

# EYE SAFETY

In today's modern vehicle workshop, there a multitude of hazards waiting to catch out ill-prepared, unwary or complacent technicians. Peter Shakespeare looks at eye injuries and how to prevent them

**A**n analysis of Health and Safety Executive (HSE) RIDDOR data for general workplace non-fatal injuries from 2020/21 shows that injuries from lifting and carrying, trips and falls on the same level, falls from height, falling objects and, believe it or not, physical assault by another person, typically top the charts. In the same year there were a total of 51,211 reportable injuries in the workplace.

Translated into the workshop environment, hazards such as cables, airlines, inspection pits, heavy equipment and components, working at height and machine tools will contribute to this sector's share of the statistics. Sometimes overlooked in the workshop environment are hazards that can harm the eye. Brake dust, spray paint, corrosive liquids, fuel and oil, metal and rust fragments, laser beams, bright light, emissions from welding and sharp objects can all cause eye injury.

While the HSE says that only 1% of

all reportable non-fatal injuries affect the eye, in 2021 this still accounted for 512 people in the UK who sustained an eye injury at work, or lost sight in one or both eyes. Self-reports from the government's 2021 Labour Force Survey put the figure at 4,410.

## KEEPING SAFE

As with all health and safety-related matters, the risk of eye injury must be properly assessed; safe working practices must be in place and observed; technicians must be provided with suitable, well-maintained personal protective equipment; first aid equipment must be available; and workers must be trained to use it.

The HSE's five-step guide to risk assessment is: look for the hazards, decide who might be harmed and how, evaluate the risks and decide whether or not precautions are adequate, record findings and review the assessment from time to time, and revise it if necessary.



Depending on the operations conducted in the workshop, there might be a requirement to risk-assess separate operations, given their unique hazards. For example, if changing an exhaust system on a car or light van, there could be a risk of eye injury caused by flame cutting, rust and dust particles or from fluids dripping down on the technician working under the vehicle.

A large part of the risk assessment will be to identify what PPE will be required to mitigate the risks identified. Under the Personal Protective Equipment at Work Regulations 1992, PPE should be regarded as the last resort to protect against risks to health and safety. Engineering controls and safe systems of work should be considered first.

PPE standards are regulated by European standards. When applied

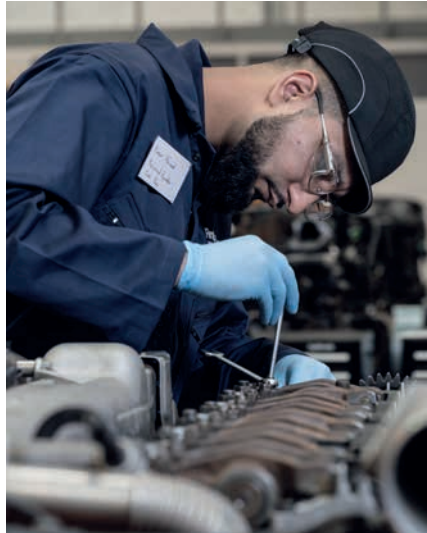
to eye protection – glasses, goggles, visors and masks (welding) – each product is marked. Lenses show the type of filter the lens provides, shade level, the manufacturer’s mark, further protective marking, mechanical strength and optical class. Frames show further protective marking, CE marking, mechanical strength rating, standard and who manufactured it. There is a raft of legislation that sits behind the markings. One of the most general standards is EN166, 2002: Personal Eye Protection – Requirements.

Major manufacturers of eye protection equipment include 3M, Uvex, Aswan and Betafit.

The key point when buying eye PPE is to ensure it meets the standard for its intended use.

According to 3M, suitability – whether it will be worn – is a key consideration. The manufacturer states: “This is often an area that is not given as much consideration during the purchasing process. The fundamental question is: will the product not only protect the wearer, but will it be suitable for the worker, the task and the environment in which it must be worn? This goes beyond understanding the technical specification of the product and ventures into the world of appreciating the product’s effectiveness in use. If this area is overlooked, it can lead to a reduction in products being worn and hence workers that are not protected as they are intended.”

The manufacturer should provide instructions specific to each item of equipment. This should include how to maintain them. Yorkshire-based PPE supplier Xamax’s guidance says it is important to clean eyewear daily, by blowing any loose dirt and debris from the lenses, rinsing them under running water using detergent or use lens cleaning wipes or sprays. They should then be stored in a clean, dry



place after washing. It also points out to avoid rough handling, because scratches will impair the vision and weaken the lenses, and they cannot be mended.

## EMERGENCY GUIDANCE

If the worst should happen, St John Ambulance offers first aid tips on how to deal with an eye injury:

- 1 Advise casualties not to rub their eye as this could make it worse. Ask them to sit down facing a light.
- 2 Stand behind them and gently open their eyelids with your thumbs. Ask them to look right, left, up and down, as you look closely at the eye.
- 3 If you can see something, ask them to tip their head backwards. Wash out the object by pouring clean water from the inner corner from a glass or jug.
- 4 If this doesn’t work and the object is still on the surface of the eye, try to remove it with a moist piece of gauze, or the damp corner of a clean handkerchief or tissue. If the object isn’t easy to remove or the eye is very painful, seek medical advice.

If an eye injury does occur, despite measures to prevent it, it is important there are adequate first aid measures in place, that first aid equipment is present in kit form, and that it contains all the items it should.

Where chemicals are used, or there is a risk that foreign bodies could enter the eye, eyewash facilities must be readily available, either in the form of an eye wash fountain or plenty of eyewash bottles (sterile water or saline).

IRTE board member John Eastman says that the checklist of IRTE’s Workshop Accreditation, an independent certification scheme, covers eyewash. If one of the squeeze bottles has been used, it needs to be replaced. The Workshop Accreditation audit will look at what methods the workshop has for making sure that happens. He suggests having a weekly inspection checklist. He further suggests attaching a thin cable tie around the handle of the box; nothing to impede access, but just to make it obvious that one of the bottles has gone.

In terms of how to use them, Health and Safety Executive guidance INDG347 Basic Advice on First Aid at Work recommends: “If chemicals are involved, flush the eye with water or sterile fluid for at least 10 minutes, while gently holding the eyelids open. Ask the casualty to hold a pad over the injured eye and send them to hospital.”

Any chemical burn to the eye must be reported as a major injury under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013.

Without our eyes, the ability to work or live a normal life is severely compromised. The guidance provided aims to open the reader’s eyes to what needs to be done to ensure every effort has been made to safeguard the eyes of a workshop’s workforce. **TE**