Collision Repair: Reducing Waste and Costs

Minnesota Technical Assistance Program ■ FACT SHEET

Collision repair generates many types of waste. Cutting the amount of waste generated at your shop can help you comply with regulations and save money. This fact sheet highlights changes in materials and practices that can help reduce waste in your shop.

Aerosols

Manufactured aerosol products are expensive. Use bulk supplies with refillable aerosol or pump sprays to save money. Many aerosol products—solvents, cleaners and lubes—are available in bulk. The cost per ounce of product is significantly less and you avoid the cost of the propellant—10 to 15 percent by weight. In addition, you avoid higher hazardous waste disposal and handling costs typically required for waste aerosols that fail to completely empty. Refillable aerosol containers pressurized with compressed air can be easily emptied or refilled.

Floor Drain Systems

Your trap or separator keeps oily washwater and spills out of the sewer where they can cause compliance and safety concerns. Do not let floor grates substitute for a dustpan when you are sweeping. When traps or separators fill with dirt and debris, they do not function. To prevent trap problems use screening at the trench outlet to trap dirt and debris. This will keep cleaning and maintaining floor trenches manageable. Routinely clean screens before months of accumulation signal maintenance needs. For more information see MnTAP's fact sheet *Floor Drain Systems* [#66].

Gun Washing

Cleaning paint guns manually is time consuming, labor intensive, exposes workers to harmful solvents and paints, and can generate significant quantities of solvent waste. An alternative is an automatic cleaning system. Automatic gun washers can reduce the amount of solvent used and paint solvent waste generated by up to 80 percent compared to manual paint gun cleaning. Because automatic gun washers are sealed recirculation units, exposure to hazardous materials during solvent handling and from volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions are greatly reduced.

For more information about automatic cleaning systems and a list of suppliers, see MnTAP's reference list *Spray Gun and Equipment Systems Suppliers* [#79]. The Iowa Waste Reduction Center (IWRC) has developed the Gun Wash Unit Cost Calculator. The cost calculator requires you to enter the amount of solvent used at your shop per year, then it calculates your gun washer savings and payback.

Packaging

Shops accumulate piles of boxes and packaging from a variety of parts and supplies. Excess packaging fills your Dumpster, costing you money for hauling. When employees purchase parts locally ask for minimal packaging. For regular stocking, talk with your distributor about switching to reusable containers. Reusable containers save money on packaging purchase and disposal costs.

A lot of packaging material is recyclable. Check with your local government or county solid waste office to learn about business recycling opportunities in your area. In the Twin Cities area the Green Guardian Web site lists recycling opportunities for many materials. Ask your recycler about crushing or baling high volume materials to increase the cash value of your recyclables.

Painting

Preparation and painting are critical activities in collision repair shops. No matter what preparation materials you use, proper washing before painting is essential.

Paint system compatibility, and equipment and supplier recommendations are key to an efficient painting process. Within the system standards are opportunities to prevent pollution. Use high-

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efficiency equipment and waterbased or low VOC and HAP materials to create a healthier environment for employees, reduce regulatory compliance burden and save money on materials and disposal cost.

The IWRC has developed the HVLP Cost Calculator to project the advantages of high volume/low pressure (HVLP) spray guns, coupled with a targeting device and specialized training, over conventional spray guns.

Painter technique is important for efficiently applying paint at the recommended mil build. If new guns are installed or you switch to a new paint system, partner with the vendor for the necessary setup and training. Periodic training for experienced painters is a good investment and is a must for new painters.

Solvents

Cleaning solvents are a mainstay of collision repair operations. The volume of waste solvent from a collision repair shop is often the reason for its waste classification size. Many solvents can be recycled—reprocessed and then reused. Solvent recycling is preferred to other disposal methods for minimizing adverse environmental effects. Distillation recycles simple solvents, reducing the total volume of solvent waste to a fraction of the total solvent used. Other recycling techniques include settling and filtration. If you have a large, continuous solvent waste stream distillation may be the best option. For more information about solvent recycling see MnTAP's fact sheet *Selecting a Still for On-site Solvent Recycling* [#62].

To help you determine if investing in a solvent still makes sense for your shop, the IWRC has developed the Solvent Distillation Cost Calculator. The cost calculator requires you to enter the amount of solvent used at your shop in a year, then it calculates savings and payback.

Spills

Spills result in lost inventory and create waste. Use catch pans to minimize spills in your shop. Clean up liquids that do spill with liquid recovery methods such as a squeegee and dustpan. This will salvage as much of the product as possible. Use shop rags or absorbent material only after using a liquid recovery method. Liquid wastes are usually less expensive to dispose of than wastes containing sludge or solids like absorbents.

Wastewater

Any time liquids go down the drain caution is advised. Collision repair shops—especially in rural areas—must understand that water discharged on their property is subject to environmental rules and can easily contaminate local groundwater and the shops' own water supply.

Other Waste Sources

Check all areas of your shop and look in the Dumpster for sources of waste. For each waste found ask why it is in there and how can it be reduced or eliminated. Employees can be a great resource for identifying waste and developing elimination strategies. Talk with employees and encourage everyone to share their waste reduction ideas.

Additional Resources

Attend a hazardous waste generator training to keep informed about the environmental requirements your shop must meet. Workshops are regularly held by Twin Cities county environmental programs and the Minnesota Pollution Control Agency (MPCA). A few hours of training can answer many of your questions. For more information contact your county program or the MPCA at 651/296-6300 or 800/657-3864.

The MPCA Small Business Environmental Assistance Program (SBEAP) is also available to answer questions about environmental regulations. For more information see <www.pca.state.mn.us/programs/sbap-sectors.html#auto>, or call 651/282-6143 or 800/657-3938. SBEAP is a nonregulatory unit at the MPCA aimed at assisting business with environmental compliance questions.

Find links to additional information about some of the topics discussed above in the online version of this fact sheet at <mntap.umn.edu>.

For More Information

MnTAP has a variety of technical assistance services available to help Minnesota businesses implement industry-tailored solutions that prevent pollution at the source, maximize efficient use of resources, and reduce energy use and cost. Our information resources are available online at <mntap.umn.edu>. Or, call MnTAP at 612/624-1300 or 800/247-0015 from greater Minnesota for personal assistance.