

*Gas Furnace Description :*

The heating for the property was provided the following natural gas-fired equipment:

<u>ZONE</u>	<u>BRAND</u>	<u>BTU</u>	<u>DATE</u>	<u>LOCATION</u>
House	Carrier	66K	2017	Attic



*Heating Equipment - Functional:*

The heating equipment was observed to be operating and functional at the time of the inspection. The heating equipment responded to the thermostat and the equipment appeared to be heating the air adequately.

*Heat Exchanger - Information:*

Gas furnaces are constructed in such a way that the units must be dismantled in order to view the entire heat exchanger inside. The equipment was not dismantled, and the heat exchanger was not able to be viewed for evidences of cracks. If further investigation is desired, it is recommended that a service company be contacted to dismantle the equipment. It is pointed out, for safety purposes, the heat exchanger should be inspected by an HVAC service company once a year.

*Limited visual inspection:*

It is pointed out that our inspection of the air conditioning and heating system(s) is a limited, visual inspection where we check the equipment as it has been installed to determine whether or not the

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I NI NP D

system(s) is cooling and/or heating at the time of the inspection. Our inspection is necessarily a cursory inspection, as we do not determine the sizing, adequacy, or design of any component in the system, or the compatibility of the individual components, nor the installation of the system(s) to be in conformity to the latest building code requirements. If you desire an in-depth analysis of the HVAC system(s), then it is recommended that a service company be contacted to analyze the system(s). This is particularly important if the system(s) is an older system and has only a limited amount of remaining life due to its age and/or condition.

**B. Cooling Equipment**

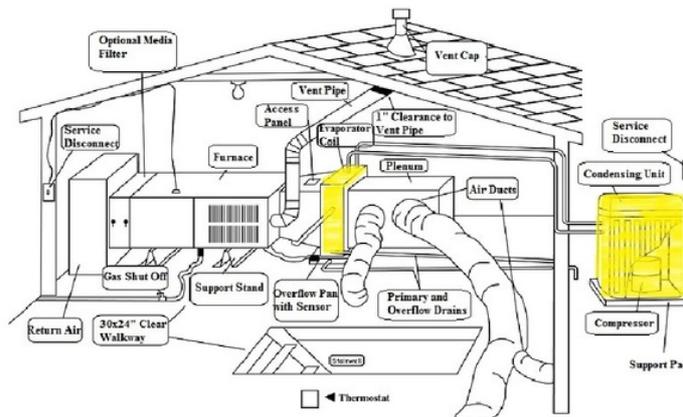
*Comments:*

*Type of System: Split system*

*A/C Equipment Description :*

The type of air conditioning for the property is a forced air split system. The cooling equipment for the property was as follows:

Zone	Brand	Size/Age Condenser	Size/Age Coil	Temp Drop Degrees
House	Carrier	3-ton 2017	3-ton 2016	15 Degrees



*Condensing Unit Equipment - Functional:*

The condensing unit equipment was functional at the time of the inspection. The equipment responded to the corresponding thermostat, and the compressor components and fan motor components were operating.

*Coil Equipment - Functional:*

The coil equipment was operating and was providing a degree of cooling at the time of the inspection.

*Overflow Pan - Water sensor present:*

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The overflow pan under the evaporator coil was equipped with a water sensor that is intended to shut off the air conditioning equipment if the pan fills with water.



*Primary Drain - Terminated properly:*

The primary condensate drain line was properly terminated into the P-trap at a plumbing fixture drain at the interior of the property.

2nd floor bathroom at tub overflow drain



*Cooling Performance:*

We measure the temperature drop ( $\Delta T$ ) across the indoor coil(s) at the time of the inspection and our observations have been recorded in this report. It is pointed out that our measurements of the cooling performance of the equipment is only at a "point in time", and cannot reflect whether the equipment has been recently serviced, or what the future performance of the equipment will be after the day of the inspection. Further investigation with the homeowner is recommended to determine when the equipment was last serviced.

