

3.16.4 Vehicle Maintenance: Radiator Repair

Tip Sheet #1

WASTE ORIGIN: Draining and Boil Out

WASTE TYPES: Motor Oils, Coolants, and Antifreeze

WASTE REDUCTION AND RECYCLING METHODS:

- ! Collect, separate, and **recycle**.
- ! **Drain** radiator well.
- ! Remove as much oil as possible from oil cooler using compressed air to **minimize drag-out**.
- ! Provide **hang bars** over tank.
- ! Provide **drain board between tanks** and divert liquid bank into source tank.
- ! **Pre-rinse radiator** over boil out tank using fog spray (high-pressure, low-water flow rate).
- ! Maintain and monitor **boil-out tank**.
- ! Use **compressed air** to blow out residual alkaline solution after removing from boil-out tank, then collect and return to tank.
- ! Use **washwater** as make-up to boil-out tank.
- ! Increase **temperature** (e.g., to 160° F) to increase evaporation.
- ! Carefully **monitor** and only add minimum required types and quantity of chemicals.
- ! Use chemical or physical **treatment system** to remove oil, metals, and solids. Reuse the wastewater.

WASTE ORIGIN: Flushing Booth

WASTE TYPE: Contaminated Rinsewater

WASTE REDUCTION AND RECYCLING METHODS:

- ! Blow out residual **caustic solution** to tank with compressed air to minimize drag-out to flushing booth.
 - ! Reuse flushing booth **rinses** for boil-out tank make-up.
 - ! Use high-pressure and lower **water flow**.
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WASTE ORIGIN: Testing

WASTE TYPES: Tank Clean-out Sludges, Test Tank Dumps

WASTE REDUCTION AND RECYCLING METHODS:

- ! Reuse **test tank water** in flushing booth.
- ! Use **smaller test tanks** for efficient operation.
- ! Correct **cloudiness** (too much solid deposition) by improving rinsing of radiator before placing radiator in test tank.
- ! Filter (using simple bag or cartridge filter) or settle **solids from solution** instead of dumping.

WASTE ORIGIN: Soldering

WASTE TYPES: Used Solder and Waste Flux

WASTE REDUCTION AND RECYCLING METHODS:

- ! Reduce use of **flux** containing complexing or chelating compounds.
- ! Use a **low-zinc flux**.
- ! Solder in a **separate area** (not over test tank), or catch before solder falls into tank.

Sources:

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