



Residential Energy Report

Prepared For:
Ed Smith

Property Address:
111 Maple Ave.
Sample City, NY 12345



American Home Inspections

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Date: 2/6/2007	Time: 2:00 PM	Report ID: Residential Energy
Property: 111 Maple Ave. Sample City, NY 12345	Customer: Ed Smith	Real Estate Professional:

Comment Key or Definitions

The following definitions of comment descriptions represent this inspection report. All comments by the inspector should be considered before purchasing this home. Any recommendations by the inspector to repair or replace suggests a second opinion or further inspection by a qualified contractor. All costs associated with further inspection fees and repair or replacement of item, component or unit should be considered before you purchase the property.

Inspected (IN) = I visually observed the item, component or unit and if no other comments were made then it appeared to be functioning as intended allowing for normal wear and tear.

Not Inspected (NI)= I did not inspect this item, component or unit and made no representations of whether or not it was functioning as intended and will state a reason for not inspecting.

Not Present (NP) = This item, component or unit is not in this home or building.

Repair or Replace (RR) = The item, component or unit is not functioning as intended or needs further inspection by a qualified contractor. Items, components or units that can be repaired to satisfactory condition may not need replacement.

Style of Home:
Colonial

Age Of Home:
Over 25 Years

Client Is Present:
Yes

Number of Stories:
Two

Interior Temperature:
65 to 70 Degrees F.

Weather:
Clear

Exterior Temperature:
30 to 35 Degrees F

Wind:
Light

Building Envelope and Environment

The home inspector shall observe: Roof covering; Roof drainage systems; Flashings; Skylights, chimneys, and roof penetrations; and Signs of leaks or abnormal condensation on building components. The home inspector shall: Describe the type of roof covering materials; and Report the methods used to observe the roofing. The home inspector is not required to: Walk on the roofing; or Observe attached accessories including but not limited to solar systems, antennae, and lightning arrestors.

		IN	NI	NP	RR	Styles & Materials
1.0	EXTERIOR CLADDING AND TRIM	X				SIDING STYLE: LAP
1.1	FOUNDATION	X				SIDING MATERIAL: VINYL
1.2	WINDOWS (Exterior)	X				TRIM: VINYL
1.3	DOORS (Exterior)	X				FOUNDATION: MASONRY BLOCK
1.4	EXTERIOR INTEGRITY	X				UNCONDITIONED SPACES: ATTIC CRAWLSPACE UTILITY ROOM
1.5	UNCONDITIONED SPACES	X				
1.6	WIND EXPOSURE	X				

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ROOF-TYPE:
GABLE
COMBINATION

WIND EXPOSURE:
LOW

WIND SHIELDING:
DECIDUOUS (SEASONAL COVER)
EVERGREEN (CONTINUOUS SHIELDING)

Comments:

1.6 The topography contains several medium to large trees which appear to offer some protection from wind.

The roof of the home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. Roof coverings and skylights can appear to be leak proof during inspection and weather conditions. Our inspection makes an attempt to find a leak but sometimes cannot. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

Interior Conditioned Spaces

		IN	NI	NP	RR	Styles & Materials
2.0	CEILING	X			X	CEILING MATERIALS: SHEETROCK
2.1	WALLS	X				WALL MATERIAL: SHEETROCK
2.2	FLOORS	X			X	FLOOR COVERING(S): AREA RUGS(S) CARPET
2.3	ELECTRICAL FIXTURES, OUTLETS, AND SWITCHES	X			X	HARDWOOD T&G CERAMIC TILE
2.4	WINDOWS	X			X	WINDOW TYPES: THERMAL/INSULATED DOUBLE-HUNG
2.5	DOORS	X			X	VENTILATION EQUIPMENT: DRYER VENT VENTED RANGEHOOD BATHROOM FANS
2.6	VENT EQUIPMENT	X			X	
2.7	ATTIC/CRAWLSPACE ACCESS	X			X	
2.8	PLUMBING AND OTHER UTILITY ENTRANCES	X			X	
2.9	CABINETS AND SOFFITS	X			X	

