Safety with Gas

Precautions To Be Taken When Handling Gas.

Gas in a canister is stored as a liquid, so it is important to keep the cylinders upright at all times, especially when being transported. The valves should also be protected from damage whilst in transit.

When setting up a kitchen area, place the gas bottles outside so that if there is any leakage it will dissipate rather than build up in the tent. Use plenty of hose from the regulator to the appliance so that any bends are smooth.

When renewing hose give it a little extra length to allow for cutting the ends of if they split, but not too much that will tangle. Use jubilee clips to tighten the hose at each end. Tight is enough, too tight will crack the hose. If the hose is tight going on a drop of washing up liquid will help ease it on. I have a plastic utility box that contains spare regulators, hose clips and a screwdriver. I assemble and dismantle all hose and regulators for every journey. This prevents the regulators from being damaged in transit, and also ensures that every connection is inspected before use (you may like to ask your QM to show you this). Check for leakage by placing a drop of washing up liquid on every connection. It will bubble if there is a leak, and if this is the case it should be removed from service immediately and suitable repairs or replacements effected.

Remember, never test for a gas leak with a naked flame. When changing bottles, always turn of all naked flames (including pilot lights where applicable), and this should always be done outside and away from tents. Good practice should dictate that a torch (with charged batteries!) is kept nearby in case you have to turn everything off in a hurry. Specify one person to turn off the bottles last thing at night, if not done so after every meal. Never leave gas appliances unattended when lit. Screw type regulators are left hand threads and should not be over tightened. If you have a leak here do not try to tighten further but check the seal, have spares in utility box, or wrap PTFE tape around the thread. As with hoses, check for leakage by placing a drop of washing up liquid on every connection. It will bubble if there is a leak, and if this is the case it should be removed from service immediately and suitable repairs or replacements effected.

For the small personal type cookers and lanterns there are generally two types, a self sealing and a pieced canister. Ensure that the valve is turned off before replacing a canister. The self-sealing type of gas canister are safer and can be removed part full. This also enables the same canister to be used on a cooker and lantern, such as on a hike. The pieced canister type cannot be removed once fitted.

To fit a new canister, this should be done outside to ensure that any escaped gas does not build up inside an enclosed space, such as a tent. Firstly, ensure there are no naked

flames in the vicinity, that the canister is empty, and the valve turned off. Unscrew the appliance from the body. Unclip the canister restraints. Fit the new canister to the body ensuring the restraints are firmly fastened. Now screw the appliance back on. At the moment of piecing there will be a sudden gas escape, and as soon as this happens firmly screw up tight and this will stop (providing this is done quickly and there are no naked flames there are no serious dangers). Ensure the escaped gas has dissipated before lighting. On the smaller cylinders the regulator has to be screwed to the bottle - this is a left hand thread. So be careful.

There are different types of gas:-

Propane -Red bottle; burns hotter and freezes at a lower temperature.

Butane - Blue bottles; most popular and readily available.

Camping gas - also blue cylinders but with smaller screw threads. Most useful if travelling abroad, as this is widely available on the continent.

Make sure you have the right type of gas, valve, regulator and other equipment, as the items do not necessarily match.

In An Emergency

OK, having followed all the guidelines, the unthinkable happens and a gas pipe punctures and flames. What do we do?

The most important thing is personal safety, do not compromise it. Clear the area of all personnel immediately, and make things safe if possible without a delay (ie if a pan of something is cooking on the other ring remove the pan, but do not stop to turn off the burner).

Never attempt to move the bottle, as this may make things worse, and if it explodes when you are carrying the bottle you would probably not survive to regret it.

You should not turn the gas off at the bottle. A flame in tubing is controllable as long as the pressure stays up. The pressure pushing the gas out of the hole prevents the flame retreating up the tube and igniting the gas bottle. A complete severance of the tube would cause a flame thrower type effect. Don't be tempted to think that you can disconnect it and be quicker than the flame can travel up the pipe - you're not!

The best thing that you can do in any emergency involving gas is to firstly make sure everyone is well clear of the emergency (in case the gas bottle explodes), and call for assistance. On a permanent campsite this will probably be the campsite warden, who will ensure that a safe area is set up. The next thing is to call the fire brigade. Never be tempted to deal with it yourself, as with many things untrained hands can make things worse than doing nothing.