**1: Low temperature drop**

The system had a less than normal temperature differential across the evaporator coils (less than 16 degrees). Have a service company find the source of the problem and provide a cost estimate to make any necessary repairs.

**Obtain Cost Estimate**

**C. Duct System, Chases, and Vents**

*Comments:*

*Type: Rigid and Flex Duct*

*Duct Work - Acceptable:*

The ductwork appeared to be in good condition at the time of the inspection and air was blowing out of each of the registers. The airflow may need to be adjusted in each room to meet your specific needs.



*Return Air - Acceptable :*

The return air system in the house had no visible items that were in need of repair and appeared to be performing as intended at the time of the inspection.

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*UV Light Filter Installed:*

An ultraviolet light filter system was installed in the ductwork at the time of the inspection at one or more of the HVAC systems. We could not determine if the unit was functional at the time of the inspection. Have an HVAC service company evaluate the unit and determine if the light is functional or needs to be replaced.



*Ductwork - Flex and Rigid ducts :*

The air ducts in the attic consisted of some newer flex ducts and some older rigid ducts. Due to the age of the rigid air ducts, further investigation is recommended with the homeowner and/or a service company to determine if the ductwork has been cleaned recently. If the air ducts have not been cleaned, it is recommended that the interior of the ducts be checked by a service company.

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### IV. PLUMBING SYSTEMS

**A. Plumbing Supply, Distribution Systems, and Fixtures**

*Comments:*

- Location of water meter: The curb
- Location of main water supply valve: Front of House
- Static water pressure reading: 46 PSI
- Water Supply Material: Galvanized Steel

A plumbing system typically consists of three major components, including the potable water supply piping; the waste or drain piping; and the plumbing fixtures. The distribution piping brings the water from the public water main or a private well to the individual fixtures throughout the property. The water distribution system is under pressure, usually from 40 psi to 70 psi. The waste or drain piping carries the waste water and products underground to the sewer system or septic tank, and the waste piping is not under pressure, but operates by gravity flow. We typically run water down the drains from the sinks, tubs, showers, and toilets, but this cannot simulate the waste flow characteristics of full occupancy. There may be partial blockage of the underground waste lines from debris, broken pipes, or tree roots that cannot be detected by a visual inspection. If you desire a more in-depth inspection, it is recommended that you contact a qualified plumber.

*Shut Off Valve - Exterior location:*

The shut-off valve for the main inlet water line was located at the exterior of the house.

Front of house



*Static Water Pressure :*

The static water pressure to the house at the time of the inspection was measured with a pressure gauge at the hose bibb nearest the shut off valve, and the static pressure was observed to be 46 PSI.



*Water Supply Piping - Galvanized Steel:*

All or portions of the water piping for the property was observed to be the original galvanized piping. It is pointed out that the galvanized piping will deteriorate with time, and will corrode on the inside of the piping, thereby reducing the inside diameter of the pipe, and restricting the flow of the water through the pipe. In addition, the piping will corrode through to the outside of the pipe and will eventually deteriorate to where the pipe will start leaking. It can be anticipated that the galvanized water piping throughout the house will need to be replaced when it is causing reduced water pressure or is corroded enough to start leaking.