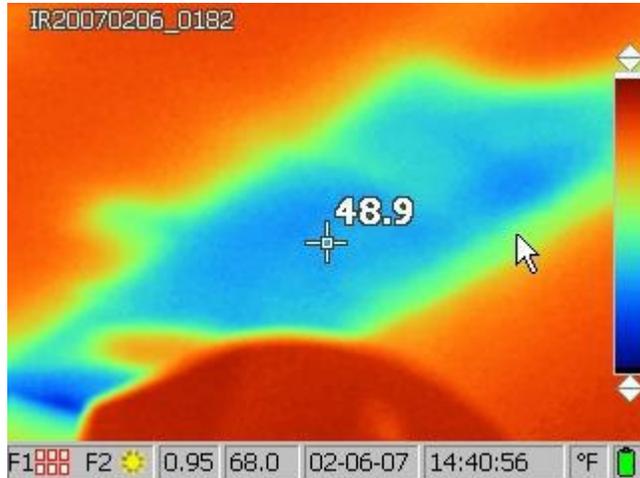
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ATTIC INFO:
SCUTTLE HOLE
KNEE-WALL STORAGE

CRAWLSPACE INFO:
DIRT FLOOR
COVERED WITH PLASTIC

Comments:

2.0 There were signs of insulation voids at the ceiling of the sunroom by near the utility door.(Picture 1) (Picture 2) The void was relatively small, but you may wish to better insulate it.

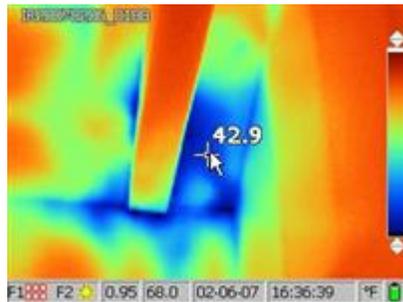


2.0 Picture 1

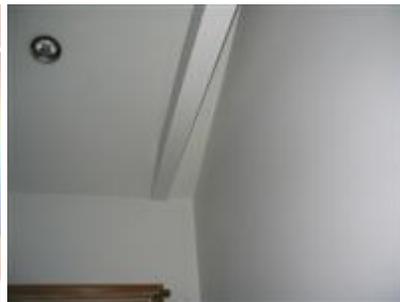


2.0 Picture 2

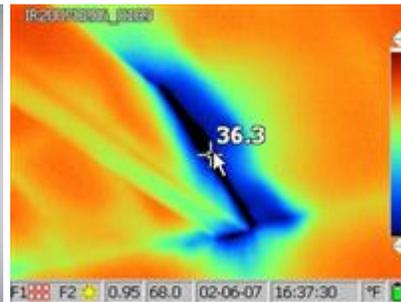
Lateral brace beams in the master bedroom had gaps where they met the ceiling and were allowing some air infiltration. I recommend these areas be better sealed with a flexible caulk to allow for seasonal expansion and contraction of the wood.



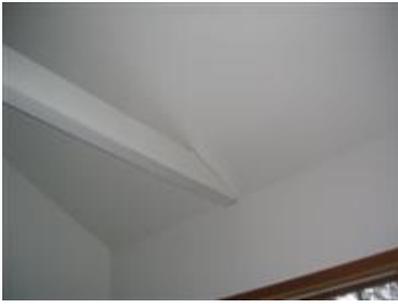
2.0 Picture 3



2.0 Picture 4



2.0 Picture 5



2.0 Picture 6

2.2 Many of the floor/wall junctions in the closets had no trim and leaked air during the blower door testing. (Picture 1) (Picture 2) (Picture 3) I recommend they be caulked/sealed.

