

PRODUCT LIABILITY LAW ON GAS APPLIANCES

ASGE NATIONAL CONFERENCE
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We Will Cover:

- The most common claims made against gas appliance manufacturers
 - Failure to warn
 - Design defects
 - Manufacturing flaws
- The legal elements of these claims
- How gas appliance manufacturers can defend themselves to win their cases

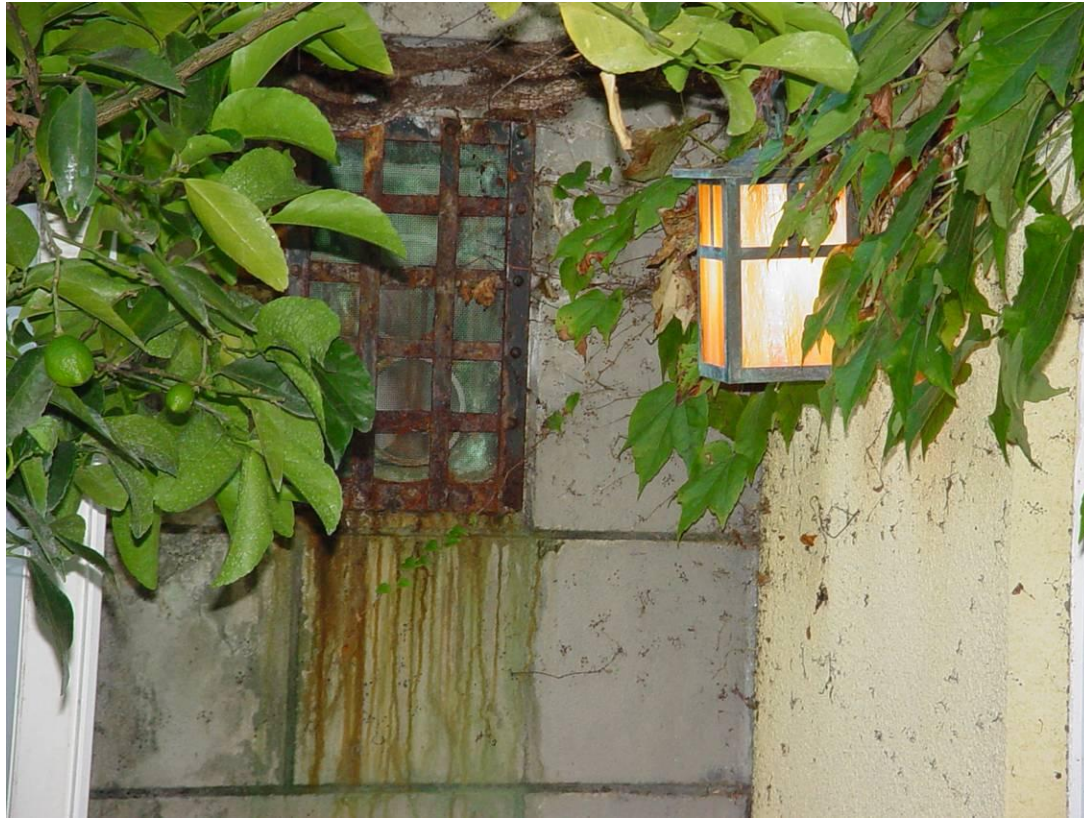
BRIAN'S MAXIM:

**THE CAUSE OF ALL ACCIDENTS IS
IMPROPER INSTALLATION OR
MAINTENANCE**

Vent in Basement



Vent Terminates Inside Basement



Improper Vent Height With Snow Block



Improper Vent Height



Poor Exhaust Vent Sealing



Improper Vent Hole Size



No Maintenance



Bulb

No Maintenance: Corroded Temperature Control



No Maintenance: Header Corrosion



Header Corrosion



Home Fire



Jumpered Flame Roll Out Switch



Jumpered Flame Roll Out Switch



PRISON FOR INSTALLERS

theguardian

Gas fitter jailed for manslaughter after carbon monoxide death

Judge jails Andrew Hartley for three years after his botched job on boiler resulted in the death of a 24-year-old woman

Steven Morris

guardian.co.uk, Tuesday 17 April 2012 09.54 EDT

[Article history](#)

PRISON FOR INSTALLERS



Judge drops criminal cases in Aspen carbon monoxide fatalities

Rules that statute of limitations had expired

[Rick Carroll](#)

The Aspen Times

Aspen, CO, Colorado

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Friday, November 4, 2011

If Installation/Maintenance Errors are the True Cause of Accidents . . .

