TOOLBOX TALK AWARENESS PACKAGES

HAZ-DEX · Diesel Exhaust Awareness

# Product Overview

Audience: Workers and supervisors who work with or near diesel engines, plant and vehicles, especially in workshops, warehouses, tunnels and underground · Duration: 20–30 minutes

Version 1.0 · 22 November 2026

**For anyone who works with or near diesel engines, plant and vehicles, especially in enclosed or underground areas: what diesel exhaust does to your health, ventilation, engine maintenance, no idling, and speaking up about smoky engines.**

Diesel exhaust is a mix of fine soot particles and gases from diesel engines: trucks, loaders, forklifts, generators, compressors, pumps, tractors and locomotives. In workshops, warehouses, loading docks, car parks, tunnels and underground mines it can build up in the air people breathe. It irritates the eyes, nose and throat, can cause headaches and make asthma worse, and long-term exposure is recognised as a cause of lung cancer.

This talk covers where diesel exhaust builds up, what it does to health, the controls that keep it out of the air people breathe, starting with cleaner or electric equipment and good ventilation, why engine maintenance and switching engines off matter, and what workers can do: follow the ventilation rules, avoid idling, and report smoky engines and poor air. It is awareness, not air monitoring or engine maintenance training.

## Learning outcomes

By the end of the session participants will be able to:

- Name the sources of diesel exhaust at work, and the places where it builds up, such as enclosed and underground areas
- Explain what diesel exhaust does to health in the short term, and that long-term exposure is a recognised cause of lung cancer
- Explain the controls, from electric or cleaner equipment and ventilation to exhaust extraction and filtered cabs
- Explain why engine maintenance, exhaust filters and switching engines off reduce exposure
- Recognise the warning signs of poor air: haze, soot, a strong smell, sore eyes and headaches
- Know what to do: follow the ventilation rules, avoid idling, and report smoky engines and poor air

## What it covers

| Module | Covers |
|---|---|
| **Why it matters** | Where diesel exhaust builds up; What it does to your health; Why the long term matters |
| **Controls that work** | Cleaner and electric equipment; Ventilation and extraction; Maintenance and no idling |
| **Your part** | Signs of poor air; Report smoky engines; Health monitoring |


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SAMPLE · HAZ-DEX Diesel Exhaust Awareness v1.0 · The full package contains the complete materials.

## Activities

- Where is the exhaust: workers find the diesel exhaust risk in four jobs, from a truck idling at a loading dock to plant working in a tunnel, and decide on a safer way
- What would you do: workers decide what to do in four situations, from a loader blowing black smoke to a workshop with the extraction hose left off

## What is in the package

| Item | File |
|---|---|
| Editable PowerPoint presentation with speaker notes, plus PDF | 02_TRAINING_PRESENTATION/Training Presentation.pptx and .pdf |
| Facilitator guide with a running sheet, discussion prompts and model answers | 03_FACILITATOR_GUIDE/Facilitator Guide.docx and .pdf |
| Participant handout with the key points to take away | 04_PARTICIPANT_HANDOUT/Participant Handout.docx and .pdf |
| Attendance record form, to capture who attended, when, and who facilitated | 06_RECORDS/Attendance Record.docx and .pdf |
| Excel attendance register | 06_RECORDS/Attendance Register.xlsx |
| Multiple-choice theory assessment, to record understanding if your business wants to | 05_ASSESSMENT/Theory Assessment.docx and .pdf |
| Answer key for the assessment | 05_ASSESSMENT/Assessment Answer Key.docx and .pdf |
| Certificate template | 06_RECORDS/Certificate Template.docx |
| Start here: Read Me First, Product Overview, Permitted Use Terms, Version Information | 01_START_HERE/ (four PDFs) |

## What you need to deliver it

- A facilitator such as a supervisor, leading hand or WHS adviser who has read the facilitator guide and knows your site's arrangements for the topic
- A screen or projector, or printed slides or handouts: it works in a crib room, site office or on a video call
- Your own site procedures for the topic, to point to during the session

## Questions

**Does it tell us the exposure limit for diesel exhaust?** No, on purpose. The talk quotes no exposure standard or figures: limits are set by the regulator where you work and can change, and measuring exposure needs a competent person. The guide tells you where to check, and the talk teaches the controls that keep exposure as low as possible.