There was also a gap seen on the right side of the fireplace along the wall at the floor. It should be sealed. (Picture 4)



2.2 Picture 1



2.2 Picture 2

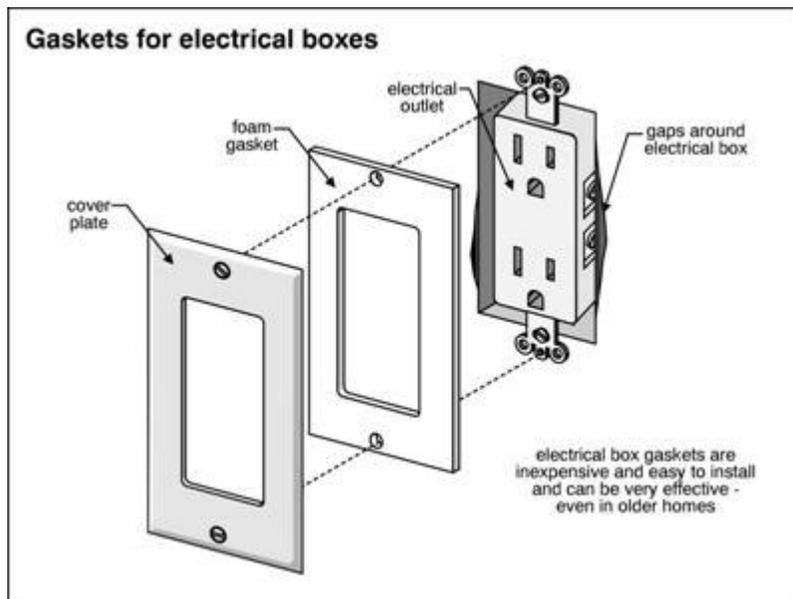


2.2 Picture 3



2.2 Picture 4

2.3 Most if not all of the electrical outlets on the exterior walls of the entire home showed significant air leaks when the home was tested. I recommend that each exterior wall outlet and switch have a gasket installed. Child-proof outlet plug-in caps may also help control drafts from unused plugs.



2.3 Picture 1

High-hat lighting was a source of air infiltration during the blower door testing. There is little that can be done about this type of air leakage without replacing the lights with sealed units.

2.4 Some thermal bridging seen at the top of the green guest bedroom window at the rear wall (Picture 1). There also appeared to be a slight void in the insulation adjacent to the window on the right side. You may wish to inject some expanding foam into this area to compensate.

The bottom of your daughter's playroom/bedroom windows also showed some thermal bridging. (Picture 2) There is little that can be done about this other than to add heavy drapes that might deflect the heat sink effect away from the headboard of the bed in this room.

Overall, virtually all the windows had good operating seals and there was little air infiltration from them. The trim wood around the windows did allow some cold air infiltration and you may want to add silicone caulk to the cracks and separations where the trim wood meets the walls. This was particularly noticeable at the sunburst windows.



2.4 Picture 1



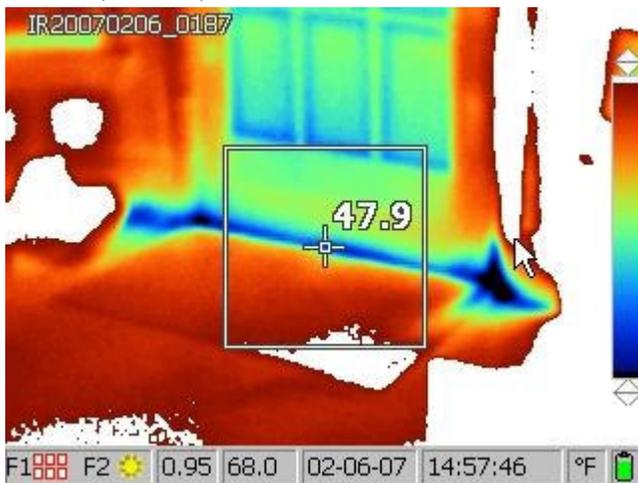
2.4 Picture 2

2.5 Door to boiler room/utility area was a significant source of air infiltration during the blower door test. I recommend a threshold and gasketing be installed.

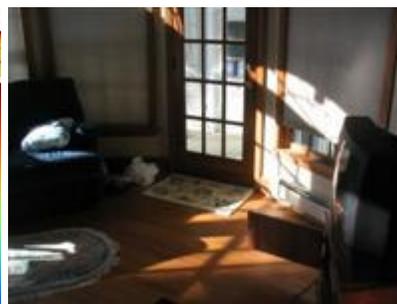
The main entry door was also leaking air when it was closed but not latched. You may wish to adjust the strike plate so that it draws the door against its gasket more securely.