Then why do gas appliance manufacturers get sued for product liability?

-
- Answer: \$\$\$
 - Installers and maintenance companies always carry low insurance limits
 - OR
 - No insurance at all
 - Gas appliance manufacturers are viewed as “Deep Pockets”

FAILURE TO WARN CLAIMS

Claim: Failure to Warn and/or Instruct

- The most common claim against gas appliance manufacturers
- Claim: The installer/maintainer's errors were caused by the manufacturer's failure to warn/instruct
- Involves:
 - “On product” warnings
 - User manuals
 - Packaging Language
 - Website Content

Failure to Warn/Instruct

- A manufacturer has a legal duty to provide adequate warnings and instructions.
- If a jury finds inadequate warnings/instructions, then the manufacturer pays the damages.

The Law on Failure to Warn/Instruct

- “A manufacturer has a duty to provide **reasonably adequate** warnings or instructions for its products to those who use the product when the product:
 - Is **used as intended**, or
 - Is **used in a way** that the manufacturer could **reasonably** have **anticipated**.”

The Law on Adequacy of Warnings/Instructions

- “A manufacturer must keep up with scientific knowledge and advances in the field.
- A manufacturer’s duty to provide reasonably adequate warnings and instructions must be judged according to the **scientific knowledge** and advances that **existed at the time** the product was **designed**.”

Law on Failure to Warn/Instruct

- “In deciding whether the manufacturer’s warnings or instructions were reasonably adequate, consider all the **facts** and circumstances, including, among others:
 - The **likelihood** that **harm would result** from use of the product;
 - The **seriousness of the harm** that would result;
 - The **cost and ease** of providing warnings and instructions that would avoid the harm;
 - Whether the warnings and instructions are in a form the ordinary user could **reasonably be expected to notice and understand**;
 - Whether the manufacturer considered the **scientific knowledge and advances** in the field;”

Law on Failure to Warn/Instruct (*continued*)

- “A product that is not accompanied by reasonably adequate warnings and instructions **is unreasonably dangerous** to whomever uses or is affected by the product.
- The product must be **reasonably safe** for use if the warnings and instructions are followed.”

Law on Failure to Warn/Instruct *(continued)*

- Jury decides if warnings and instructions had to be provided.
 - “A manufacturer has a duty to use reasonable care in deciding **whether to warn** of dangers involved in using its product and to provide instructions for safe use of the product.”
- Jury decides reasonable care.
 - ‘Reasonable care’ is the standard of care you would expect a **reasonable person** to follow in the **same or similar circumstances**.
 - You must decide if a manufacturer using reasonable care **would have provided warnings** and instructions for the safe use of the product.”

Law on Failure to Warn/Instruct *(continued)*

- Jury Verdict Questions:

- Was the product in a defective condition unreasonably dangerous to the user because manufacturer failed to provide adequate warnings or instructions for the safe use of the product?

Yes or No

- *If your answer to Question 3 was “Yes,” then answer this question:* Was the defective condition a direct cause of the damages sustained by the plaintiff?

