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Share and Collaborate / Energy Safety Canada works collaboratively with organizations to develop Safety Alerts that improve hazard awareness and injury prevention. Canada's leading oil and gas industry trade associations support the sharing of information to help companies of all sizes improve safe work performance.

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RUFFNECK HEATER DAMAGE

DESCRIPTION:

A Ruffneck-brand heater in a shack at a drilling work site experienced a static electricity rupture of the heat exchanger core. No one was injured because the crew had just completed their tasks for the day, but in slightly different circumstances crew members would have been present in the area where the explosion occurred.

The industry has reported several issues with Ruffneck heaters. In most cases, the root cause has been a lack of regular preventative maintenance.



STOCK PHOTO OF A RUFFNECK FX4 SERIES HEATER



DAMAGED HEATER PARTS



PRESSURE RELIEF VALVE HAD A BUILDUP OF SCALE

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CAUSE:

- The pressure relief valve (PRV) had vented but had not been replaced or serviced as required.
- The PRV had a buildup of scale.

CONTRIBUTING FACTORS:

- Contact points on the contactor were welded together. As a result, the element and motor were receiving constant power.
- The use of “field gas” may have contributed to the buildup of scale.
- No preventive maintenance or inspections has been performed as per the original equipment manufacturer (OEM).

CORRECTIVE ACTIONS:

Ruffneck maintenance:

- Each owner’s manual has a maintenance checklist, and each heater should be regularly inspected and maintained. Maintenance should take place before every heating season.
- The heater is equipped with a single bimetal overtemperature high-limit. The heater should never be operated with the high-limit disabled or disconnected from the control circuit.
- Venting pressure of the PRV is factory-set; when it vents (pops) it must be removed from service and maintained.
- Do not tamper with or remove the warning label indicator on the PRV (see image below).

General considerations:

- At minimum, ensure periodic maintenance is performed at the beginning each heating season.
- Look at pressure relief valves regularly to ensure there has been no venting. If you notice paper torn over the PRV, glycol on the heater or other deficiencies, take the heater out of service and replace the core.
- If you cannot locate the owner’s manual, you can [download it](#) from Ruffneck’s website.

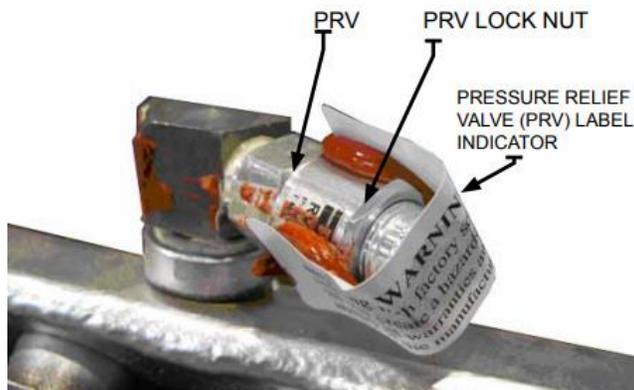


IMAGE OF MANUFACTURER’S WARNING LABEL