

Rosco Manufacturing RA-300 Pothole Patcher

What the innovation is:

Spray pothole patching is the breakthrough process of filling a pothole or sealing and filling a damaged road surface by blowing liquid asphalt and aggregate into the void.

Why is it innovative:

The major appeal of this technology is its simplicity. Pothole patching using the spray patching method will increase the strength and life of the patch while also decreasing the time involved in patching and patching costs. It does this by:

- Using less labor to repair potholes. The RA-300 is a one-person operation, as compared to conventional throw-and-go methods that use two or more workers.
- The National Research Council's Strategic Highway Research Program in Washington, DC, found that spray pothole patches could be put in place more quickly, were less costly, and lasted much longer than conventional roadway patching methods.
- Truck-mounted pothole patchers provide an extremely safe environment for patching in heavy traffic or after dark. The one-person operation is completely controlled from the comfort and safety of the truck cab.
- This process allows for year-around patching of roadways (temperature must be above 0 degrees F).
- Finally, this is the most cost-efficient method of roadway repair. It is less expensive with a 45 percent cost savings compared to conventional throw-and-go patching with edge seal.

What it changed or replaced:

The technology replaces the traditionally labor-intense throw-and-go patching technique.

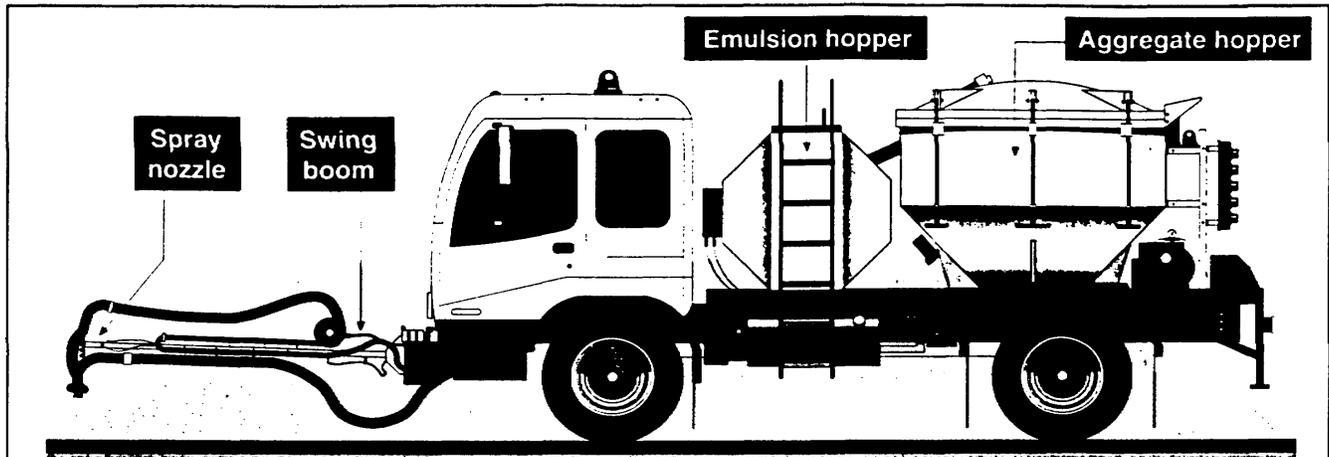
Where and when it originated, has been used, and is expected to be used in the future:

The innovation was introduced in the United States in the early 1990s. Rosco was the first manufacturer to offer the pothole patcher in a working model as a main-line product for customer use. Rosco pothole patchers are popular in the United States and have been receiving more interest on the international level. The pothole patcher will continue to evolve and improve to meet customer requirements.

Contact: Steve Simons • Rosco Manufacturing Co. • 1001 SW 1st Street
Madison, SD 57042 • 605-256-6942 • 800-658-5499 • Fax 605-256-0240 • www.roscomfg.com

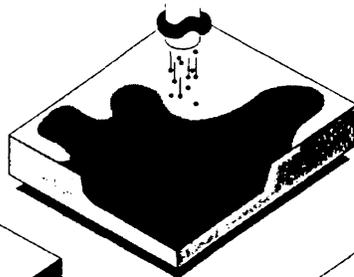
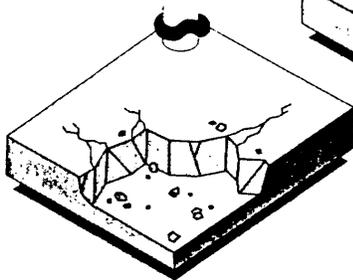
Rosco Manufacturing RA-300 Pothole Patcher

Here's How It Works . . .

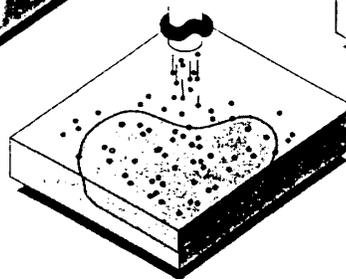


Patching a hole

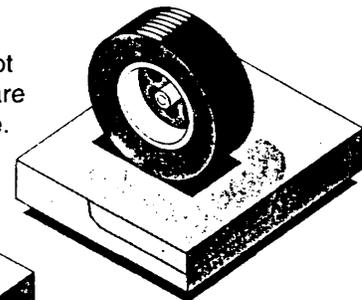
1. A high-volume blower is used to clean out the hole or crack.



2. Next, a tack coat of hot asphalt emulsion is applied.



3. A mixture of aggregate and hot asphalt emulsion are shot into the hole.



4. Finally, a top coat of aggregate is applied. Traffic can flow immediately.

Rosco Manufacturing's RA-300 patcher

● The RA-300 patcher, manufactured by Rosco Manufacturing, Madison, S.D., is a fully automated spray patching road maintenance vehicle. The RA-300 is engineered to fill potholes and cracks, providing erosion control and constructing speed bumps.

From the cab, the operator directs the entire spray patching process with the control panel and joystick. Through a patented telescopic swing boom, the machine delivers air, emulsion and aggregate to complete the maintenance task. A take-up reel automatically controls the length of the emulsion hose to accommodate the various lengths

of the boom during operation, so the hose is not dragging on the ground, getting in the way or obstructing the view. The unit also uses an aggregate feed hose from the hopper slide gate to the front bumper.

The unit's spray patching method consists of a four-step process. First the hole is cleaned with a high volume blower. Second, the same nozzle is used to supply a tack coat of hot asphalt to the area to be patched, including cracks and holes in the base. Third, aggregate and hot asphalt are combined with the forced air and shot into the hole. Last, the valve controlling the hot

asphalt is turned off and a topcoat of aggregate is applied.

To maximize working time, the RA-300 is built with an aggregate hopper capable of holding up to 5 cubic yards (4.6 cubic m) of material. The whole process takes approximately one minute to complete, according to the manufacturer and traffic can flow immediately.

The RA-300 includes an arrow-board mounted on the back of the chassis for safety. Another safety factor: The operator is not required to leave the cab during any step of the process.

Reprinted with permission from Asphalt Contractor magazine.