

Home Energy Audit

Sample Customer

Property Address:

123 Main St

Berthoud, CO 80513



Inspection Date: 7/7/2007



General Information

This confidential report is furnished for the use of the client only. It is not intended to be relied upon for any purpose by any other party not named on the report and Inspection Agreement.

This inspection was performed in accordance with and under the terms of a *Home Inspection Agreement*. The agreement was signed and agreed upon before the preparation of this report and a signed copy of the agreement is available upon request. An unsigned copy of the agreement is available on our web site at; www.scotthomeinspection.com/agreement.html


Scott Home Inspection conducts all inspections according to the American Society of Home Inspectors (ASHI) Standards of Practice and Code of Ethics. The complete standards can be reviewed at the following location; www.scotthomeinspection.com/ASHI_standards-ethics.pdf


Date: 7/7/2007	Time: 7:00 AM	Report ID: Scott-123
Property: 123 Main St Berthoud, CO 80513	Customer: Sample Customer	Real Estate Professional:
Style of Home: Single Family	Age Of Home: Over 25 Years	Client Is Present: Yes
Weather: Clear	Temperature: Over 65	Rain in last 3 days: No


Interpreting the Inspection Results


Each item or area inspected will be marked with a finding, which represents the inspection result for that item. The following descriptions represent an explanation for each of the inspection findings.

Inspected - Appears Functional = The item, component, or unit was visually observed, and if no other comments were made, then the item appeared to be functioning as intended, allowing for normal wear and tear.

 **Repair or Replacement Recommended** = The item, component or unit was visually observed, and is not functioning as intended or needs further inspection by a qualified specialist. Items, components or units that can be repaired to satisfactory condition may not need replacement.

 **General Maintenance Item** = These are repairs that, in the opinion of the inspector, are regular maintenance items typical for all homes. Repair to these items is not urgent, but should be performed in the near future.

 **Service Needed** = The item, component, or unit is functioning, but a service check-up is recommended to optimize performance.

 **Energy Recommendation** = An energy related improvement item is noted with recommendations on the appropriate upgrade or repair.

Limited Inspection = The item, component, or unit was not fully inspected, and some form of limitation is preventing a complete inspection of the item/area. The report will state a reason for the limited inspecting of the item.

Not Inspected = The item, component, or unit was not inspected, and no representations of whether or not it was functioning as intended are made. The report will state a reason for not inspecting the item.

Not Present = The item, component or unit is not in this home or building.

Energy Recommendation Summary

Date: 7/7/2007	Time: 7:00 AM	Report ID: Scott-123
Property: 123 Main St Berthoud, CO 80513	Customer: Sample Customer	Real Estate Professional:



The following items or discoveries represent a summary of the inspection items specifically related to the Energy Audit portion of the inspection, marked **Energy Audit Issues**, indicating that these systems or components; (a) affect energy performance or (b) adversely affect energy loss of the dwelling or (c) appear to warrant further investigation by a specialist or (d) require subsequent observation.

Every effort is made to identify existing and potential energy related problems at the time of the inspection, however it is not possible for a home inspector to foresee all problems that might arise in the future.

1. Insulation and Ventilation


1.0 ATTIC INSULATION

Energy Recommendation

-  (1) The attic is insulated with about 4" of fiberglass batt insulation. I recommend adding another 6-8" of blown insulation in the accessible attic area. Recommended insulation levels in our area in the attic is R-50. IR scans of the ceiling and attic areas show many areas where the insulation is inadequate, causing a considerable amount of heat gain and heat loss in these rooms.
-  (2) Weatherstrip the attic hatch and attach insulation to the upper part to approximately R-30. If possible, have tightening cam latches installed to keep hatch securely closed.


1.1 WALL INSULATION

Energy Recommendation

-  A basic inspection of the wall insulation in a few areas was done, by Infra-Red (IR) Scanning. This limited inspection showed that the walls have areas where insulation is missing. This can be a considerable expense, and would require drilling access holes in either the outside wall siding or inside drywall. I recommend you consult with an insulation company and understand the process and costs associated.


1.2 BASEMENT/CRAWLSPACE INSULATION

Energy Recommendation

-  The rim joist area and the foundation walls in the crawlspace are not insulated well. The rim joist is the area above the foundation wall but below the floor area, which is exposed along the outside edges of the home. Add cut pieces of fiberglass insulation to this and any exposed areas of the rim joist accessible. For the foundation walls, drape insulation down to the crawlspace dirt floor, attaching it to the top of the sill plate. For the floor of the crawlspace, lay down a plastic sheeting vapor barrier and attached this to the foundation wall edge. Lay the draped insulation on the walls over this sheeting. If outside vents for the crawlspace exist, close these vents and seal them off with insulation batts or foam board insulation, and foam spray the edges if possible.


1.3 INSULATION OF HEAT DUCTS & WATER PIPES (in unheated spaced)

Energy Recommendation

-  Insulate accessible hot water piping coming from the water heater with low cost foam wrap insulating material.