Doors in the sunroom were also leaking air at their bottoms. (Picture 1) (Picture 2) Replacement or adjustment of the thresholds are recommended. The double doors also leaked where they met in the middle. (Picture 3)

Stack effect in the home is going to make the air leaks in the sunroom a particularly noticeable and a significant comfort concern. (Picture 4)



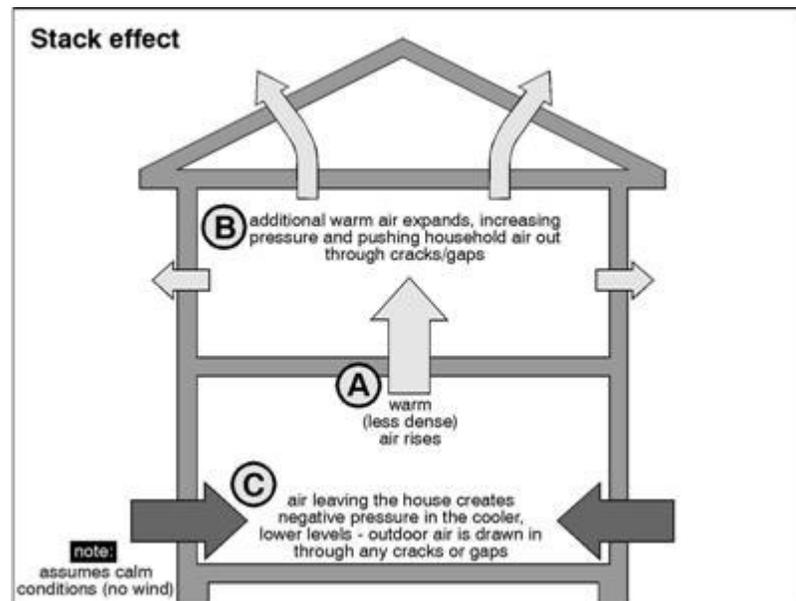
2.5 Picture 1



2.5 Picture 2



2.5 Picture 3



2.5 Picture 4

Door trim was missing from the interior of some of the closets. There was air leakage coming in around these areas. Recommend they be caulked.

2.6 Vent fans in bathrooms tended to leak air into the residence during the blower door test. These fans may have loose flaps which do not adequately halt airflow when not in use. There is typically little that can be done about these but if you discover that they become a comfort problem you may wish to replace them with better sealed units.

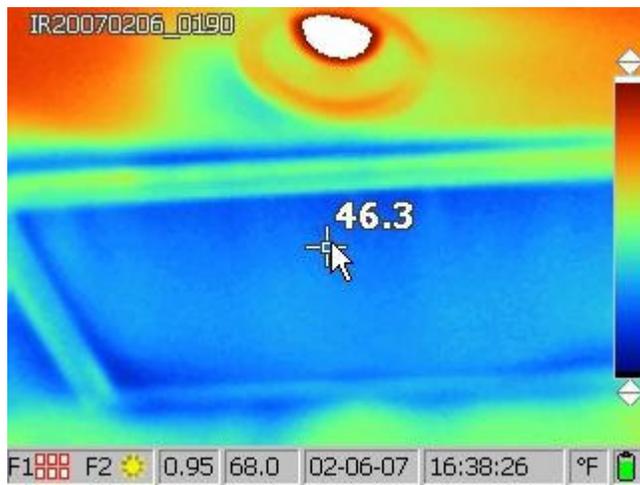
Vent chase for range vent system was leaking air and could be better sealed. (Picture 1)