**Can we add our own site procedures and photos?** Yes. The slides, handout and guide are editable, and the facilitator guide marks the places to add your own procedures, contacts and photos of your workplace.

**Do we have to use the assessment?** No. It is there if your business wants a record that each worker understood the key points. The attendance record on its own shows who attended and when.

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TOOLBOX TALK

# Diesel Exhaust Awareness

The fumes you get used to: where diesel exhaust builds up and how to keep it out of your lungs

20–30 minutes · Workers and supervisors who work with or near diesel engines, plant and vehicles, especially in workshops, warehouses, tunnels and underground

**[Company name] · [Date] · [Facilitator name]**

DEX


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# What this talk is, and is not

## This talk covers

- ✓ Where diesel exhaust builds up
- ✓ What it does to your health
- ✓ The controls that keep it out
- ✓ What you can do and report

## This talk is not

- ✗ Air monitoring training
- ✗ Ventilation design
- ✗ Engine maintenance training
- ✗ Our procedure: **[Our plant procedure]**

**Awareness only. Air monitoring, ventilation design and engine maintenance need competent people.**


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# Where diesel exhaust builds up

Every diesel engine makes it. Enclosed spaces let it build up.

- Workshops and service bays with engines running
- Loading docks, warehouses and car parks
- Tunnels, underground mines and basements
- Diesel forklifts, loaders and generators indoors
- Cabs and sheds where exhaust drifts in

### A composite example

- On cold mornings the crew warms up the diesel loader inside the shed with the roller door down.
- By smoko several workers have sore eyes and headaches. The shed walls are grey with soot.

**If you can see or smell it, you are breathing it.**


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# Duties under health and safety laws

## The business must

- Keep the air safe to breathe
- Ventilate and extract exhaust
- Maintain plant and vehicles
- Monitor air and health where needed

## You must

- Follow the ventilation rules
- Avoid idling engines
- Use the extraction provided
- Report smoky engines and poor air

Most health and safety laws give these duties. Check the law where you work (in Australia, WHS or OHS laws).


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# The order of controls for diesel exhaust

1. **Elimination** — No diesel engines running in enclosed spaces where avoidable
2. **Substitution** — Electric or battery plant, forklifts and generators; cleaner engines
3. **Isolation** — Engines and generators outside; filtered, sealed cabs
4. **Engineering** — Ventilation, exhaust extraction hoses, exhaust filters
5. **Administrative** — Maintenance, no idling, traffic limits, air monitoring
6. **PPE** — Respirators where assessed and fit tested; not the first answer

**HIGHER ORDER**

Higher order controls remove or control the hazard at the source, or put a barrier between people and the hazard.

**LOWER ORDER**

Lower order controls rely on people to do a thing or wear a thing, every time, tired, distracted or rushed.

*Behaviours are not on the hierarchy, but behaviours and culture decide whether every control on it actually works.*

**A respirator is the last line, not the first answer.**


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# Diesel Exhaust Awareness

Participant handout · keep this

Diesel exhaust harms you now and over the years. Keep it out of the air you breathe. Keep this page.

## The order of controls

1. No diesel engines in enclosed spaces where avoidable
2. Electric or battery equipment instead
3. Engines outside; filtered, sealed cabs
4. Ventilation, extraction hoses and filters
5. Maintenance, no idling, monitoring
6. Respirators last, fit tested

## The signs

- Sore eyes and throat, coughing, headaches
- Haze, soot, smoke, a strong smell

## Never

- Warm up a diesel engine indoors
- Keep working when ventilation stops

## Before you start

- ☐ Is a diesel engine running inside or in an enclosed space?
- ☐ Is there an electric or cleaner option for this job?
- ☐ Is the ventilation or extraction on and working?
- ☐ Is any engine idling that could be switched off?
- ☐ Is any engine blowing smoke, or is the air hazy?

## Poor air or smoky engine

- Switch off what you can; move to fresh air
- Report it; call your local emergency number (000 in Australia) if someone collapses

## Who and where

- **[Ventilation and idling rules]**
- **[Who to report to here]**

**Engines off when you can, exhaust out, air in. Report a smoky engine.**

*This is awareness training. It is not a licence, a ticket, a permit or a competency. It is not air monitoring, ventilation design or engine maintenance training.*


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