Yes or No

REAL EXAMPLES OF FAILURE TO WARN CLAIMS

Propane Supplied to Natural Gas Heater

ANSI Z21.56-2001
CSA 4.7-2001

LT™*

FOR YOUR SAFETY
Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

THIS HEATER EQUIPPED TO BURN **NATURAL** GAS

INPUT RATE [MAX.] 399,000 BTU/HR

MINIMUM THERMAL EFFICIENCY 78 PERCENT
MINIMUM CLEARANCE FROM COMBUSTIBLE CONSTRUCTION
4 INCHES SIDE, 4 INCHES REAR, 39 INCHES TOP (FOR INDOOR INSTALLATION)**

DO NOT INSTALL THIS HEATER UNDER AN OVERHANG LESS THAN 3" (914MM) FROM TOP. THE AREA UNDER THE OVERHANG MUST BE OPEN ON THREE SIDES.**

THIS HEATER MUST BE INSTALLED AT LEAST 5 FEET FROM THE INSIDE WALL OF A POOL UNLESS SEPARATED FROM THE POOL BY A SOLID FENCE, WALL OR OTHER PERMANENT SOLID BARRIER.

FOR OUTDOOR OPERATION IN AMBIENT TEMPERATURES DOWN TO 15°F (-9°C)
FOR INDOOR OR OUTDOOR INSTALLATION.

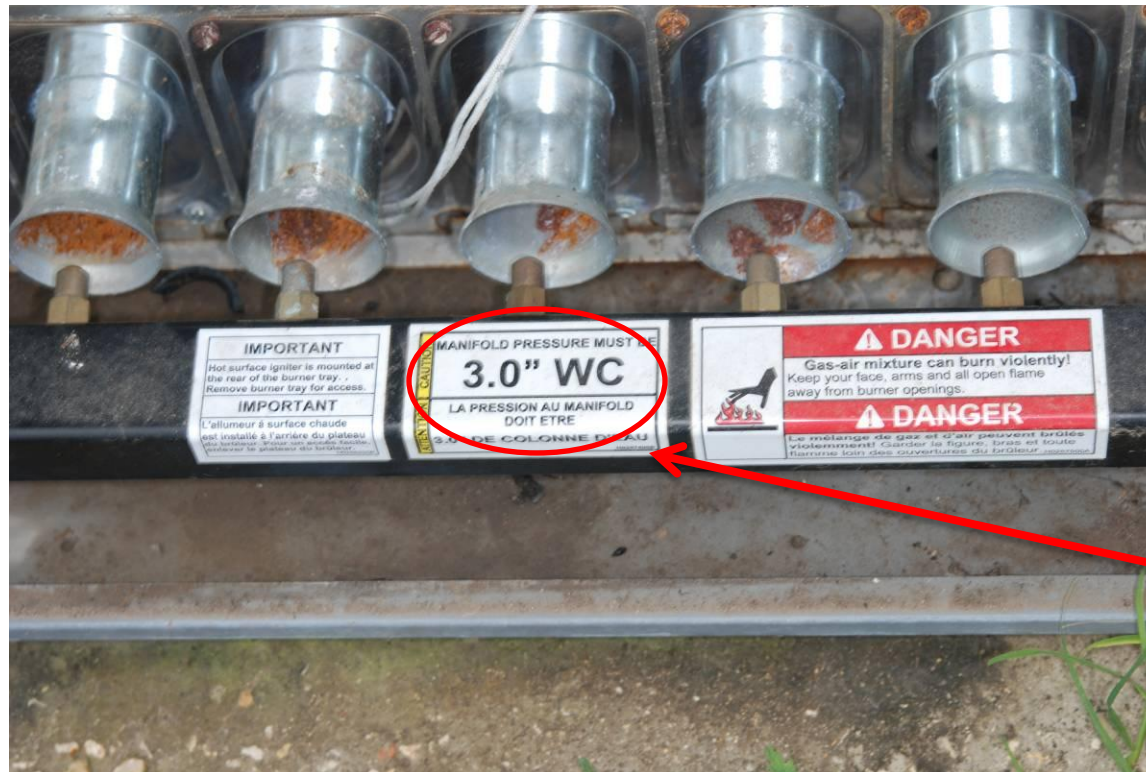
INDOOR INSTALLATION WITH COLLAR ADAPTER NO. R0331405

AW NO. 11018300B

POUR VOTRE SECURITE
Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables à proximité