1.5 VENTING SYSTEMS (Kitchens, baths and laundry)


Energy Recommendation

-  Both vent fans are not connected to the outside, and do not have any damper installed to prevent outside air from entering or from heat escaping. The vent fans need a proper roof-mounted vent with a built in damper installed, to prevent heat loss and air entry.

2. Air Leakage and Air Sealing




2.0 BLOWER DOOR TESTING

Energy Recommendation

-  The air sealing in the home needs to be improved. The blower door test measured 4900 CFM at 50 PA, which calculates to 0.92 NACH (Natural Air Changes per Hour). A NACH over 0.35 indicates leakage rates where air sealing efforts would be beneficial. Air sealing specific areas are noted in the appropriate section of the report.



2.3 INTERIOR AIR SEALING

Energy Recommendation

-  (1) Seal with blow foam the plumbing pipe entries below the kitchen sink, to prevent air leakage in these areas.
-  (2) Seal the recessed light fixtures in the home. Seal around the edges and any holes present when the trim and bulb are removed, with an appropriate fire rated caulking. For any upstairs recessed light, that are accessible in the attic, build a box out of drywall that will cover the light fixture, allowing for a 3" clearance on all sides of the fixture. Place this box over the can light, and caulk or seal the edges. Then you can move insulation all around this box.
-  (3) Install foam sealing gaskets behind exterior wall electric outlet and switch covers. Plug unused electrical outlets on exterior walls with child-safety plugs. These items can be purchased at any hardware store. It is recommended power be removed to the outlets and switches when installing gaskets, for safety.


2.4 EXTERIOR AIR SEALING

Energy Recommendation

-  (1) Clean out the build up of lint in the outside clothes dryer exhaust. This will prevent air penetration into the dryer area.
-  (2) The cat door is significantly contributing to the air leakage present in the home. I would recommend you investigate a better insulated and weatherstripped door flap for the cat door. Visit the following for one possible option:
<http://www.dogdoors.com/cgi/smart.cgi?command=listitems&type=group&group=best>


2.5 DOORS (REPRESENTATIVE NUMBER)

Energy Recommendation

-  Update the weatherstripping on the front door and patio sliding door to prevent air leakage and heat loss.

2.6 DUCT SEALING


Energy Recommendation

-  Duct Leakage: during the blower door test, there was a significant amount of air infiltration coming through the return registers in the upper level of the home. This indicates that outside air is penetrating the return duct system and that the ducts need to be sealed. When outside air is penetrating the return system, the efficiency of the furnace is reduced, and the furnace needs to work harder than necessary. The leakage is most likely in the attic or in the wall cavity where the returns are run. An HVAC contractor will need to investigate further and determine where the leakage is occurring, and seal these areas.

3. Windows

3.0 WINDOWS


Energy Recommendation

-  Most of the windows on your home have air leakage around the edges of them. I would recommend you consider repairing the weatherstripping on the windows. The following article has a section on windows, and discusses repair versus replacement;
https://rmi.org/images/PDFs/HEBs/E04-11_HEB1_Building.pdf

4. Heating System


4.0 HEATING EQUIPMENT

Energy Recommendation

-  The furnace operational performance was tested with a Combustion Safety Analyzer, to determine how efficiently the unit is running. While your furnace is an +80% efficient unit, the actual performance was measured at 65%. This indicates that your furnace needs to be serviced and adjusted. I recommend an HVAC contractor come in before the next heating season, to performance a tune-up, cleaning and adjustment of your furnace system.


4.1 THERMOSTAT

Energy Recommendation

-  The thermostat is old and out-dated and should be replaced. A four-time-zone set-back thermostat would increase system efficiency and reduce heating/cooling costs. For more information visit:
http://www.energystar.gov/index.cfm?c=thermostats.pr_thermostats


4.4 DISTRIBUTION SYSTEMS (including fans, pumps, ducts and piping, duct supports, insulation, air filters, registers, radiators, fan coil units and convectors)

Energy Recommendation

-  The disposable filter is dirty. The filter needs to be replaced.

4.7 FIREPLACE AIR SEALING


Energy Recommendation

-  Air seal around the outside edges of the fireplace trim with appropriate caulking. There is a considerable amount of air leakage around this area.

5. Air Conditioning System

5.0 COOLING AND AIR HANDLER EQUIPMENT


Energy Recommendation

-  Ensure that any vegetation and/or leaves be cleaned from around the outside of the compressor, to allow for optimum performance. Also, the AC unit is older and the coolant level may be low and may need re-charged. I recommend an HVAC contractor perform a tune up of your AC system, to optimize performance and efficiency.

6. Hot Water and Plumbing System


6.1 WATER HEATER INSULATING BLANKET

Energy Recommendation

-  Consider installing an insulating blanket on the hot water heater, which will help reduce energy use and ambient losses.


