

Reducing diesel emissions will cut down on hazardous air pollutants.

Emission control equipment

Diesel particulate filters (DPFs)

- Cost: \$5,000-\$9,000
- Benefits: reduces particulate matter by 60-90%
- DPFs need to be cleaned every 100,000 miles
- Lasts 7-15 years, most have a warranty of three years
- Must be used with ULSD fuel on engines built after 1994

Diesel oxidation catalyst

- Cost: \$1,000-\$2,500
- Benefits: reduces particulate matter emissions by 20-30%
- Does not require special maintenance
- Lasts 7-15 years
- Can be used with regular diesel fuel, but most effective with ULSD

Closed crank case filter

- Cost: \$500-\$1000
- Benefits: eliminates 90%+ of in-cabin crank case emissions of fine particulate matter pollution
- Filter needs to be changed at every oil change or after 500 hours of operation (whichever is first)
- Lasts 5 years

Compressed natural gas

- Reduces particulate matter by 70-90% if using catalyst technology to reduce ultra fine matter
- Used only with new CNG Engines
- Costs \$30,000 more than a diesel bus (cost of fuel is 2/3 lower than diesel)



Anti-Idling is a simple and cost-effective way to reduce emissions and protect students' health.

Idling reduction

Anti-idling policy

Anti-Idling is a simple and cost-effective way to reduce emissions and protect students' health (as well as your own). Below are easy steps you can take to develop and implement an anti-idling policy:

- Reduce idling by turning off engines stopped for more than a few minutes-saves money and lives
- Replace older buses with new, low-emission buses
- Position buses at school so tail pipes are not blowing directly towards another bus
- Position buses away from the school air intake vents
- Reward drivers for adhering to the policy
- Having a formal anti-idling policy can aid in securing funding



Diesel emissions have been linked to asthma, lung and heart disease, cancer, and breathing ailments.



Diesel particulate filters reduce particulate matter by 60-90% and last 7-15 years.



B20 Reduces particulate matter by 10%; B100 reduces particulate matter by 40%.

Idling reduction

Heaters

- Accelerates and maintains window defrosting and defogging
- Reduces emissions and eliminates idling
- Stops white smoke
- Extends the life of the engine
- Substantial fuel cost savings by reducing idling time
- Roughly \$1,000.00 to purchase
- Cut down on warm-up time by preheating the engine

Engine Plug-ins

- Reduces idling time by warming engine over night
- Saves fuel cost
- Reduces harmful emissions
- One person can plug in several buses
- Saved fuel translates into higher utility bill (weigh options)

For more information on diesel clean-up options, please visit www.theOEC.org or contact the Air Team at air@theoEC.org or (614) 487-7506.

Cleaner alternative fuels

Ultra low sulfur diesel (ULSD)

- Reduces particulate by 10% with no other emission control equipment
- Will replace current diesel fuel
- ULSD only allows 15 parts per million of pollution-causing sulfur compared to 500 parts per million with regular diesel
- Can be used in new or old diesel engines with no cleaning of tank
- ULSD is available in Ohio
- Incremental cost is \$.10-.25 cents more per gallon, projected to level off at \$.04 per gallon

Biodiesel

- B20 Reduces particulate matter by 10%; B100 reduces particulate matter by 40%
- B20 (20% pure Biodiesel/80% conventional diesel) can be used in any conventional diesel engine
- Typically \$.10 to \$.20 more per gallon than diesel
- No extra maintenance required
- Most tailpipe emissions reduced compared with conventional diesel with the exception of a slight increase of NOx
- Federal tax incentive may now cover the incremental cost

