

# SR14

COSHH Essentials for  
service and retail

## Vehicle exhaust fumes in the workplace

### Control approach 2 Engineering control

**The Control of Substances Hazardous to Health Regulations 2002 (COSHH) require employers to ensure that exposure is prevented or, where this is not reasonably practicable, adequately controlled. This guidance gives practical advice on how this can be achieved by applying the principles of good practice for the control of exposure to substances hazardous to health, as required by COSHH.**

**It is aimed at people whose responsibilities include the management of substances hazardous to health at work (eg occupational health specialists, anyone undertaking COSHH assessments, and supervisors). It is also useful for trade union and employee safety representatives. It will help you carry out COSHH assessments, review existing assessments, deliver training, and supervise activities involving substances hazardous to health.**

**This guidance is issued by the Health and Safety Executive. Following the guidance is not compulsory, unless specifically stated, and you are free to take other action. But if you do follow the guidance, you will normally be doing enough to comply with the law. Health and safety inspectors seek to secure compliance with the law and may refer to this guidance.**

**See Essential information near the end of the sheet.**

#### What this sheet covers

This sheet describes good practice for the control of exposure to vehicle exhaust fumes in the workplace.

It covers the key points you need to follow to reduce exposure to an adequate level. This is achieved by following good control practice, ie follow all the points described in this sheet or use equally effective measures.

#### Hazards

- ✓ Vehicle exhaust fumes irritate the eyes and respiratory tract.
- ✓ Diesel exhaust fumes increase the risk of serious lung diseases, including cancer.
- ✓ Petrol or liquefied petroleum (LP) gas fuelled engines can produce carbon monoxide, a poisonous gas which can cause death.

#### Access to workplace

- ✓ Only allow access to authorised and appropriately trained people.

#### Equipment and procedures

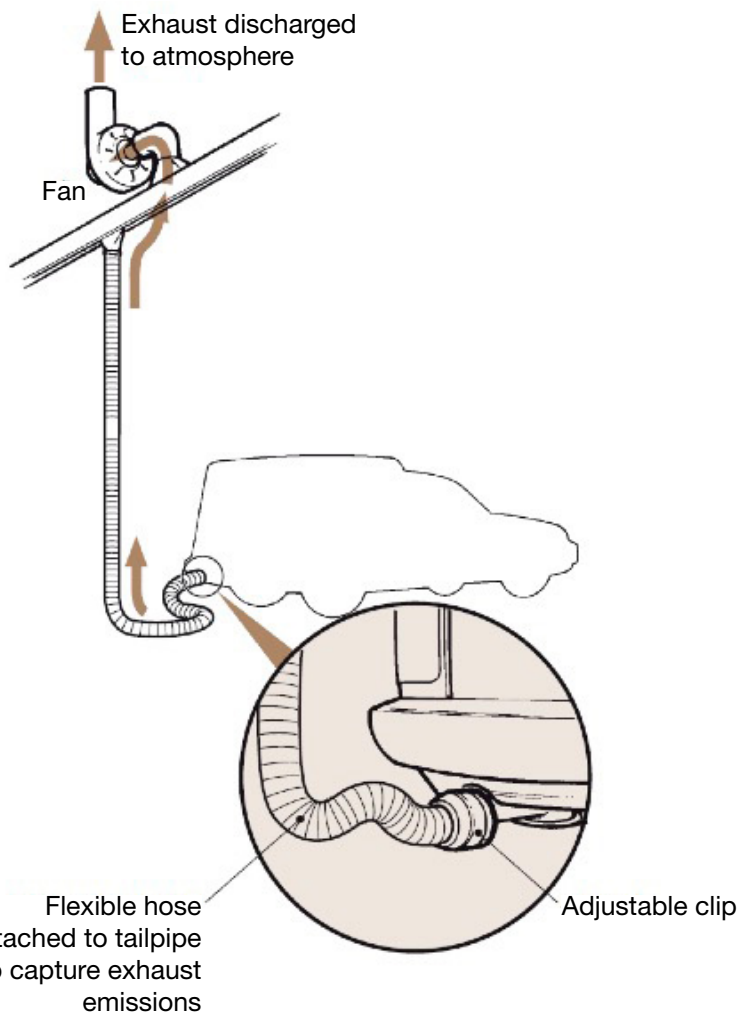
- ✓ Avoid using diesel-powered vehicles indoors if possible.
- ✓ Design the workplace and work processes to eliminate exhaust emissions.
- ✓ Substitute diesel fuel with a safer alternative if practicable, eg compressed natural gas or battery power.
- ✓ If an alternative fuel is used, this must be considered in your risk assessment.
- ✓ Keep the workplace well-ventilated and ensure a through draught.
- ✓ Consider automating operation of the extraction fans by use of occupancy sensors to ensure fans are switched on whenever the premises are occupied.