6.2 TEMPERATURE OF HOT WATER (nominal setting = 120 F)

Energy Recommendation

-  Temp Setting: the water heater setting is too high and your water temp measured 135F. Optimum setting should be 115-120F. This is causing excessive energy use from the water heater. The set point was reduced during the audit.

6.3 FIXTURES & FAUCETS

Energy Recommendation

-  For water savings, consider changing your shower heads to low flow type.


6.4 TOILETS & BIDETS

Energy Recommendation

-  For water savings, consider replacing the hall bathroom toilet with a low flush, maximum 1.6 GPF rated.

6.5 DRAIN WATER HEAT RECOVERY DEVICE

Energy Recommendation

-  Your home would be a good candidate for installing a plumbing drain water "Heat Recovery Device". These devices capture heat from drained hot water in showers, sinks, etc, and use this heat captured to warm the cold water supply into these areas. This reduces the hot water use from the water heater, and saves energy costs.

The addition of these devices is relatively easy. One company that has these units is; <http://gfxtechnology.com/>

7. Electrical System and Safety Tests

7.0 ENERGY EFFICIENT LIGHTING

Energy Recommendation



Energy-Efficient Lighting Options

There are many readily available alternatives to conventional incandescent lighting. Compact fluorescent light bulbs use only one-third the electricity consumed by incandescent bulbs, yet last up to thirteen times longer. They produce less heat, are available in warm colors, and can be screwed into your existing light fixtures. While they cost more initially, their energy savings and long-life saves money in the long run. To make your homes lighting even more energy efficient, consider installing hardwired fluorescent lights in your study or den and in your kitchen.

If you have outside lights, you may wish to consider putting them on a sensor so that they only go on when someone approaches the house.

For more information about lighting options visit;
https://rmi.org/images/PDFs/HEBs/E04-12_HEB2_Lighting.pdf
http://www.energystar.gov/index.cfm?c=cfls.pr_cfls

7.3 SMOKE DETECTORS AND CO DETECTORS

Energy Recommendation



Smoke detectors are installed, but for safety, consider installing a CO detector on the main level of the home.

8. Appliance Review

8.0 REFRIGERATOR

Energy Recommendation



Your refrigerator power consumption was measured, and is consuming approximately 50 kWh per month, or approximately 600 kWh per year. This is about 2-3 times more energy than a newer Energy Star refrigerator. Consider replacement when possible. In the meantime, regularly clean the refrigerator condenser coils beneath or behind the unit to ensure optimum efficiency is gained from your current unit.

END OF SUMMARY

Prepared Using HomeGauge <http://www.homegauge.com> SHGI (c) 2000-2004 : Licensed To Scott Home Inspection, LLC



Scott Home Inspection, LLC

Principle Inspector: George Scott

970-532-2424 or 720-979-4960

www.scotthomeinspection.com

Report Detail

Date: 7/7/2007	Time: 7:00 AM	Report ID: Scott-123
Property: 123 Main St Berthoud, CO 80513	Customer: Sample Customer	Real Estate Professional:

The following items or discoveries represent the complete details of the inspection items. Items marked **Repair- Replacement Recommended, General Maintenance Item, or Service Needed** indicate that these systems or components; (a) do not function as intended or (b) adversely affect the habitability of the dwelling or (c) appear to warrant further investigation by a specialist or (d) require subsequent observation.

Items specifically related to the Energy Audit portion of the inspection, marked **Energy Recommendations**, indicate that these systems or components; (a) affect energy performance or (b) adversely affect energy loss of the dwelling or (c) appear to warrant further investigation by a specialist or (d) require subsequent observation.

Every effort is made to identify existing and potential repair items, maintenance issues, and energy related problems at the time of the inspection, however it is not possible for a home inspector to foresee all problems that might arise in the future.

1. Insulation and Ventilation

DESCRIPTION:

Basement / Crawlspace:

Partial Basement with Crawlspace

Crawl Space Floor Vapor Retarder:

None Present

Attic Insulation:

Fiberglass

Dryer Vent:

Flexible Metal

Metal

Method used to observe Crawlspace:

Crawled

Attic info:

Attic access

Ventilation:

Roof-top vents

Soffit Vents

Dryer Power Source:

220 Electric

Floor System Insulation:

NONE

Method used to observe attic:

Walked

Exhaust Fans:

Fan only

OBSERVATIONS & RECOMMENDATIONS:

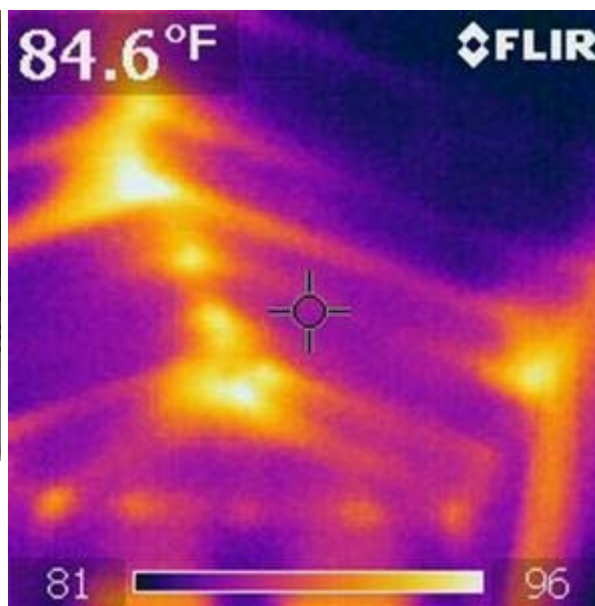
1.0 ATTIC INSULATION

Energy Recommendation

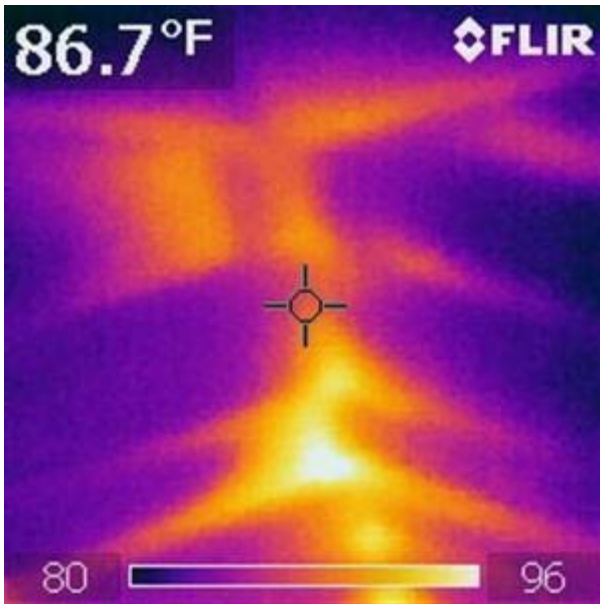
- 🏠 (1) The attic is insulated with about 4" of fiberglass batt insulation. I recommend adding another 6-8" of blown insulation in the accessible attic area. Recommended insulation levels in our area in the attic is R-50. IR scans of the ceiling and attic areas show many areas where the insulation is inadequate, causing a considerable amount of heat gain and heat loss in these rooms.



1.0 Picture 1



1.0 Picture 2

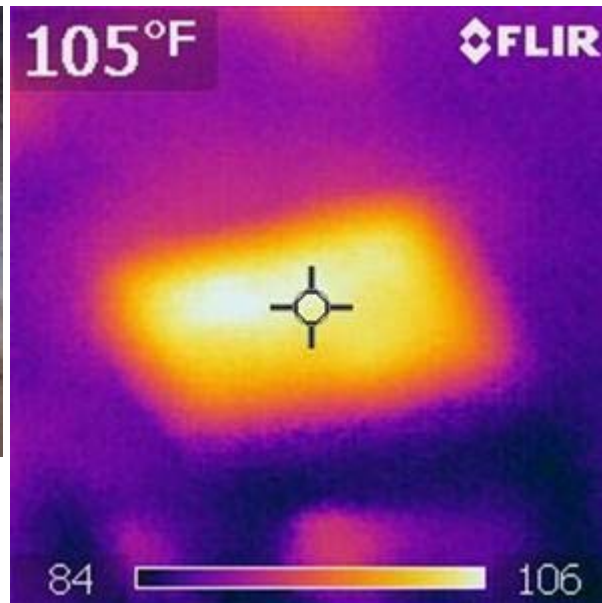


1.0 Picture 3

- 🏠 (2) Weatherstrip the attic hatch and attach insulation to the upper part to approximately R-30. If possible, have tightening cam latches installed to keep hatch securely closed.



