

PLACING THE FLAME

CVW learns about the Inductor product range, which has been designed to ensure safe practice in the workshop and offers an alternative to the use of Oxy-Acetylene.

The number one concern in any commercial vehicle workshop these days is health and safety. Safe practices are a sign that a business is well run, cares about its employee's wellbeing and is aware that if they do not comply with the appropriate safety regulations they could be liable for fines or even legal action.

Along with essential activities such as professional and appropriate clothing, cleanliness and constant training, a safe workshop needs to invest in equipment that not only keeps the user safe, but allows them to do the job efficiently. Of course all machinery and equipment can be dangerous if used incorrectly, so it is vital to invest in ongoing training to make sure employees know how to use machinery properly. This is not just a safety consideration, but well trained staff will work more effectively and efficiently – this can only be good for the business as a whole.

Recognising the risks

One piece of equipment has been under scrutiny for some time. The risks of fire and explosion hazards from using Oxy-Acetylene for welding, cutting and similar processes are well documented by the Health and Safety Executive (HSE).

Acetylene is an extremely flammable gas and differs from other gases due to its unstable nature and tendency to pollute by emitting toxic fumes. Fire and rescue services nationally attend many hundreds of fires and incidents each year involving acetylene cylinders.

Problems have occurred when incorrect training or standard safety processes have not been followed. Gas cylinders are a convenient way to transport and store gases under pressure but they have a number of hazards, including:

- Blast of a gas cylinder explosion or rapid release of compressed gas;
- Impact from parts of gas cylinders or valves that fail, or any flying debris;
- Manual handling injuries.

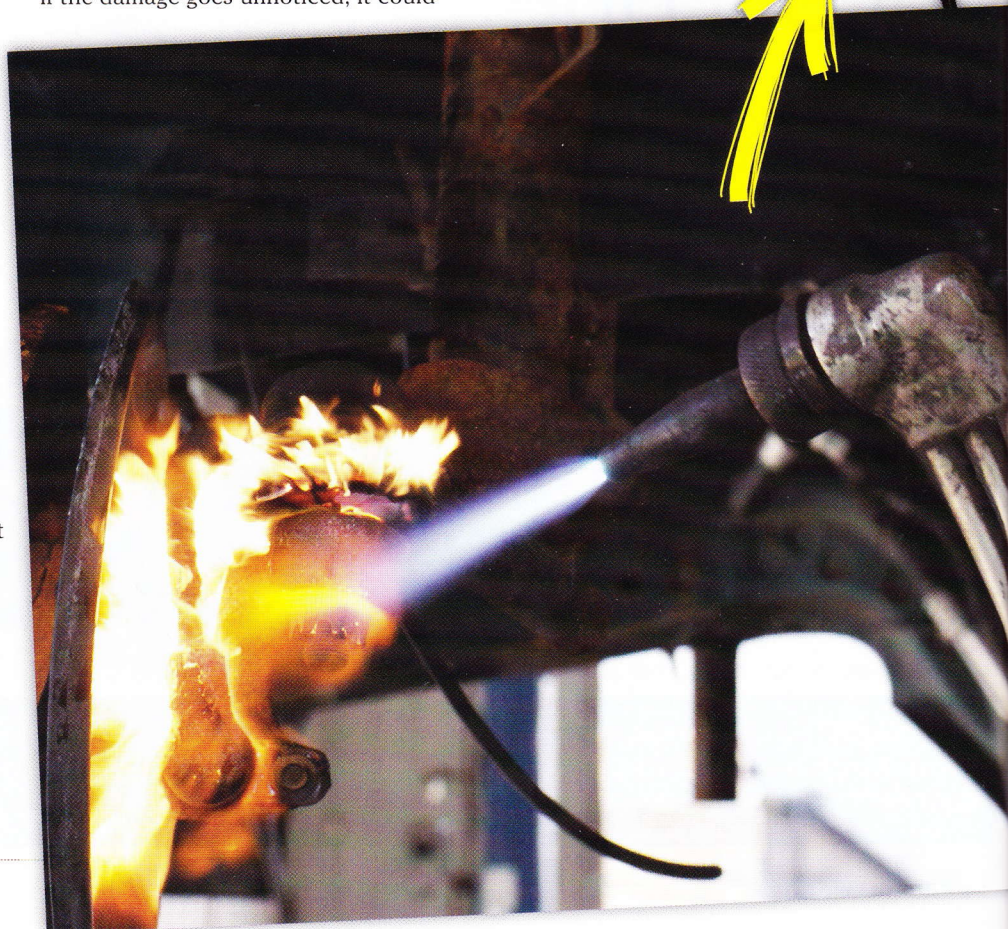
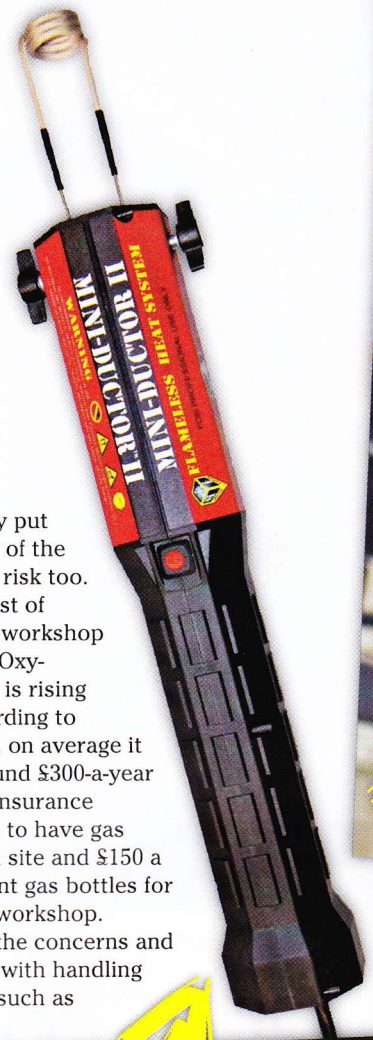
In addition to these possible risks, the use of a naked flame/torch in a confined space vastly increases the consequential fire risk – plastics, wiring, trim etc. around the part to be removed can catch fire, causing potentially costly damage. The training and monitoring of the processes involved with the use of Oxy-Acetylene is time consuming and procedures and adequate precautions need to be strictly followed.