#### Static running (eg during vehicle testing)

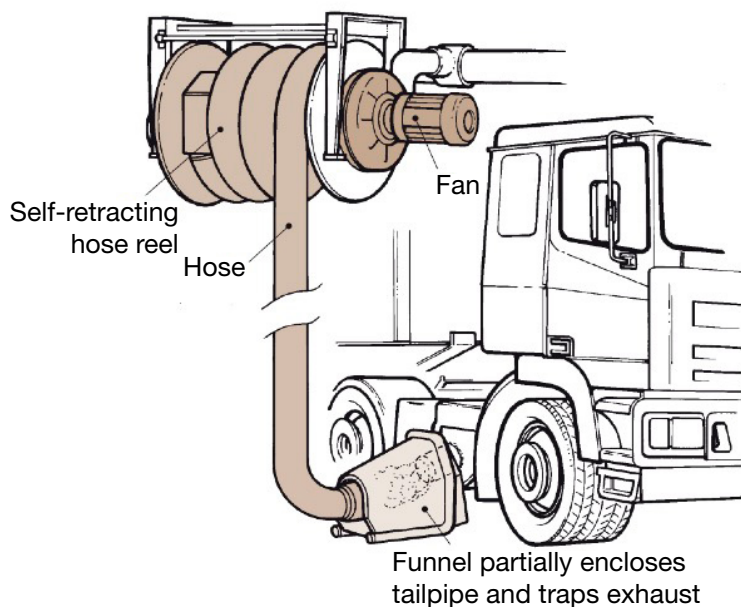
- ✓ Install well-designed tailpipe exhaust scavenge systems. See Figures 1–3 for system examples.
- ✓ Connect an exhaust gas scavenger to the vehicle tailpipe.
- ✓ Turn on the scavenge system before starting the vehicle.

#### Moving vehicles (eg warehouse vehicles)

- ✓ Consider using electric-powered vehicles.
- ✓ Fit catalytic converters and particulate filters to diesel engines to reduce exhaust fume.
- ✓ Turn on extraction fans before starting vehicles.
- ✓ Check that inlets for make-up air are not blocked.
- ✓ Start up diesel-fuelled vehicles outside.
- ✓ Turn off the engine when not being used.
- ✓ Watch out for dark smoke from diesel engines or unusual acrid smells from LP gas fuelled engines. These engines need immediate maintenance.

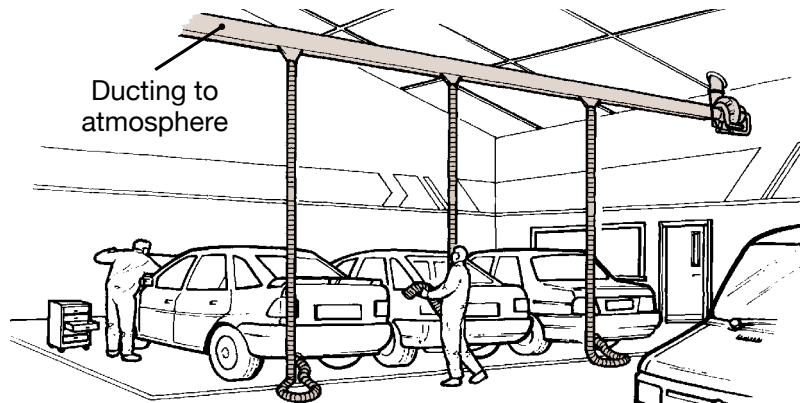


**Figure 1** – Fixed length flexible hose with tailpipe exhaust extraction system



**Figure 2** – Fixed hose and funnel-type local exhaust extraction system





**Figure 3** – Multihose system attached to vehicle exhaust tailpipes in a specialist workshop

- ✓ Follow instructions in maintenance manuals – keep equipment in effective and efficient working order.
- ✓ If the extraction is faulty, stop work until it is repaired.
- ✓ Do regular maintenance on all types of engine to reduce exhaust emissions.

#### Respiratory protective equipment (RPE)

- ✓ RPE is not normally needed.

#### Maintenance, examination and testing

- ✓ Every day, look for signs of damage to the scavenger ducts.
- ✓ At least once a week, check that the scavenger system works properly.
- ✓ Keep all equipment used for the task in effective working order. Maintain it as advised by the supplier or installer.
- ✓ Check for signs of damage to control equipment before starting work.
- ✓ Have equipment thoroughly examined and tested against its performance standard at suitable intervals.
- ✓ For local exhaust ventilation (LEV), a user manual or log book is helpful in setting out the frequency of checking, maintenance or parts replacement.
- ✓ For LEV with no user manual or log book, you may need the help of a competent person. They can determine the performance needed for adequate control.
- ✓ LEV systems require a statutory ‘thorough examination and test’ (TExT).
- ✓ Get a competent person to perform the TExT at least once every 14 months.
- ✓ Carry out all actions arising from the TExT.
- ✓ Keep an employer record for at least five years of TExT information such as target extraction rates, which show the LEV is performing as originally intended.
- ✓ Several measures are available to check the effectiveness of controls. These range from simple qualitative (eg use of a dust lamp) to complex quantitative techniques (eg air sampling); the latter are usually for higher-risk scenarios. See sheet G409 in Essential information.
- ✓ HSG258 provides more detailed information on LEV systems and legal and competence requirements. See Further information.