1.0 Picture 4

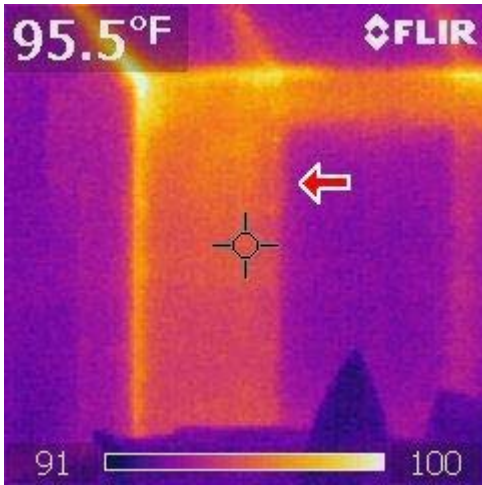


1.0 Picture 5

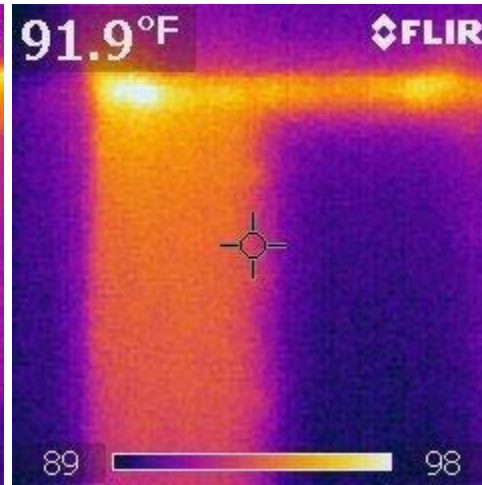
1.1 WALL INSULATION

Energy Recommendation

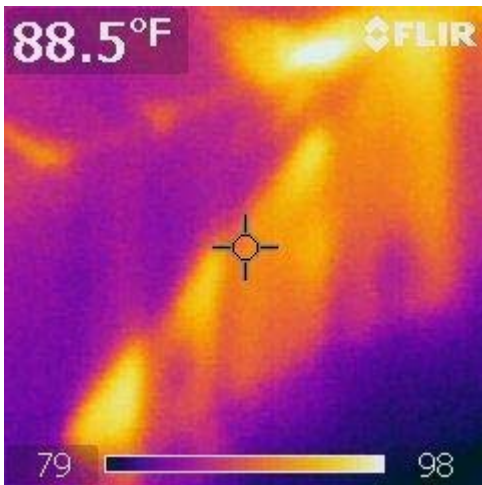
- 🏠 A basic inspection of the wall insulation in a few areas was done, by Infra-Red (IR) Scanning. This limited inspection showed that the walls have areas where insulation is missing. This can be a considerable expense, and would require drilling access holes in either the outside wall siding or inside drywall. I recommend you consult with an insulation company and understand the process and costs associated.



1.1 Picture 1




1.1 Picture 2



1.1 Picture 3

1.2 BASEMENT/CRAWLSPACE INSULATION

Energy Recommendation

-  The rim joist area and the foundation walls in the crawlspace are not insulated well. The rim joist is the area above the foundation wall but below the floor area, which is exposed along the outside edges of the home. Add cut pieces of fiberglass insulation to this and any exposed areas of the rim joist accessible. For the foundation walls, drape insulation down to the crawlspace dirt floor, attaching it to the top of the sill plate. For the floor of the crawlspace, lay down a plastic sheeting vapor barrier and attached this to the foundation wall edge. Lay the draped insulation on the walls over this sheeting. If outside vents for the crawlspace exist, close these vents and seal them off with insulation batts or foam board insulation, and foam spray the edges if possible.



1.2 Picture 1

1.3 INSULATION OF HEAT DUCTS & WATER PIPES (in unheated spaced)

Energy Recommendation

- 🏠 Insulate accessible hot water piping coming from the water heater with low cost foam wrap insulating material.



1.3 Picture 1

1.4 VENTILATION OF ATTIC

Inspected - Appears Functional

1.5 VENTING SYSTEMS (Kitchens, baths and laundry)

Energy Recommendation

- 🏠 Both vent fans are not connected to the outside, and do not have any damper installed to prevent outside air from entering or from heat escaping. The vent fans need a proper roof-mounted vent with a built in damper installed, to prevent heat loss and air entry.



1.5 Picture 1

2. Air Leakage and Air Sealing

OBSERVATIONS & RECOMMENDATIONS:

2.0 BLOWER DOOR TESTING

Energy Recommendation

- The air sealing in the home needs to be improved. The blower door test measured 4900 CFM at 50 PA, which calculates to 0.92 NACH (Natural Air Changes per Hour). A NACH over 0.35 indicates leakage rates where air sealing efforts would be beneficial. Air sealing specific areas are noted in the appropriate section of the report.



2.0 Picture 1

2.1 ATTIC AIR SEALING

Inspected - Appears Functional

2.2 BASEMENT-CRAWLSPACE AIR SEALING

Inspected - Appears Functional

2.3 INTERIOR AIR SEALING

Energy Recommendation

- (1) Seal with blow foam the plumbing pipe entries below the kitchen sink, to prevent air leakage in these areas.