Natural Gas

Specified Propane Manifold Pressure



Natural Gas
Pressure

Gas Valve for Propane

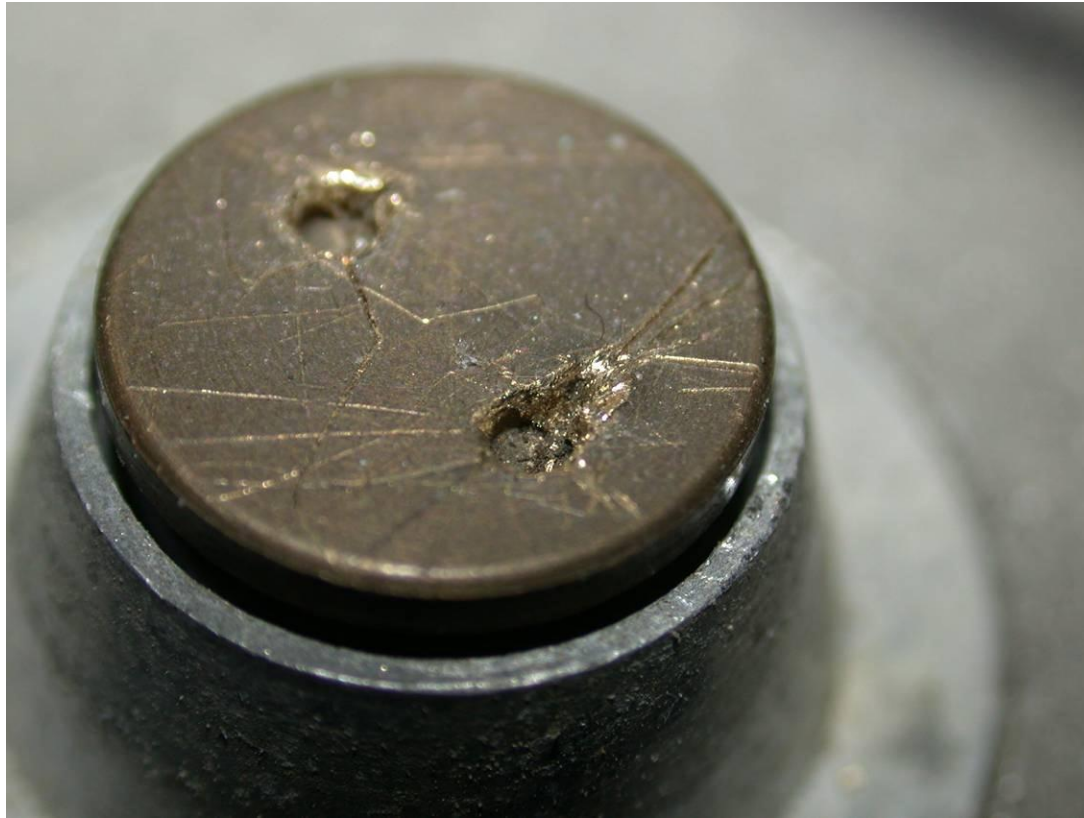


Propane Sticker on
Valve

Misadjusted Negative Pressure Gas Valve



Adjustment Screw on Gas Valve



Plex Vent Piping After Backfire



Stupid Warnings



On a bicycle -- "Removing the wheel can influence the performance of the bicycle."



On a toilet brush -- "Do not use for personal hygiene."



On washing machine -- "Do not put any person in this washer."

Stupid Warnings *(continued)*



On car sun shield-- "Do not drive with shield in place."



On a Sears hairdryer -- "Do not use while sleeping."



On electric cattle prod -- "For use on animals only."

Stupid Warnings *(continued)*



On packaging for a Rowenta iron -- "Do not iron clothes on body."



On Nytol Sleep Aid -- "Warning: May cause drowsiness."



On a Swedish Chainsaw -- "Do not attempt to stop chainsaw with your hands or genitals."