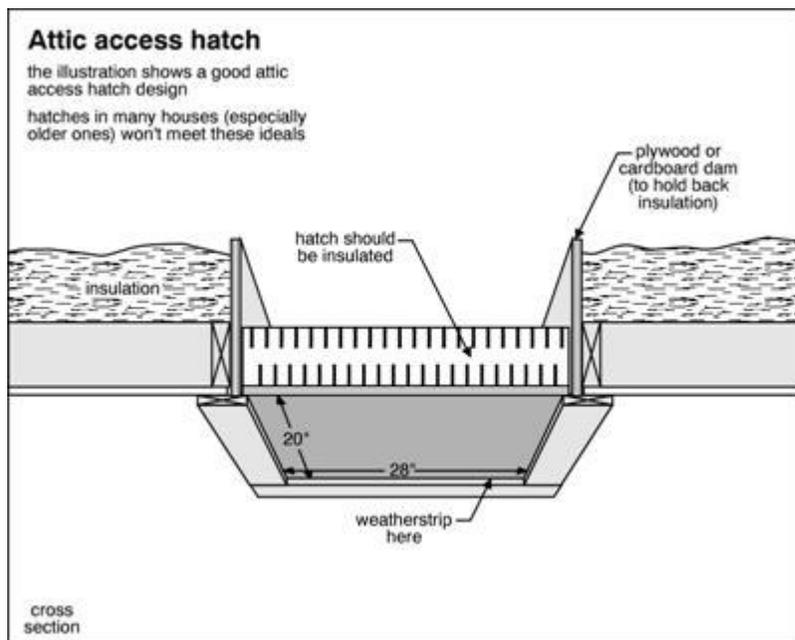
2.6 Picture 1

2.7 Attic scuttle hole leaks air and had no insulation. Recommend properly insulating and sealing it. It was a major source of air leaks during the blower door test. (Picture 1)

Knee-wall storage access doors in the bedroom were significant sources of air infiltration during the blower test. (Picture 3) (Picture 4) The doors should be better sealed and you should consider using rigid foam insulation on their backs to help reduce heat loss.



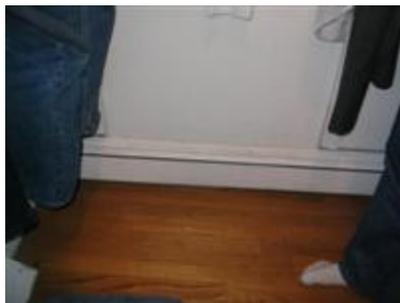
2.7 Picture 1



2.7 Picture 2



2.7 Picture 3



2.7 Picture 4

2.8 Wall penetrations for the waste pipe lines under the kitchen and bathroom sinks were a source of air leakage. (Picture 1) (Picture 2) I recommend they be sealed with expanding foam.



2.8 Picture 1



2.8 Picture 2

A pipe passing through one closet could be better sealed through its penetration points.



2.8 Picture 3

2.9 The ceiling behind the refrigerator inset area was open and a major source of air infiltration during the blower door test. I recommend the ceiling area be properly covered over.



2.9 Picture 1

Insulation and Ventilation

		IN	NI	NP	RR	Styles & Materials
3.0	ATTIC / LOFT INSULATION	X				ATTIC INSULATION: BATT FIBERGLASS
3.1	BASEMENT/CRAWLSPACE INSULATION	X				METHOD USED TO OBSERVE ATTIC: CRAWLED
3.2	WALL CAVITIES	X				ATTIC R-VALUE: R-19 OR BETTER
3.3	FLOOR INSULATION	X				BASEMENT/CRAWLSPACE INSULATION: BATT FIBERGLASS
3.4	ATTIC VENTILATION	X				BASEMENT/CRAWL R- VALUE: R-19 OR BETTER

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ATTIC VENTILATION:
RIDGE VENTS
SOFFIT VENTS

Comments:

3.0 The attic storage area had a reasonable amount of insulation. The insulation in the cathedral ceilings could not be measured but IR analysis showed that ceiling temperatures were fairly homogenous and there were no signs of significant insulation settlement or voids.

3.1 Per the original realty inspection, some of the crawlspace insulation was sagging and there were voids in some areas. I recommend that the insulation be better attached. You may wish to secure the insulation in place by covering it with moisture-permeable house wrap or even poultry netting.