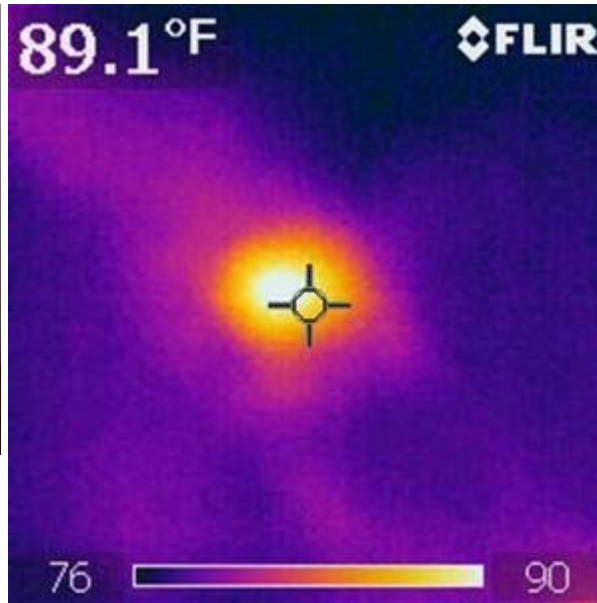
2.3 Picture 1

- (2) Seal the recessed light fixtures in the home. Seal around the edges and any holes present when the trim

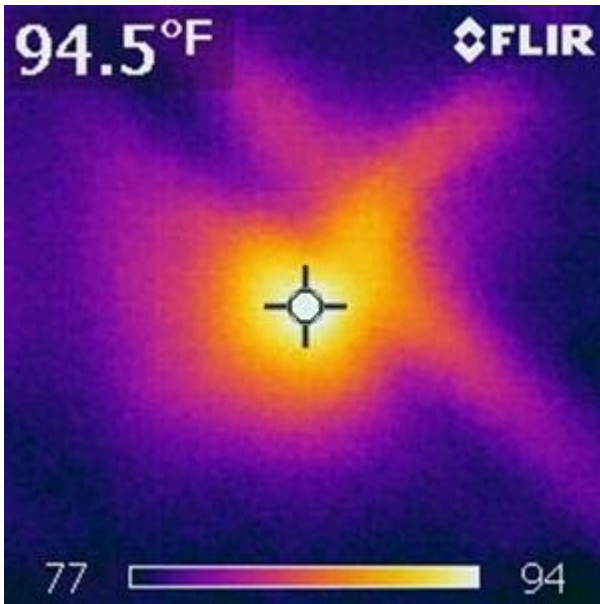
and bulb are removed, with an appropriate fire rated caulking. For any upstairs recessed light, that are accessible in the attic, build a box out of drywall that will cover the light fixture, allowing for a 3" clearance on all sides of the fixture. Place this box over the can light, and caulk or seal the edges. Then you can move insulation all around this box.



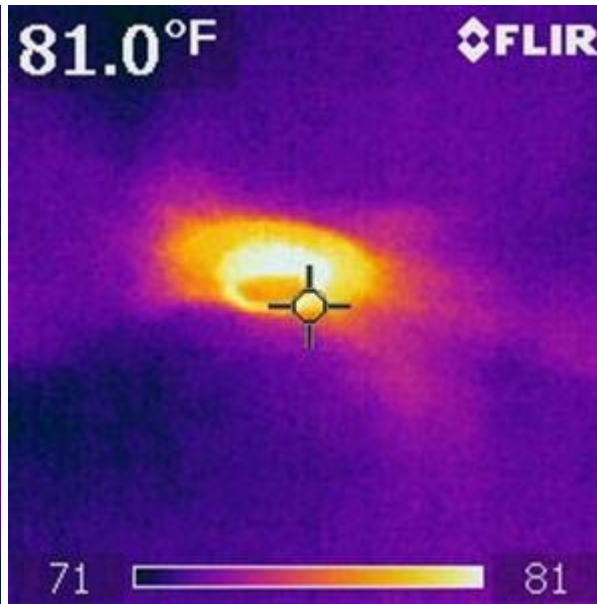
2.3 Picture 2



2.3 Picture 3



2.3 Picture 4



2.3 Picture 5


- 🏠 (3) Install foam sealing gaskets behind exterior wall electric outlet and switch covers. Plug unused electrical outlets on exterior walls with child-safety plugs. These items can be purchased at any hardware store. It is recommended power be removed to the outlets and switches when installing gaskets, for safety.



2.3 Picture 6


2.4 EXTERIOR AIR SEALING

Energy Recommendation

-  (1) Clean out the build up of lint in the outside clothes dryer exhaust. This will prevent air penetration into the dryer area.



2.4 Picture 1

-  (2) The cat door is significantly contributing to the air leakage present in the home. I would recommend you investigate a better insulated and weatherstripped door flap for the cat door. Visit the following for one possible option:

<http://www.dogdoors.com/cgi/smart.cgi?command=listitems&type=group&group=best>



2.4 Picture 2

2.5 DOORS (REPRESENTATIVE NUMBER)

Energy Recommendation


- 🏠 Update the weatherstripping on the front door and patio sliding door to prevent air leakage and heat loss.



2.5 Picture 1

2.6 DUCT SEALING

Energy Recommendation

-  **Duct Leakage:** during the blower door test, there was a significant amount of air infiltration coming through the return registers in the upper level of the home. This indicates that outside air is penetrating the return duct system and that the ducts need to be sealed. When outside air is penetrating the return system, the efficiency of the furnace is reduced, and the furnace needs to work harder than necessary. The leakage is most likely in the attic or in the wall cavity where the returns are run. An HVAC contractor will need to investigate further and determine where the leakage is occurring, and seal these areas.