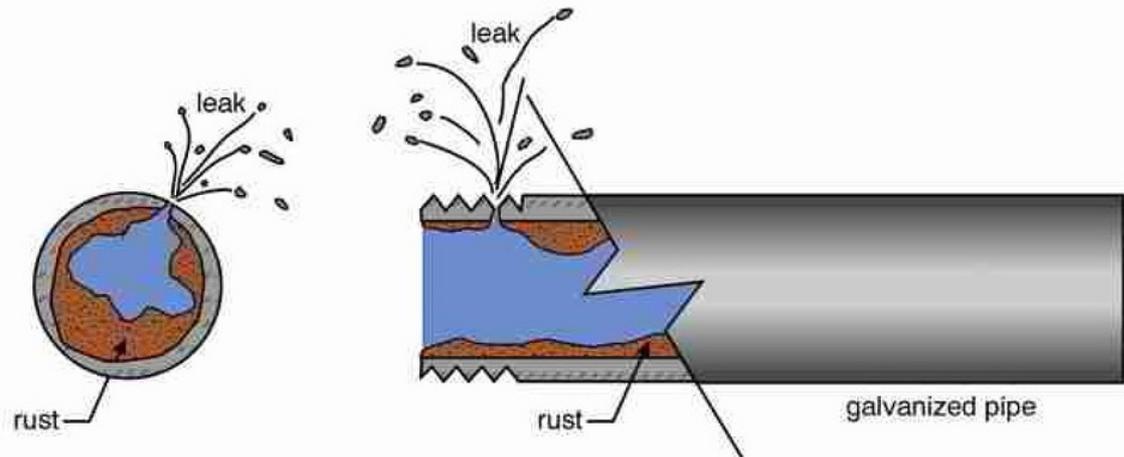
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## Galvanized steel pipe

rusting of galvanized pipe can greatly reduce water pressure and will eventually cause leaks as rust creates holes in the pipe walls

problems are likely to occur soonest on pipes carrying hot water, horizontal pipes and at threaded (thinner) sections



### *Limited visibility of plumbing lines: At attic -*

Visibility of the plumbing lines was very limited at the time of the inspection and some portions of the plumbing that are typically accessible were concealed. If further investigation is desired, it is recommended that a service company be contacted.

### *Sinks & Lavatories - Functional:*

No items requiring repair were visible at the time of the inspection to the operation of the sinks and/or lavatories. The sinks were filled with water, and were observed to be draining properly, with no leaking piping or slow drains.

### *Toilets - Functional:*

No items requiring repair were visible at the time of the inspection to the operation of the toilets. The toilets were flushing properly, with no leaks visible in the plumbing, the wax seal, or the internal valves.

### *Tub/Shower - Functional:*

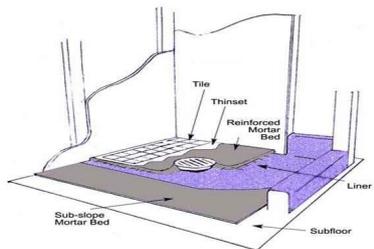
No items requiring repair were visible for the tub and/or shower at each bathroom. The tubs were partially filled with water and water was run in the showers, and they were observed to be operating adequately at the time of the inspection.

### *Shower - No evidence of shower pan leak:*

No evidence of a current shower pan leak were visible at the time of the inspection for the shower(s). It is pointed out, our shower inspection is limited to a visual inspection and we did not perform a shower pan leak test. It is recommended that a plumber be contacted to perform a shower pan leak test to determine if any water is leaking past the shower pan.

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I	NI	NP	D
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**1: Vacuum Breaker - Missing**

The atmospheric vacuum breaker devices were missing at one or more of the hose bibbs, and it is recommended that they be installed to prevent cross connections, which can allow contaminated water to enter the potable water supply.

**Obtain Cost Estimate**



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**2: Insulate Exterior Water Piping**

Front of house

Exterior water piping that was not properly insulated was observed. It is recommended that the piping be properly insulated.

**Obtain Cost Estimate**

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**3: Hose Bibb - Leaking at valve stem**

Front of house

A leak was observed at a hose bibb around the valve stem.

**Obtain Cost Estimate**



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**4: Bellows Drain Piping**

Kitchen sink

Bellows piping was used on a portion of the drain piping. In the plumbing industry the use of bellows piping is considered amateur workmanship as bellows piping is prone to frequent clogs. Consideration

I = Inspected NI = Not Inspected NP = Not Present D = Deficient

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should be given to replacing the Bellows piping.