Defending Yourself from Warning/Instruction Claims

- Prove: Strict compliance with ANSI/CSA standards
 - ANSI/CGA product line certifications always include warnings and instructions.
- Prove: Strict compliance with ANSI Z 535 standard on warnings
- Prove: No other gas appliance manufacturer provides such warnings/instructions – not the standard of care.

Defending Yourself from Warning/Instruction Claims

- Prove: The current warnings/instructions were not read – the “read and heed” rule.
- Prove: No accident if current warnings/instructions were followed.
- Prove: “Clutter”
- Qualified expert witness on warnings and instructions to testify at trial.

DESIGN DEFECT CLAIMS

Claim: Design Defect

- The second most common claim against appliance manufacturers.
- An alternative design would have corrected the installer/maintainer's installation and maintenance errors.
- Asking you to design for the specific accident scenario and to account for misuse of the product.

Law on Design Defect

- “A manufacturer has a duty to use reasonable care to design a product that is **not unreasonably dangerous** to users exposed to the product when the product:
 - Is used **as intended**, or
 - Is **used** in a way that the manufacturer could **reasonably have anticipated**.”

Law on Design Defect *(continued)*

- The jury evaluates the manufacturer's design choices.
 - “A manufacturer must keep up with **scientific knowledge** and advances in the field.
 - A manufacturer's duty to design products must be judged according to the **knowledge and advances** that existed at the **time the product was designed.**”

Law on Design Defect *(continued)*

- “In deciding whether a manufacturer’s design choices resulted in a product that was in a defective condition unreasonably dangerous to those who use the product, consider all the facts and circumstances, including:
 - The **danger** presented by the product;
 - The **likelihood that harm** will result from use of the product;
 - The **seriousness** of the harm;
 - The **cost and ease** of taking effective precautions to avoid that harm;
 - Whether the manufacturer considered the **scientific knowledge** and advances in the field;”

Law on Design Defect *(continued)*

- Jury Verdict Question:
 - Did the manufacturer’s design result in a product that was in a defective condition unreasonably dangerous to the user?

Yes or No

- *If your answer to Question 1 was “Yes,” then answer this question:* Was the defective design a direct cause of the damages sustained by plaintiff?