2.6 Picture 1

2.7 DUCT SEALING AROUND REGISTERS

Inspected - Appears Functional

3. Windows

DESCRIPTION:

Window Types:

Double-hung

OBSERVATIONS & RECOMMENDATIONS:

3.0 WINDOWS

Energy Recommendation

Most of the windows on your home have air leakage around the edges of them. I would recommend you consider repairing the weatherstripping on the windows. The following article has a section on windows, and discusses repair versus replacement;

https://rmi.org/images/PDFs/HEBs/E04-11_HEB1_Building.pdf



3.0 Picture 1

3.1 SKYLIGHTS

Inspected - Appears Functional

4. Heating System

The following components were observed and inspected. A description of the area materials and styles is included, and any observations and/or recommendations are listed.

DESCRIPTION:

Primary Heating System:

Forced Air

Number of Heat Systems (excluding wood):

One

Filter Size:

16x25

Heat System Brand:

RHEEM

Approximate Age:

<5 years old

Types of Fireplaces:

Vented gas logs

Energy Source:

Propane

Filter Type:

Disposable

Operable Fireplaces:

One

OBSERVATIONS & RECOMMENDATIONS:

4.0 HEATING EQUIPMENT

Energy Recommendation

- 🏠 The furnace operational performance was tested with a Combustion Safety Analyzer, to determine how efficiently the unit is running. While your furnace is an +80% efficient unit, the actual performance was measured at 65%. This indicates that your furnace needs to be serviced and adjusted. I recommend an HVAC contractor come in before the next heating season, to performance a tune-up, cleaning and adjustment of your furnace system.



4.0 Picture 1

4.1 THERMOSTAT

Energy Recommendation

- 🏠 The thermostat is old and out-dated and should be replaced. A four-time-zone set-back thermostat would increase system efficiency and reduce heating/cooling costs. For more information visit: http://www.energystar.gov/index.cfm?c=thermostats.pr_thermostats

4.2 AUTOMATIC SAFETY CONTROLS

Inspected - Appears Functional

4.3 GAS LEAK TESTING

Inspected - Appears Functional

4.4 DISTRIBUTION SYSTEMS (including fans, pumps, ducts and piping, duct supports, insulation, air filters, registers, radiators, fan coil units and convectors)

Energy Recommendation

- 🏠 The disposable filter is dirty. The filter needs to be replaced.



4.4 Picture 1

4.5 CHIMNEYS, FLUES AND VENTS

Inspected - Appears Functional

4.6 FIREPLACES, GAS/LP FIRELOGS, SOLID-FUEL FIREPLACES, WOODSTOVE

Inspected - Appears Functional

4.7 FIREPLACE AIR SEALING

Energy Recommendation

- 🏠 Air seal around the outside edges of the fireplace trim with appropriate caulking. There is a considerable amount of air leakage around this area.



4.7 Picture 1

HVAC equipment can fail at any time without warning. Regular service is important for efficient operation and to achieve maximum life from equipment; most manufacturers recommend annual service.

5. Air Conditioning System

The following components were observed and inspected. A description of the area materials and styles is included, and any observations and/or recommendations are listed.

DESCRIPTION:

Central Air Manufacturer:

GOODMAN

Approximate Age:

<5 years old

Number of AC Only Units:

One

Equipment Type:

Air conditioner unit

Operating Characteristics:

Air-to-air system

Energy Source:

Electricity

OBSERVATIONS & RECOMMENDATIONS:

5.0 COOLING AND AIR HANDLER EQUIPMENT

Energy Recommendation

- 🏠 Ensure that any vegetation and/or leaves be cleaned from around the outside of the compressor, to allow for optimum performance. Also, the AC unit is older and the coolant level may be low and may need re-charged. I recommend an HVAC contractor perform a tune up of your AC system, to optimize performance and efficiency.



5.0 Picture 1

5.1 NORMAL OPERATING CONTROLS

Inspected - Appears Functional

5.2 DISTRIBUTION SYSTEMS (including fans, pumps, ducts and piping, duct supports, insulation, air filters, registers, and fan coil units)

Inspected - Appears Functional

HVAC equipment can fail at any time without warning. Regular service is important for efficient operation and to achieve maximum life from equipment; most manufacturers recommend annual service.

6. Hot Water and Plumbing System

The following components were observed and inspected. A description of the area materials and styles is included, and any observations and/or recommendations are listed.

DESCRIPTION:

Water Heater Power Source:

Gas

Water Heater Capacity:

(2) 40 Gallon

Manufacturer:

RHEEM

Approximate Age:

<5 years old

OBSERVATIONS & RECOMMENDATIONS:

6.0 HOT WATER SYSTEMS, CONTROLS, CHIMNEYS, FLUES AND VENTS

Inspected - Appears Functional

6.1 WATER HEATER INSULATING BLANKET

Energy Recommendation

- 🏠 Consider installing an insulating blanket on the hot water heater, which will help reduce energy use and ambient losses.



