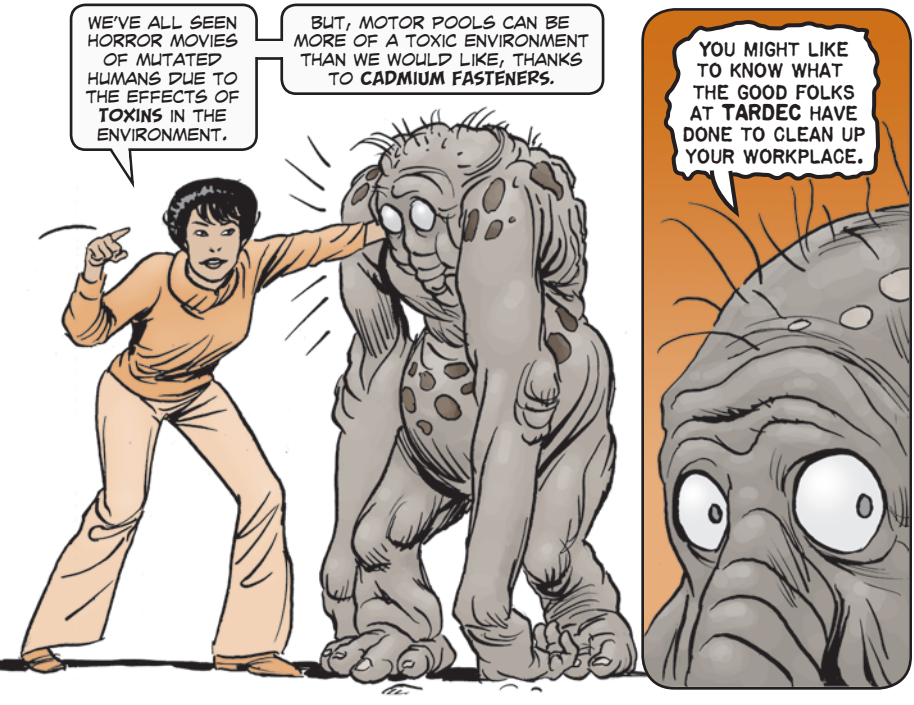
Toxins as a Form of Corrosion



Removal of cadmium fasteners from the Stryker, or any vehicle, may require sanding or grinding. Most of the toxic cadmium falls as small pieces that can be easily cleaned up, but some cadmium becomes dust.

Cadmium dust on skin, clothing and work surfaces can be removed by washing—but inhaled cadmium dust is hazardous to your health!

The risk is great enough to require protective clothing and respirators when removing cadmium fasteners. Consult your local industrial hygienist or safety professional for recommendations.

Some corrosion control experts at TACOM's Research, Development and Engineering Center (TARDEC) wondered if non-toxic fasteners wouldn't be better.

At point-of-purchase, cadmium fasteners are cheaper but non-cadmium fasteners offer significantly lower life-cycle costs when you factor in clean-up and hazardous material disposal costs.

Soldiers can reduce cadmium exposure by applying the good word found on Pages 38 and 39.

One of the best ways to prevent corrosion is to root out the conditions that lead to it. In this case, TARDEC eliminates the toxic/corrosive effects of cadmium to the health of Soldiers and saves the Army money.

Cadmium is a silver-white metal element that's commonly used as a protective coating, a hardener, a battery component and a paint pigment. That means it's all over any motor pool.

Unfortunately, cadmium is also a known carcinogen and can cause lung and kidney damage. That's why Soldiers should do everything possible not to expose themselves to it. Normally, grinding and sanding produce particle sizes that will not be airborne. However, don't use compressed air to clean work benches, parts and areas because cadmium dust can produce an inhalation hazard. Keep the hazard limited to a skin and ingestion hazard. Maintain a clean work environment and wash frequently.

You are most at risk to cadmium exposure while grinding, sanding or welding metal parts, particularly bearings and axles. The fine cadmium particles get into the air where you can unknowingly inhale them, especially if compressed air is used to clean or dry parts. This can also spread cadmium particles to adjoining areas like break rooms and offices.

Wear a respirator and protective clothing, such as coveralls, as determined by a qualified industrial hygienist.

- Welding, sanding and grinding should be done in areas that can be washed to remove cadmium waste. These processes are best done outside the shop to reduce inhalation hazards. People not involved should stay away from these processes

- Use exhaust ventilation to capture cadmium dust at its source. Ensure the work environment is periodically evaluated by industrial hygienists or safety professionals to provide adequate and appropriate protection.

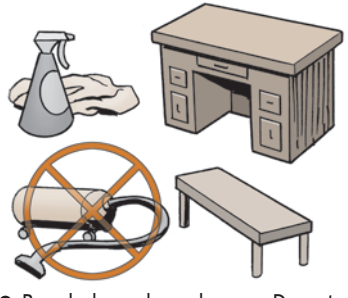
- Never shake or blow dust that might contain cadmium off clothing. That just puts the cadmium in the air where it can be inhaled.

- Keep your home free of possible cadmium contamination by leaving work clothing in designated work locker areas.

- Don't wash contaminated clothing with non-contaminated clothing.

- Wash your hands and face as soon as possible after doing any repairs that might produce cadmium dust.

- Do not smoke, eat or drink in work area.



- Regularly wash work areas. Do not use a shop vac to clean since it may spread the cadmium through its exhaust.

Follow local environmental laws and Army regulations to dispose of gloves, clothing, rags, respirator cartridges and waste water.

PS END