Yes or No

REAL EXAMPLES OF DESIGN CLAIMS

Overview of Fire



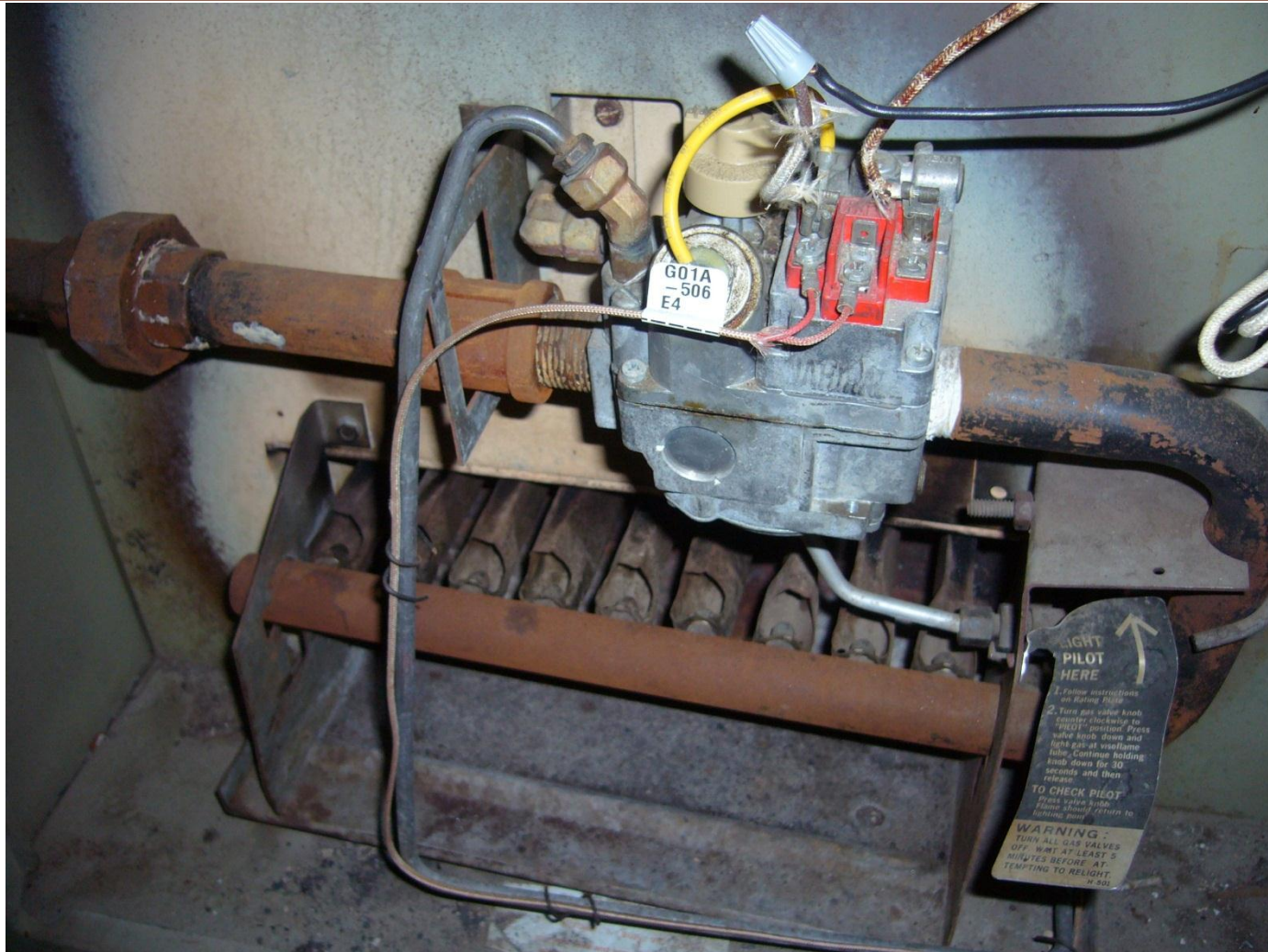
Design Claim on Fire Box Integrity



Design Claim: Built-In CO Detection



Rewired Temperature Control



Improper Stack Height



Typical Claims Made in Design Defect Cases

- The gas appliance should have had a built-in:
 - CO detector for CO danger;
 - Low O₂ shut off sensor for CO danger;
 - Heat or smoke detector for fire danger;
 - Gas detector for explosion danger.
- The gas appliance should not have utilized a draft hood – direct vent only.

Typical Claims Made in Design Defect Cases *(continued)*

- The gas appliance should have had additional back-up redundant safety shut-offs.
 - More flame rollout sensors
 - More pressure switches
 - More water temperature sensors
- The gas appliance should have had a better filter holder.
- The gas appliance should not have used a negative gas supply pressure system.
- The heat exchanger fins were designed too close together leading to clogging.
- The fire box should have been more robust.

Defending Yourself from Design Defect Cases

- Overall Point: You are a good and careful company that makes safe products.
- Designate a great in-house engineer to testify – the “Face of the Company.”
- Hire a great outside forensic design expert witness.
- Prove: Strict compliance with ANSI/CSA standards.
- Prove: ANSI/CSA certification of product.
- Prove: ANSI/CSA does not require the alternative design.

Defending Yourself from Design Defect Cases *(continued)*

- Prove: No same/similar claims, reported injuries, lawsuits with existing design.
- Prove: No other manufacturer utilizes the suggested alternative design (standard of care in the industry).
- Prove: The excellence of your design phase process, blueprints and documents.
- Prove: The excellence of your engineering staff.

Defending Yourself from Design Defect Cases *(continued)*

- Prove: FMEA (Failure Mode Engineering Analysis)
 - Reports
 - Documents
- Prove: FMET (Failure Mode Engineering Testing)
- Prove: No accident occurs with existing design if:
 - Product was not altered
 - Warnings and instructions had been followed.
 - Product had not been misused or abused.