6.1 Picture 1

6.2 TEMPERATURE OF HOT WATER (nominal setting = 120 F)

Energy Recommendation

- 🏠 Temp Setting: the water heater setting is too high and your water temp measured 135F. Optimum setting should be 115-120F. This is causing excessive energy use from the water heater. The set point was reduced during the audit.

6.3 FIXTURES & FAUCETS

Energy Recommendation

- 🏠 For water savings, consider changing your shower heads to low flow type.



6.3 Picture 1

6.4 TOILETS & BIDETS

Energy Recommendation

- 🏠 For water savings, consider replacing the hall bathroom toilet with a low flush, maximum 1.6 GPF rated.



6.4 Picture 1

6.5 DRAIN WATER HEAT RECOVERY DEVICE

Energy Recommendation

- 🏠 Your home would be a good candidate for installing a plumbing drain water "Heat Recovery Device". These devices capture heat from drained hot water in showers, sinks, etc, and use this heat captured to warm the cold water supply into these areas. This reduces the hot water use from the water heater, and saves energy costs.

The addition of these devices is relatively easy. One company that has these units is; <http://gfxtechnology.com/>

Concealed pipes within walls, floors and ceilings or that are buried below soil cannot be evaluated.

7. Electrical System and Safety Tests

The following components were observed and inspected. A description of the area materials and styles is included, and any observations and/or recommendations are listed.

DESCRIPTION:

Panel Type:

Circuit breakers

Electric Panel Manufacturer:

CUTLER HAMMER

Branch wire 15 and 20 AMP:

Copper

Wiring Methods:

Non-Metallic Sheathed

Smoke Detectors:

Present

OBSERVATIONS & RECOMMENDATIONS:

7.0 ENERGY EFFICIENT LIGHTING

Energy Recommendation

Energy-Efficient Lighting Options

There are many readily available alternatives to conventional incandescent lighting. Compact fluorescent light bulbs use only one-third the electricity consumed by incandescent bulbs, yet last up to thirteen times longer. They produce less heat, are available in warm colors, and can be screwed into your existing light fixtures. While they cost more initially, their energy savings and long-life saves money in the long run. To make your homes lighting even more energy efficient, consider installing hardwired fluorescent lights in your study or den and in your kitchen.

If you have outside lights, you may wish to consider putting them on a sensor so that they only go on when someone approaches the house.

For more information about lighting options visit;

https://rmi.org/images/PDFs/HEBs/E04-12_HEB2_Lighting.pdf

http://www.energystar.gov/index.cfm?c=cfls_pr_cfls

7.1 ELECTRICAL PANEL IR SCANNING

Inspected - Appears Functional

7.2 RECEPTACLE OPERATION (POLARITY, GROUNDING, AND LOAD TESTING)

Inspected - Appears Functional


Several random electrical outlets in your home where tested for stress and safety, with measurements made with a specialty meter to determine if any hazardous wiring conditions exist. If this condition were to exist, it may be causing higher electrical use, as well as presenting a hazardous, un-safe condition. All of the outlets measured exhibited a voltage drop when loaded of less than the recommended 5% threshold. No actions are needed - this is noted for your information.



7.2 Picture 1

7.3 SMOKE DETECTORS AND CO DETECTORS

Energy Recommendation

 Smoke detectors are installed, but for safety, consider installing a CO detector on the main level of the home.

The hidden nature of the electrical system prevents inspection of many components. Repairs should be made by a qualified licensed electrician.

8. Appliance Review

The following components were observed and inspected. A description of the area materials and styles is included, and any observations and/or recommendations are listed.

DESCRIPTION:

Refrigerator:
GENERAL ELECTRIC

Dishwasher Brand:
GENERAL ELECTRIC

Range/Oven:
GENERAL ELECTRIC


Built in Microwave:
GENERAL ELECTRIC

Washer/Dryer:
GENERAL ELECTRIC

OBSERVATIONS & RECOMMENDATIONS:

8.0 REFRIGERATOR

Energy Recommendation

-  Your refrigerator power consumption was measured, and is consuming approximately 50 kWh per month, or approximately 600 kWh per year. This is about 2-3 times more energy than a newer Energy Star refrigerator. Consider replacement when possible. In the meantime, regularly clean the refrigerator condenser coils beneath or behind the unit to ensure optimum efficiency is gained from your current unit.



8.0 Picture 1

8.1 DISHWASHER

Inspected - Appears Functional

8.2 RANGES/OVENS/COOKTOPS

Inspected - Appears Functional

8.3 MICROWAVE COOKING EQUIPMENT

Inspected - Appears Functional

8.4 CLOTHES WASHER/DRYER

Inspected - Appears Functional

