

DIESEL EXHAUST AND PVC PIPE

Large diesel-powered trucks are often used to deliver pipes to jobsites. Occasionally, some of the shipped pipes are stained by diesel exhaust. When the pipe is used for non-potable applications (gravity sewer, pressure sewer, and reclaimed water) exhaust deposits are not a matter of concern. However, if the pipes are to be used in drinking water systems, the inside surfaces should be protected from the exhaust.

TASTE-AND-ODOR ISSUES

If diesel exhaust is allowed to flow through the pipe and is not removed before installation, the resulting odor is difficult to remove and can be detected in the water. For this reason, water utility specifications often include shipping requirements such as:

- “The contractor shall protect pipe and fittings to avoid vehicle exhaust during transit.”
- “The front end of all pipe delivered by truck shall be covered for protection against exhaust fumes.”
- “Pipe will not be accepted for installation if discoloration is evident.”



The last specification item is not necessary for the following reasons:

- PVC material – diesel smoke residue does not contain chemicals in quantities that can adversely affect PVC.
- Gaskets – assembly instructions to join gasketed PVC pipe include cleaning the gasket. At a minimum, the instructions require that the bell and gasket should be inspected and wiped clean. In the case of diesel smoke residue, simply following these standard assembly instructions is sufficient to prevent harmful effects.
- Cleaning – unless heavily stained by exhaust fumes, pipe with exhaust residue on the inside surface can be adequately cleaned by use of a power washer. Alternatively, a scrub brush can be used with common household detergents.

PREVENTION

As usual, it is much easier to prevent a problem than to correct one after it occurs. Pipe producers typically require that truckers transporting the pipe provide smoke protection in the form of tarps that cover the front ends of pipe that might be exposed to exhaust. If smoke residue does enter the pipe, it is usually the responsibility of the trucker to remedy the problem.

DEALING WITH EXHAUST DEPOSITS

The good news is that exhaust deposits are usually visible on PVC water pipe because the sooty discoloration contrasts with the pipe color. However, this may not be the case for black pipe. Careful inspection of black pipe may be necessary to ensure that exhaust has not entered the pipe.

Another variable is the truck being used to transport the pipe:

- Newer, cleaner-burning, recently tuned trucks will emit less soot than older, less-well-maintained vehicles.
- Trucks with exhaust located below the body of the cab will not expose pipe to residue.
- New emission-control requirements for diesel engines will reduce the amount of smoke residue over time.

THE BOTTOM LINE

- Smoke residue is not a problem, except when pipe is intended for potable water use.
- For potable water pipe: if smoke residue is present on the inside surfaces, it is not necessary to reject the pipe. Instead, the residue should be removed prior to installation.

SUGGESTED SPECIFICATION

“The shipping company shall protect pipe to avoid vehicle exhaust during transit.”