

Incident Summary #II-1173055-2021 (#21513) (FINAL)

SUPPORTING INFORMATION	Incident Date	April 6, 2021	
	Location	Chilliwack- Residential home	
	Regulated industry sector	Gas - Natural gas system	
	Impact	Qty injuries	0
		Injury description	N/A
		Injury rating	None
	Damage	Damage description	Heat damage to insulation on inside of furnace and burnt acoustic insulation inside furnace ducting.
		Damage rating	Minor
	Incident rating	Minor	
	Incident overview	A homeowner noticed a burning smell coming from the vents in the home. He quickly turned the furnace off and realized something was burning inside the ducting near the furnace.	
INVESTIGATION CONCLUSIONS	Site, system and components	Furnaces are commonly used to heat residential homes. In normal circumstances they are a safe and effective way of warming the home, however clearances to combustibles need to be maintained (as per manufacturers instructions and Gas installation code). Supply and return ducts are sealed to the furnace cabinets so that foreign objects etc. do not make their way into the furnace.	
	Failure scenario(s)	A piece of cardboard inside the ducting resting on the heat exchanger of the furnace became hot enough to catch fire and spread to the furnace cabinet and acoustic duct insulation.	
	Facts and evidence	<p>-2 weeks prior to the incident, a duct cleaning was completed by a company who provides the service.</p> <p>-cardboard ash and a large rock were found on top of the furnace heat exchanger after the incident</p> <p>-the duct cleaning company has stated that they often cut an access hole in the ducting above the furnace and place a piece of cardboard and weighted object on top of the furnace heat exchanger during duct cleaning. This is done to prevent debris from falling into the furnace. After the cleaning process, the cardboard and weight are removed, and access hole covered with a patch. Compressed air and vacuums are used to clean the ducts.</p>	
	Causes and contributing factors	After the ducts were cleaned, the duct cleaner forgot to remove the piece of cardboard and rock and closed the access hole. During the two weeks after the duct cleaning and up to the incident, the area was experiencing mild temperatures. This likely resulted in the furnace only cycling on periodically and taking time to fully dry and overheat the cardboard till it eventually caught fire and began damaging the insulation.	

Photos or diagrams



The rock left side of the picture.

Yellow arrow points to the heat exchanger

Red arrow points to the bits of cardboard ash.



Picture above shows charred insulation