### Cleaning and housekeeping

- ✓ Clean work equipment and the work area daily. Clean other equipment and the workroom regularly – at least once a week.
- ✓ Deal with spills immediately – absorb liquid spills with granules and decontaminate the area (ask your product supplier or follow the Safety Data Sheet (SDS) instructions). Practise how to do this.
- ✓ Dispose of hazardous waste safely in a labelled, lidded bin.

### Health surveillance

- ✓ Carry out health surveillance if workers use a product labelled 'May cause sensitisation by skin contact' or 'May cause sensitisation by inhalation'. In such cases, you should consult an occupational health professional.
- ✓ Provide health surveillance for asthma where there is a reasonable likelihood that this may occur in your workplace. See sheet G402 in Essential information.
- ✓ Provide health surveillance for dermatitis where there is a reasonable likelihood that this may occur in your workplace. See sheet G403 in Essential Information.
- ✓ It may be helpful to consult an occupational health professional on what the health surveillance should cover.

### Training and supervision

- ✓ Tell workers about the hazards associated with their work and how to recognise early signs of asthma.
- ✓ Provide workers with training on:
  - when and how to use controls;
  - how to check they are working;
  - what to do if something goes wrong.
- ✓ Provide supervision – ensure that safe work procedures are followed.
- ✓ Involve managers and supervisors in health and safety training.

### Essential information

S100 – General advice on chemicals causing harm via skin or eye contact

S102 – Selecting personal protective equipment

G402 – Health surveillance for occupational asthma

G403 – Health surveillance for occupational dermatitis

G409 – Exposure measurement: Air sampling

### Further information

*Control of diesel engine exhaust emissions in the workplace* HSG187, HSE Books 2012, ISBN 978 0 7176 6541 9.

*Diesel Engine Exhaust Emissions* INDG 286, HSE Books 2012, ISBN 978 0 7176 1671 8.

*Clearing the air: A simple guide to buying and using local exhaust ventilation (LEV)* INDG408(rev1), HSE Books 2016. [www.hse.gov.uk/pubns/indg408.pdf](http://www.hse.gov.uk/pubns/indg408.pdf)

*Controlling airborne contaminants at work: A guide to local exhaust ventilation (LEV)* HSG258 (second edition), HSE Books 2017, ISBN 978 0 7176 6613 3. [www.hse.gov.uk/pubns/books/hsg258.htm](http://www.hse.gov.uk/pubns/books/hsg258.htm)

*Respiratory protective equipment at work: A practical guide* HSG53 (fourth edition), HSE Books 2013, ISBN 978 0 7176 6454 2.

*Respiratory sensitisers and COSHH: An employer's leaflet on preventing occupational asthma* INDG95, HSE Books 2005.  
[www.hse.gov.uk/pubns/indg95.pdf](http://www.hse.gov.uk/pubns/indg95.pdf)

*Control of substances hazardous to health: The Control of Substances Hazardous to Health Regulations 2002. Approved Code of Practice and guidance* L5 (sixth edition) HSE 2013. <https://www.hse.gov.uk/pubns/books/l5.htm>

Occupational Safety and Health Consultants Register [www.oshcr.org/](http://www.oshcr.org/)

You can find the full COSHH Essentials series at [www.hse.gov.uk/coshh/index.html](http://www.hse.gov.uk/coshh/index.html)

For information about health and safety, visit <https://books.hse.gov.uk> or <http://www.hse.gov.uk>

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To report inconsistencies or inaccuracies in this guidance, email: [commissioning@tso.co.uk](mailto:commissioning@tso.co.uk)

### Employee checklist

- Do you understand the health hazards associated with your work?
- Are you sure about safe working procedures?
- Do you know how to use the controls?
- Check that the LEV is working prior to every use.
- Look for signs of leaks, wear and damage before every job.
- If you find any problems, tell your supervisor. Don't just carry on working.
- Look for signs of blue or black smoke from a diesel engine, or unusual or acrid smells from an LP gas fuelled engine.
- Report any cases of ill health (eg breathing problems or coughing) that may be associated with exhaust fumes to your supervisor.
- Wash hands before eating and drinking, after smoking and using the lavatory, and after work.
- Check your skin regularly for dryness or soreness – make sure you know the procedure on reporting if such symptoms occur. Early intervention means it will be less likely that you develop permanent symptoms.
- Use skin creams provided as instructed.
- Co-operate with health surveillance.