The use of necessary safety equipment can also increase the risk of using a torch heating too. For example, safety goggles reduce visibility by up to 25%, so the mechanic may not realise that the area around the part, such as wiring, may have been set alight. Replacing wiring can be very expensive and time consuming, plus, if the damage goes unnoticed, it could

potentially put the driver of the vehicle at risk too.

The cost of running a workshop that uses Oxy-Acetylene is rising too. According to estimates, on average it costs around £300-a-year extra for insurance premiums to have gas bottles on site and £150 a year to rent gas bottles for a regular workshop.

Given the concerns and problems with handling products such as





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Oxy-Acetylene, and additional issues such as the damage naked flame heating causes to the area surrounding a part, many workshops may be pleased to hear that a safer, more reliable and efficient heating solution is available.

The Inductor product range, from US company Induction International, is a high performance inductive heating solution, ideal for use in commercial workshops. The range includes the user-friendly Mini-Ductor II 1kw handheld unit and the Pro-Max 2kw trolley or work bench mounted inverter. Both are CE marked and engineered to operate on 230volt power, with 110volt certification pending. These easy-to-use tools use high frequency magnetic fields that create Invisible Heat.

The Mini-Ductor II is ideal for quickly releasing corroded and bonded hardware, frozen nuts and bolts, O₂ sensors, track rod ends, bearings, pulleys and other hardware that are rusted/thread-locked into place.

The more powerful Pro-Max comes

with various attachments: the Glass Blaster for removing glass, including windshields, which can be removed in under 15 minutes without breaking, plus bonded SMC panels and spray-on bedliners; the Fast-Off Pad for removing adhesive trim, vinyl graphics and decals; and the Concentrator for removing seized/rusted hardware in seconds and shrinking/removal of soft bodywork dents.

Collateral damage

The flameless invisible heat, created by high frequency magnetic fields, heats parts in seconds, allowing for all types of adhesives bonded to metal and seized hardware to be removed and released much quicker than by traditional naked flame heating, reducing collateral damage to nearby components.

To cope with a variety of heating needs, different types of bendable coils can be attached to the unit to fit the problem part and these can be usefully shaped to fit into

hard to reach crevices and tight spots. Induction heating does not heat rubber, plastic or glass and ferrous metal parts heat up very quickly, with less damage, because the heat is localised on the part and not the surrounding area.

By using the tools, workshop operators are kept safer too, with a heavily reduced risk from fire, explosions or toxic fumes. It is worth noting that although the use of an Induction Heating System is safer than using Oxy-Acetylene, the operator needs to become thoroughly familiar with the instruction and precautions for use, such as not wearing any metallic items and wearing heat resistant gloves for removing parts from heated surfaces. However, compared to the use of Oxy-Acetylene, less training is needed to use the flameless heating products.

Ergonomic design

Before developing the tools, the company took the time to work with motor mechanics and its own auto-body professionals, to engineer it from the inside out; making sure the tool's construction and ergonomics were right. As a result, the Mini-Ductor II is rugged, lightweight and is made with military grade plastics for long-term durability. Its ergonomic design reduces user fatigue and also features a non-slip grenade grip for greasy hands and an LED light to illuminate work surfaces.

Apart from the increased safety benefits the use of induction heating tools can increase a garage's productivity by over 50% because downtime is minimized, parts can be re-used and insurance premiums are reduced if gas bottles are not used on site.

Many will wonder how they can still cut equipment without a torch. The answer lies in the use of a Plasma Cutter, which used in conjunction with a Mini-Ductor or Pro-Max negates the need for a torch in any workshop.

So, if you're looking to improve safety in your workshop, the range of flameless heating offers a safe, reliable, adaptable and cost effective alternative to traditional heating methods.

For more information on the Inductor product range circle 066 on the readerlink card