**Obtain Cost Estimate**



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**5: Sink Drain - Repaired with putty**

2nd Floor Bathroom

The drain line under the sink was observed to be puttied, apparently due to previous leaks. It is noted that the drain line was not leaking at the time of the inspection, however it can be anticipated that the putty will fail in the future and further permanent repairs will become necessary.

**Obtain Cost Estimate**



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**6: Tub - Mechanical stopper nonfunctional**

2nd Floor Bathroom

The mechanical stopper was nonfunctional.

**Obtain Cost Estimate**

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**7: Shower/Tub - Shower head leak**

2nd Floor Bathroom

The shower head was leaking at the connection and needs to be repaired.

**Obtain Cost Estimate**

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**8: Tub/Shower - Diverter Stuck**

2nd Floor Bathroom

The diverter was stuck and would switch from shower to tub and repair is needed.

**Obtain Cost Estimate**

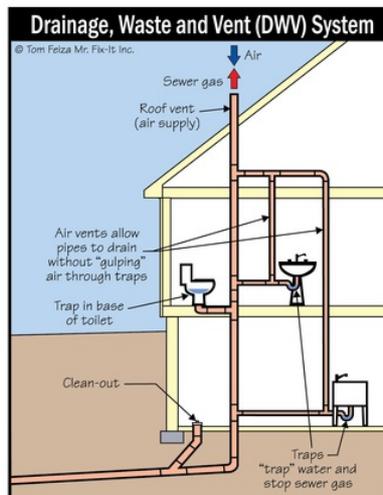
**B. Drains, Wastes, & Vents**

*Comments:*

*Sewer Piping Material: PVC*

*Sewer System - Functional:*

No items requiring repair were visible for the operation of the drain system at the time of the inspection. No evidences of a system wide problem were observed when the system was operationally checked by running water through each of the plumbing fixtures during the duration of the inspection. It is noted that most of the drain waste system in the walls, under the floors, and in the ceilings is not visible. If further investigation is desired, it is recommended that a plumber be contacted to perform an in depth survey with a camera or hydrostatic test.



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*Sewer Clean Out - Not visible:*

A clean out for the sewer line was not visible, and it is recommended that you check with the owner for the location. This is needed for access to the sewer line should the line become clogged and need to have a snake run down the line to clean it out.

**C. Water Heating Equipment**

*Comments:*

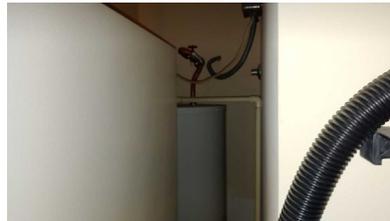
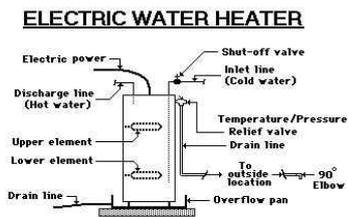
*Energy Source: Electric*

*Capacity: 50 gallons*

*Electric Water Heater Description:*

The hot water for the property was provided by the following water heater(s):

<u>Location</u>	<u>Brand</u>	<u>Capacity</u>	<u>Age</u>	<u>Energy Type</u>
Garage	Bradford White	50 Gal	2012	Electric



Blocked by refrigerator at garage



*Water Heater Equipment - Functional:*

The water heater equipment was functional at the time of the inspection and providing hot water to the applicable plumbing fixtures.

*Hot water - Temperature :*

The generally recommended maximum temperature setting for a hot water heater, to prevent accidental scalding, is 120-125 degrees. It is recommended that the water heater thermostat be adjusted to and maintained in this temperature range.

The temperature of the hot water at the kitchen sink was 118 degrees.