Defending Yourself from Design Defect

Cases *(continued)*

- Prove: The claimed alternative design:
 - Is not workable;
 - Is not scientifically feasible (e.g. CO detection switch);
 - Creates other dangers;
 - Is costly and not easy (this can be a dangerous position!!).
- Prove: Strict compliance with manufacturing process records
- Quality control records – incoming, on production line, final testing.
- Manufacturing process records: strict compliance.

MANUFACTURING FLAW CLAIMS

Manufacturing Flaws

- Rarely litigated as there are very few “flaw” cases.
 - Difficult to defend.
 - Settle early.

Law on Manufacturing Flaws *(continued)*

- “A product is in a defective condition unreasonably dangerous to the ordinary user or consumer if he or she **could not have anticipated the danger** the product created.
- In deciding if the danger could have been anticipated, assume the user had the **knowledge common to the community** about the product’s characteristics and common use.
- The defect in the product may be caused by the way it was manufactured, assembled, inspected, packaged or tested.”

Law on Manufacturing Flaws *(continued)*

- A jury decides if a product is in a defective condition unreasonably dangerous.
 - “You may find that the product was in a defective condition unreasonably dangerous if you find that:
 - The event that caused the **injury** would ordinarily occur only **because of a defective condition** in the product, and
 - The manufacturer was **responsible for a condition** in the product that was the cause of the injury, and
 - The event that caused the injury was not caused by anything other than a defect in the product that **existed at the time of the product’s sale** by the manufacturer.”

Manufacturing Flaws *(continued)*

- Jury Verdict Question:

- Was the product manufactured by the manufacturer in a defective condition unreasonably dangerous to plaintiff?

