



INVESTIGATION GUIDELINE

Appendix 124
October 2001

BUTANE TABLETOP GRILLS

I. INTRODUCTION

A. Background Information

Since 1995, CPSC is aware of 27 incidents resulting in one death and 39 injuries associated with butane tabletop cooking appliances. Most injuries were burns sustained when flames unexpectedly emanated from the grills, possibly due to butane leaking and being ignited. A lesser number of injuries were sustained from explosions where victims did not witness flames or fire.

The purpose of the investigations will be to identify the failure mechanism(s) in each scenario, whether on the part of the grill or the butane canister, and study how they relate to the severity of injury of the victims. To this end, the lab is interested in collecting the incident grills and butane canisters for examination.

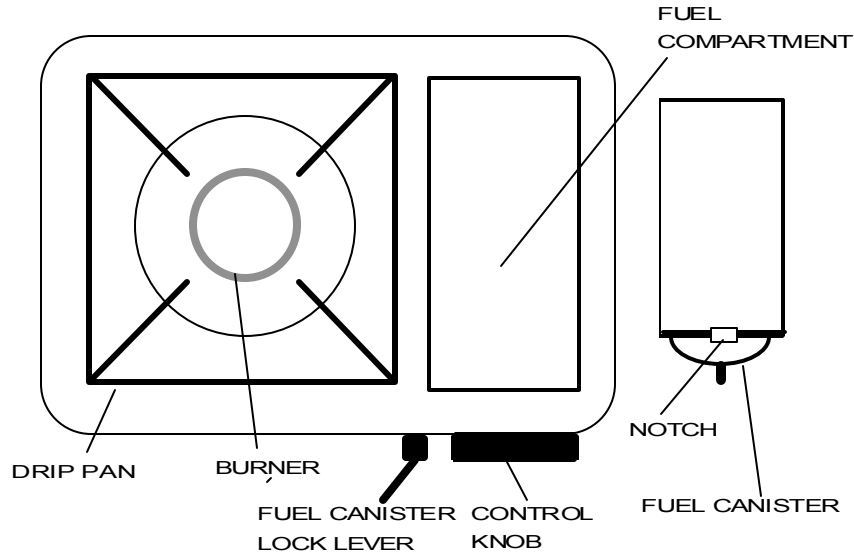
Please note that this is a guideline, not a checklist. Any relevant information discovered in the course of the investigation should be included regardless of whether it was explicitly requested in this guideline or in the assignment message.

B. Product Design

The sketch below depicts a single burner grill (although double-burner designs are also in-scope for this project) using an 8 oz. disposable butane canister. The canister is placed in a compartment to the right of the burner (as you face the front of the grill) and plugs directly into the controls. In this design, there is a notch in the upper lip of the fuel canister to align the can properly. Some grills are shipped with the drip pan inverted for compactness.



INVESTIGATION GUIDELINE



Sketch 490-3248-01A
Wm. Rowe
7/28/99 rev 10/20/99

C. Specific Items of Interest

- Was the grill shipped with the drip pan inverted? Was the grill in use with the drip pan inverted during the incident?
- Where did incident occur (cabin of boat, outdoor deck of boat, indoors in restaurant, etc.) ?
- At what point did the incident occur (when the fuel was being connected to the stove, when the fuel was being disconnected from the stove, while victim was cooking on the stove, incident occurred while stove was not in use, etc.) ?
- Did consumer have any difficulty installing the fuel container in the stove? If so, describe.
- Determine how long product had been in use just prior to incident. Also determine how long the fuel canister involved in the incident had been in use just prior to



INVESTIGATION GUIDELINE

the incident (One 8 oz. butane canister is expected to last 1½ - 2 hours.)

- Did the consumer notice an explosion, flames, or both? If both, in what order did they occur?
- Describe the food being cooked during or just prior to the incident? Was grease or oil a by-product of the cooking? Describe whether food was being cooked in cookware or directly on the grill.
- Give the dimensions, shape, and material of the cookware being used on the stove during or just prior to the incident.
- Description of grill and butane canister, including manufacturer(s), model numbers, age of stove, and age of fuel canister.
- Note the condition of the canister, and if it failed, where it failed.
- Describe how often grill was used (or if incident occurred during 1st time use) and document any historical problems with the product.
- Describe the area(s) on the stove and fuel canister that experienced the most severe damage.
- Describe any standards labeling or warnings on each product.

D. Headquarters Contacts

Susan Vagts EPHA 301-504-0470, x1118
William Rowe, LSE 301-413-0173



INVESTIGATION GUIDELINE

II. INSTRUCTIONS FOR COLLECTING SPECIFIC INFORMATION

A. Synopsis

Code investigations involving butane tabletop grills using Product Code 3248 - Gas or LP grills or stoves. Be sure to use *butane* in the synopsis.

B. Description of the Incident Environment

Pre-incident. Include in this portion of the narrative a description of the specific circumstances leading to the incident. Document who loaded the butane canister that was being used when the incident occurred and who ignited the burner. Indicate if the victims had any difficulty or confusion about performing either of these tasks. Ask if victim heard any hissing noise or smelled gas or an onion-y smell (butane odorant), indicating a butane leak.

Incident. Describe in the narrative how the fire and/or explosion happened. If this is speculative, give the reasons for this particular reconstruction of events.

Post-incident. Include injuries, type of treatment administered, property damage, medical costs and resulting physical limitations. Document the disposition of the grill and butane canister.

C. Description of the Injured Person(s) and Product Interaction

The narrative should include information on how well the victim(s) understood the products and hazards involved. Indicate whether victims had operated the incident grill or grills with the same design in the past. Indicate if an instruction manual was included with purchase of product and if the victim had read and understood instructions.

D. Description of the Product

Obtain the manufacturer and model from labeling on the grill, packaging, or from the instruction manual. Also describe the butane canister used. Document any claims of safety features found on the grill labeling. Copy those



INVESTIGATION GUIDELINE

pages of the instruction manual pertaining to any safety features or warnings.

E. Product Safety Standards

CPSC does not have mandatory standards on these products. There is a UL voluntary standard 45Z7 under which these products may be listed as either *Gas-Fired Portable Cook Stoves for Outdoor and Indoor Commercial Use Only* or *Portable Gas Camp Stoves*. Butane canisters should be certified to DOT-2Q or DOT-2P.

III. INSTRUCTIONS FOR PHOTOGRAPHS AND/OR DIAGRAMING FACTORS RELATED TO THE INVESTIGATION

- Photograph the area(s) on the stove and butane canister that experienced the most severe damage.
- Photograph the cookware that was being used on the stove at the time of the incident. If possible, photograph the cookware next to the stove so that the relative size can be seen.
- Photograph any standards labeling or warnings on grill and butane canister.
- Obtain any other available photographs.

IV. INSTRUCTIONS FOR OBTAINING SAMPLES AND DOCUMENTS RELATED TO THE INVESTIGATION

- If the butane canister and grill involved in the incident are still available, please attempt to collect and send to the CPSC lab c/o Bill Rowe, LSE.
- Obtain a copy of the fire department report
- If an insurance claim was filed as a result of the incident, provide the insurance company, contact, and claim number



INVESTIGATION GUIDELINE

- Try to obtain expert technical reports from insurance companies and forensic engineering firms. If a subpoena is needed, contact Susan Vagts (EPHA) for assistance.