I = Inspected NI = Not Inspected NP = Not Present D = Deficient

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WATER TEMPERATURE	TIME AND TEMPERATURE RELATIONSHIP TO SERIOUS BURNS	
	Adults (skin thickness of 2.5 mm)	Children (skin thickness of 0.8 mm)
155°F 68°C	1 second	Time required for a 10th-degree burn to occur
148°F 64°C	2 seconds	0.5 second
140°F 60°C	5 seconds	1 second
133°F 56°C	15 seconds	1 second
127°F 52°C	1 minute	10 seconds
124°F 51°C	3 minutes	1.5 minute
120°F 48°C	8 minutes	2.5 minutes
100°F 37°C	Safe temperature for bathing	Safe temperature for bathing

For 01: °C = (°F) - 32 / 1.8 or (°F = 1.8 °C + 32)

Figure P278B.3  
TEMPERATURE BURN CHART

**Temp/Pressure Relief Valve - Information :**

Temperature/pressure relief valves are not operationally checked by this firm during the inspection. Valves typically do not reseat properly when they are operated, which causes the valves to leak. It is best to replace the temperature/pressure relief valves for water heaters every 2-3 years to prevent them from getting clogged with mineral deposits.

**D. Hydro-Massage Therapy Equipment**

*Comments:*

*Hydro - therapy equipment was not present at the time of the inspection. :*

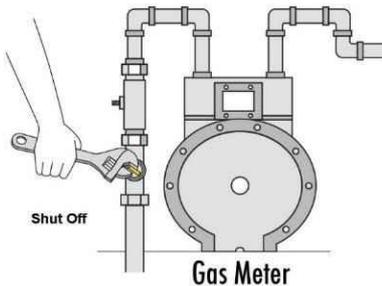
**E. Gas Supply System**

*Comments:*

*Gas Meter Location :*

The main gas shut off valve was located at the inlet side of the gas service meter.

Front of house



*Gas System Inspection :*

A cursory visual inspection was performed on the gas supply piping. The inspection was limited to the gas pipes that were visible and accessible at the time of the inspection. The use of specialized equipment to detect leaks is not included in the scope of this inspection, nor is determining the gas supply pressure or adequacy. If further investigation is desired, it is recommended that a plumber be contacted.

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## V. APPLIANCES

**A. Dishwashers**

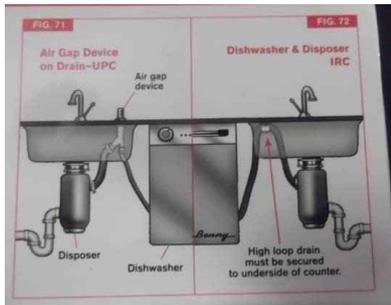
*Comments:*

*Functional :*

The dishwasher was functioning and responded to the controls. The unit was run through a cycle at the time of the inspection and appeared to be operating properly.

*Drain Line Loop Present :*

The drain line under the sink was looped up so that the top of the loop was higher than the point where the drain line connected to the disposal. This will help to prevent garbage from running down the drain line into the dishwasher.



**B. Food Waste Disposers**

*Comments:*

*Functional:*

The disposal was operating and responded to the controls at the time of the inspection.

**C. Range Hood and Exhaust Systems**

*Comments:*

*Recirculating Vent Fan - Functional:*

The recirculating vent fan was operating and responded to the controls at the time of the inspection. It is pointed out that the equipment does not vent to the outside, but rather filters the air through a grease filter and vents the air back into the kitchen.

**1: Light - nonfunctional**

The light was non-functional at the time of the inspection, which may be due to a burned out bulb, defective wiring or possibly a defective switch.

**Obtain Cost Estimate**

**D. Ranges, Cooktops, and Ovens**

*Comments:*

*Gas Cooktop - Functional:*

The gas cooktop was functioning and responded to the controls when they were operated. All of the burners and controls were operating properly at the time of the inspection.

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*Electric Ovens - Functional:*

The electric ovens were observed to be functioning and no items requiring repair were visible at the time of the inspection.

*Ovens - Upper/Lower calibrated properly:*

Both oven thermostats were checked and were properly calibrated. The thermostats were set at 350 degrees, and the ovens heated to within the allowable  $\pm 25$  degrees. The ovens were checked with an oven thermometer and found to heat to 370 degrees for the upper oven, and 360 degrees for the lower oven.