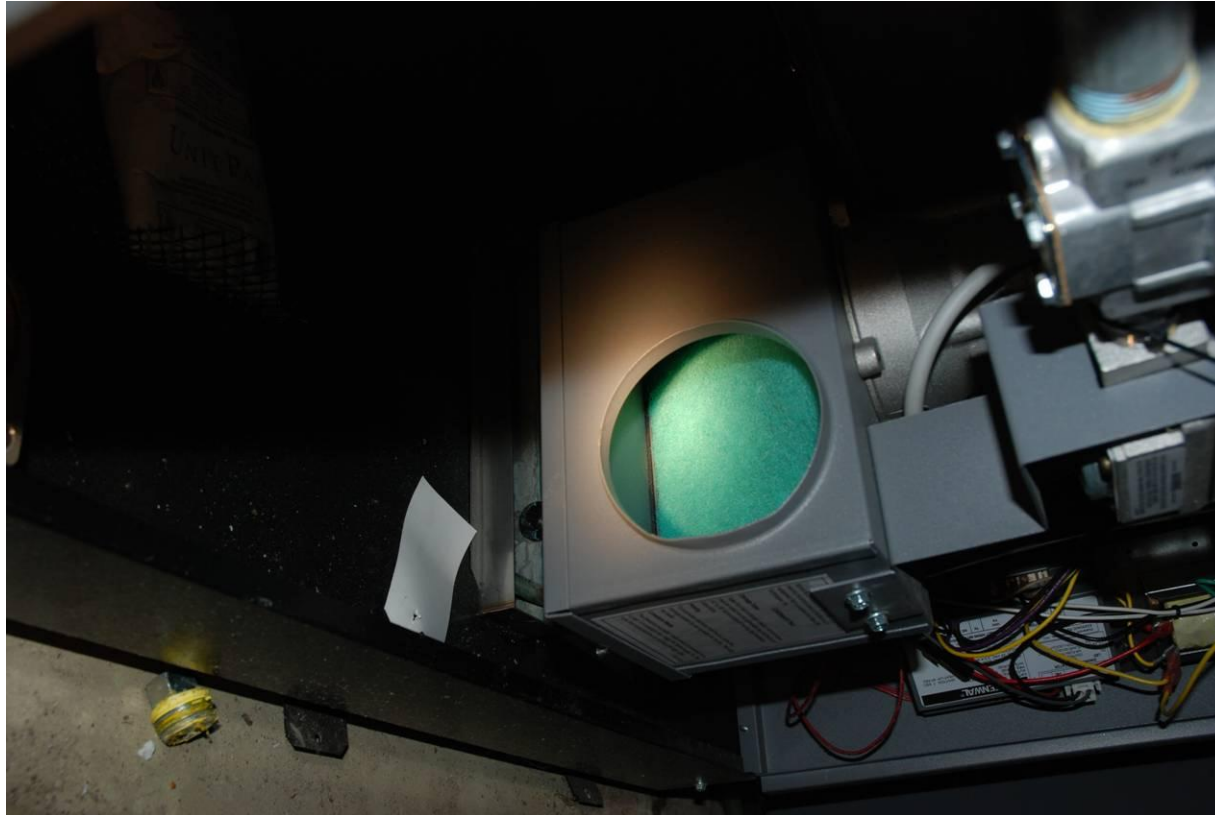
Yes or No

- *If your answer to Question 1 was “Yes,” then answer this question:* Was the defective condition a direct cause of the damages sustained by the plaintiff?

Yes or No

A REAL CLAIM OF MANUFACTURING FLAW

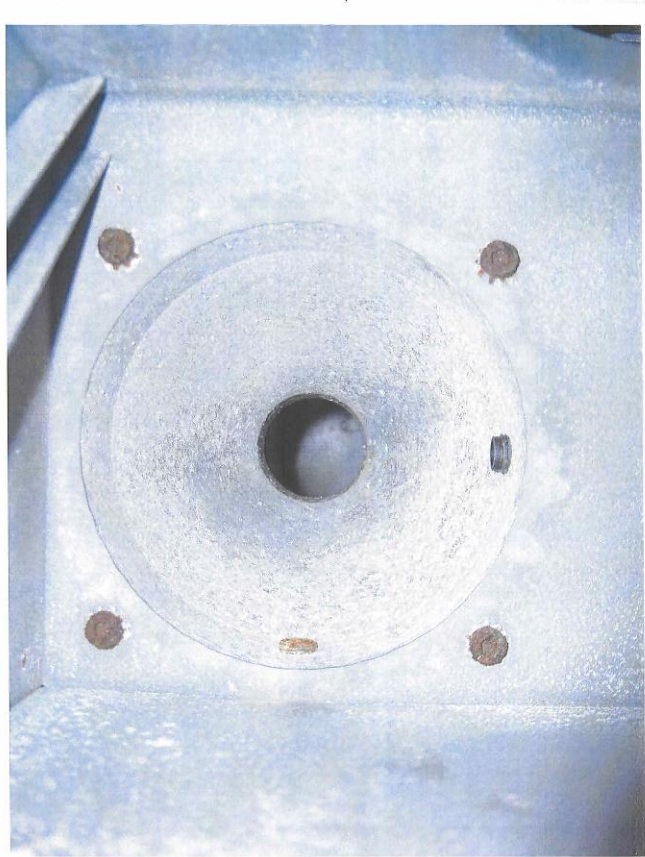
Proper Filter Position



Improper Filter Position



Venturi Throat (Filter Removed)



Defending Yourself From Manufacturing Flaw Claims

- Prove: The flaw was created after the product left the manufacturer.
- Prove: The flaw was not created by the manufacturer through Q.C. testing records.
- Prove: Packaging was excellent and the flaw was not created by shipping or rough handling.
- Prove: Alternative accident scenarios showing the flaw was not the cause.

Miscellaneous Defenses to Product Claims Against Gas Appliance Manufacturers

- Plaintiff's comparative fault
- Installer's/maintainer's comparative fault
- Product useful life defense
- Learned or sophisticated intermediary
- Open and obvious condition
- Assumption of Risk

Thank you

Questions

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