

Auto Service & Repair Shops

Automotive service and repair is one of the most common types of commercial enterprises in any city. Establishments include: service stations, oil change/lubrication, body repair, tune-up shops, full-service repair shops, fleet maintenance, and tire services. The design of a water-efficient shop depends to some extent upon the type of service offered. New air-quality regulations have also meant that shops have switched from solvent-based parts- and brake-cleaning systems to aqueous-based systems.

Standards and Practices

Operational measures to be recommended at the time of permitting to reduce water use for cleanup include the following:

- ◆ use mopping or dry cleaning where possible.
- ◆ use pressure-washing equipment instead of hoses.
- ◆ place drip pans under vehicles.
- ◆ provide proper facilities for the capture, storage, and recycling of spent fluids, oils, and fuels, including antifreeze and radiator flush water.
- ◆ provide secondary containers to catch drips, leaks, and spills from stored liquids and solvents.

Floor Cleaning

Floor-cleaning with dry methods, preventing spills and leaks from entering the wastewater discharge system, and proper design of oil separators have as much to do with pollution prevention as they do with water conservation. To achieve this:

- ◆ install recirculating filtration equipment to minimize the need to dump water from aqueous parts- and brake-cleaning equipment.
- ◆ seal shop floors to ensure easy cleanup.
- ◆ properly identify all drains.
- ◆ if hoses are used, install automatic-shutoff and solenoid valves on all hoses and water-using equipment, where applicable.

Water Treatment

Measures to improve the efficiency of water treatment include:

Shops have switched from solvent-based to water-based brake- and parts-cleaning systems to comply with new air-quality regulations.





- for all filtration processes, installing pressure gauges to determine when to backwash or change cartridges, followed by backwash based upon pressure differential.
- for all ion-exchange and softening processes, setting recharge cycles by volume of water treated or using conductivity controllers.
- avoiding the use of timers for softener-recharge systems.
- using water treatment only when necessary.

Always seal shop floors to facilitate easy clean-up, and clearly identify all drains.

Plumbing

Use high-efficiency toilets requiring no more than 1.3 gallons per flush and urinals which flush with 1 gallon or less. Avoid automatically timed flushing systems. Use self-closing faucets with flows of 0.5 gpm for hand washing. If available, and if codes and health departments permit, flush with non-potable water.

Other

Install automatic-shutoff and solenoid valves on all hoses and water-using equipment.

Install faucets on set tubs and janitorial sinks with flows not to exceed 2.2 gpm.

Water-efficiency measures for vehicle cleaning are described in the summary sheet for “**Vehicle Washes.**”

TIP: Conspicuously mark fire-protection plumbing so no connections will be made except for fire protection. Additionally, install flow-detection meters on fire services to indicate unauthorized water flows.