**E. Microwave Ovens**

*Comments:*

*Functional:*

No items requiring repair were visible at the time of the inspection for the heating operation of the microwave. A cup of water was placed in the unit, and the microwave heated the water adequately. It is pointed out that the unit was not checked for microwave leakage.

**F. Mechanical Exhaust Vents and Bathroom Heaters**

*Comments:*

*Mechanical Vents - Functional:*

The mechanical vent fans were functional at the time of the inspection. The bath vent fans responded to the switches and were functional at all the bathrooms.

**G. Garage Door Operators**

*Comments:*

**1: Opener - did not auto-reverse**

Both Openers

The garage door opener did not stop the descent of the door when the door was subjected to a reasonable resisting pressure. This could cause possible personal injury or damage to house, and the opener is in need of adjustment. It is pointed out that the unit was equipped with the infra-red sensing safety device, and the device was operational at the time of the inspection.

**Obtain Cost Estimate**

**H. Dryer Exhaust Systems**

*Comments:*

*Dryer Vent :*

The dryer vent appeared to be properly installed at the time of the inspection. It is pointed out that a portion of the dryer pipe was not visible where it entered the wall/ceiling. Also, dryer vents need to be cleaned periodically for safety reasons and to allow the dryer to operate properly.

*Dryer vent - Dryer present :*

The vent was connected to the dryer but was not tested. It is recommended that the vent be checked for an excess of lint and that it be cleaned if necessary. (Information)

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**1: Vent - Disconnected at back of dryer**

The flexible dryer vent duct was disconnected from the back of the dryer and needs to be resecured to the dryer.

**Obtain Cost Estimate**



**I. Other**

*Comments:*

*Non Built-in Equipment - Not inspected :*

It is pointed out that non built-in refrigerators, wine coolers, small refrigerators, clothes washers, and clothes dryers are not included in the scope of this inspection and were not checked. If further investigation is desired, it is recommended that a service company be contacted.

**Further investigation is recommended**

*Dryer Connections - Electric 3 Prong and Gas:*

The 240-volt outlet for the electric dryer connections was observed to be the older style 3-prong outlet rather than the newer 4-prong outlet. You may want to check your clothes dryer to determine if you have the correct power cord for this outlet. A gas connection was installed. It is pointed out that the gas valve was not operationally checked.

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I	NI	NP	D
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### INFORMATION FROM HEDDERMAN ENGINEERING INC.

*Closing Comments :*

Opinions and comments stated in this report are based on the apparent performance of the items included within the scope of the inspection, at the time of the inspection. Performance standards are based on the knowledge gained through the experience and professional studies of the inspector. There is no warranty or guarantee, either expressed or implied, regarding the habitability, future performance, life, merchantability, and/or need for repair of any item inspected. It is recommended that a Home Warranty Policy be provided to protect the appliances and mechanical equipment against unforeseen breakdowns during the first year. Check with your agent for details.

**Items identified in the report as Deficient and our Recommendations are provided in the above report. Many, but not all, recommendations are highlighted in bold red text. It is our intention, and your responsibility, that you follow up on these deficiencies and recommendations as part of your due diligence by contacting the appropriate service contractor for Further Investigation, Obtain cost estimate, and/or Contact the builder before your option period expires. It is pointed out that other related and/or underlying conditions may be present, and which may not be apparent without further investigation.**

As an additional service, we strongly recommend using a new tool we have on our website that can quickly turn your inspection report into an easy-to-read estimate of repairs for a nominal fee. These pricing reports from a third party company called Repair Pricer not only make the inspection report easy to understand in terms of dollars and cents, but they are also useful negotiation tools. Just visit the page below on our website and upload your report into Repair Pricer. If you have any questions when you receive your report, you can contact them at [info@repairpricer.com](mailto:info@repairpricer.com) <http://www.heddermanengineering.com/repair-cost-estimates>