3.3 See section 3.1.

Heating and Cooling Systems

The home inspector shall observe permanently installed heating systems including: Heating equipment; Normal operating controls; Automatic safety controls; Chimneys, flues, and vents, where readily visible; Solid fuel heating devices; Heat distribution systems including fans, pumps, ducts and piping, with supports, insulation, air filters, registers, radiators, fan coil units, convectors; and the presence of an installed heat source in each room. The home inspector shall describe: Energy source; and Heating equipment and distribution type. The home inspector shall operate the systems using normal operating controls. The home inspector shall open readily openable access panels provided by the manufacturer or installer for routine homeowner maintenance. The home inspector is not required to: Operate heating systems when weather conditions or other circumstances may cause equipment damage; Operate automatic safety controls; Ignite or extinguish solid fuel fires; or Observe: The interior of flues; Fireplace insert flue connections; Humidifiers; Electronic air filters; or The uniformity or adequacy of heat supply to the various rooms.

		IN	NI	NP	RR	Styles & Materials
4.0	HEATING EQUIPMENT	X				ENERGY SOURCE: GAS
4.1	COOLING EQUIPMENT	X				HEAT TYPE: AGED CIRCULATING BOILER
4.2	CHIMNEYS, FLUES AND VENTS	X				
4.3	SOLID FUEL HEATING DEVICES	X			X	NUMBER OF HEAT SYSTEMS (excluding wood): ONE
4.4	GAS/LP FIRELOGS AND FIREPLACES			X		HEAT SYSTEM BRAND: THERMODYNAMICS
4.5	HEAT AND COOLING DISTRIBUTION PIPING/DUCTWORK/REGISTERS	X			X	

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IN NI NP RR DUCTWORK:
N/A

TYPES OF FIREPLACES:
CONVENTIONAL

OPERABLE FIREPLACES:
ONE

NUMBER OF WOODSTOVES:
NONE

Comments:

4.0 The system was aged and overdue for servicing (3+ years). Efficiency was measured at 72%.

4.1 The through-wall air conditioner appeared to be relatively well sealed. (Picture 1)



4.1 Picture 1

4.3 No obvious signs of problems were noted with the fireplace and its damper closed securely. I recommend that if it has not been done recently, you have the chimney cleaned and serviced/repaired by a qualified chimney sweep if you plan to put it into service.

There was an air gap noted where the hearth stones met the flooring. You may wish to better seal this gap.



4.3 Picture 1

4.5 Duct by front sliding door leaked some air. You may wish to better seal or gasket this register.



4.5 Picture 1

The heating system of this home was inspected and reported on with the above information. While the inspector makes every effort to find all areas of concern, some areas can go unnoticed. The inspection is not meant to be technically exhaustive. The inspection does not involve removal and inspection behind service door or dismantling that would otherwise reveal something only a licensed heat contractor would discover. Please be aware that the inspector has your best interest in mind. Any repair items mentioned in this report should be considered before purchase. It is recommended that qualified contractors be used in your further inspection or repair issues as it relates to the comments in this inspection report.

Blower Door Test Data

		IN	NI	NP	RR
5.0	Test Results	X			
		IN	NI	NP	RR

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Comments:**5.0 HOW MUCH AIR LEAKAGE DO YOU NEED FOR GOOD VENTILATION?**

For basic ventilation, your home needs about 1.02 square feet of air leakage.

This is like keeping a 24 inch wide window open 6.17 inches

The recommended basic ventilation would exchange the air in your home with fresh outside air 8.4 times every day.

HOW MUCH LEAKAGE DID THE BLOWER DOOR TEST MEASURE?

We measured a total of 3.36 square feet of leakage in your home.

This is like keeping a 24 inch wide window open 20.1 inches all year round.

It is also the same as a 1 inch gap 40.3 feet long.

This amount of leakage replaces your home's air with unconditioned outside air an average of 27.4 times every day. You are paying to heat or cool 19.0 extra house volumes of air each day, unnecessarily.

Reducing excess air infiltration lowers heating and cooling costs. Most homeowners notice improved comfort, less winter drafts, and better indoor humidity control.

Outdoor irritants such as dust, pollen, mold spores, insects and outdoor noise are less able to enter the home.

Air loss in this home was excessive to the extreme. The 5500 CFM air blower fan was not capable of depressurizing the home below 37 Pascals.

The largest air loss areas were in the ceiling behind the refrigerator and in the master bedroom at the knee-wall storage doors. While I recommend that you heed all recommendations set forth in this report, if you were to perform no other remediation activities besides sealing these aforementioned areas you would cut the majority of your infiltration losses.

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