

# **Road and Asphalt Repair Patchers**

\*Patchers shown with optional equipment

#### COMBINE THE PROVEN BENEFITS OF SPRAY PATCHING WITH THE LATEST TECHNOLOGY:



ONE PERSON OPERATION TO REDUCE LABOR COST



ASPHALT OR CONCRETE REPAIR YEAR-ROUND



90%+ COMPACTION RATE WITHOUT USE OF COMPACTOR



IMMEDIATE TRAFFIC FLOW TO KEEP DELAYS TO A MINIMUM

Your Schwarze Dealer.

The U.S. Department of Transportation's National Research Council's Strategic Highway Research Program (SHRP) Report deems spray injection patching as "the most economical and longest lasting method of pothole repair." This is primarily due to the benefit of having a single operator and the average patch lasting 4-7 years.



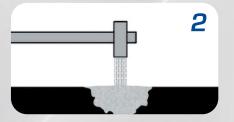
A recent report by the Minnesota Department of Transportation conducted a present worth analysis of spray patching vs. traditional "throw and roll" and found the cost of spray patching to be 1/3 the cost (\$2.31 per patch vs. \$7.17 per patch), again due to lower labor and the fact that spray injection lasted 4 years compared to throw and roll patches having to be refilled annually due to wash out from weather.

#### 4-Step Spray Injection Patching Process



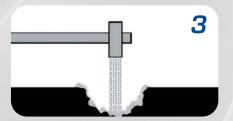
Cleaning – Dust and debris is blown from the pothole by a high velocity blower. The Operator is located in the cab eliminating being exposed to traffic and reducing the risk of potential personal injury.

Once familiarized with the spray patching process and controls, one single operator can put down approximately 9 tons of material a day.



Tacking - Asphalt emulsion is spraved to seal the surface and create a binder for the repair. A nozzle tilt allows for more efficient movement of rock when cleaning the repair and reduces rock bounce.

By utilizing spray patching for repairs, Municipalities can extend the lifespan of marginal roadways and focus on roads that are "worst-case scenarios."



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Filling - Asphalt emulsion and aggregate are combined to create a quality and durable high density repair. With a 90% compaction rate based on the Strategic Highway Initiative Testing without the use of compactors.

Spray injection patching can be used to repair potholes, alligator cracking, cup cracking as well as perform other road maintenance functions.

Dry coating - The repair is topped off with aggregate to allow immediate traffic on the new surface.



#### Superior Spray Patch System

Spray injection patching is a specialized repair process that combines hot asphalt emulsion and crushed aggregate using forced air. Spray injection patching is very versatile in the types of repairs that can be done! It is not only an exceptional repair method for potholes, you can repair alligator cracks, cupped cracks, areas that are raveling, high iron and any other type of repair where you would use traditional asphalt. This type of repair can easily be used on concrete as well.

#### What Equipment Do I Need?

Schwarze spray patch equipment consists of an aggregate hopper, hot asphalt emulsion tank and a high volume blower which is all mounted on the same piece of equipment. There are two types of machines: Trailer mounted and Truck mounted. The trailer mounted machine takes a 2 to 3 person crew to operate the equipment; the truck mounted machine needs only one person to operate the equipment.

#### Are There Cost Savings?

The cost savings is apparent right from the start, 2 men is all that you need to place approximately 8 tons of material with the trailer patcher while 1 man can place 12 tons of material with the truck. Besides labor, cost savings are realized by the longevity of the repair. The average spray patch lasts 4-7 years.

## What About The Weather?

Spray patching can be done year round as long as you have a supply of aggregate and RS-2 emulsion. Cold weather is also when the cost savings really start to add up. The repaired area will withstand the freeze-thaw movement of pavement. It does not deteriorate or break out. There are not hard edges for the snow plows to catch the patch and it will stay in place. Even when the temperature is below freezing, you will not have to go back time and time again to the same pothole.

## What About Safety?

If safety for your work force is a concern, the truck mounted unit is the answer! One person can work from the safety of the cab and still place approximately 12 tons of "HOT" material. The trucks are equipped with their own arrow-board and a crash cushion can be easily added.









For More Information Visit
WWW.SCHWARZE.COM/SURFACE-REPAIR

Repairs:     Potholes		Spray Patcher	Spray Patcher
<ul> <li>Potholes</li> <li>Alligator Cracks</li> <li>Utility Cuts</li> </ul>	<b>Roadpatcher</b> <sup>**</sup>	<b>Street Max</b>	Load King
<ul> <li>Shoulder Work</li> <li>Depressions</li> <li>Edge Raveling</li> </ul>	Mounts on various cabover chassis to meet requirements	Fed from a standard dump body with pintle hitch	Self contained unit carries its own aggregate and emulsion, and can be towed with a one-ton pickup
AUXILIARY ENGINE			
Manufacturer Model Horsepower Starting system Charging system Battery Fuel tank	Perkins T4F 404F-E22TA 67 HP @ 2600 rpm Electric 12 volt; 85 amp 12 volt; 550 cca 40 gallon	Deutz T4F TD2.9 74 HP @ 2600 rpm Electric 12 volt; 85 amp 12 volt; 550 cca 40 gallon	Perkins T4F 404F-E22TA 67 HP @ 2600 rpm Electric 12 volt; 85 amp 12 volt; 550 cca 40 gallon
BLOWER SYSTEM			
Type Drive Output	Lobe-Type Air Blower Direct Drive 435 cfm	Lobe-Type Air Blower Direct Drive 670 cfm (18.97 cubic meters per minute) @ 2200 RPM	Lobe-Type Air Blower Direct Drive 435 cfm
Dimensions	4 in x 6 in (102 mm x 152.4 mm)	5 in x 5 in (127 mm x 127 mm)	4 in x 6 in (102 mm x 152.4 mm)
AGGR. DELIVERY HOSE			
Type Inner diameter Hose length Maximum flow	Rubber lined, abrasion resistant, spiral reinforced, non-kinking 2 <sup>1/2</sup> in (63 mm) 35 ft 150 lbs per minute	Wire reinfoced, flexible, gum lined tri-folding system 4 in (101.6 mm) 19 ft 150 lbs per minute	Rubber lined, abrasion resistant, spiral reinforced, non-kinking 3 <sup>1/2</sup> in 19 ft 125 lbs per minute
AGGREGATE HOPPER BODY Capacity	6.5 cu yd	2 cu ft	2 cu yd
Cover Conveyance	n/a Conveyer to air lock air flow system	n/a Venturi air flow system	Nylon/Hinged Metal Doors Gravity fed with vibration assist; Venturi air flow system
Construction Fill opening	10 gauge Steel 9'10" x 6'10"	10 gauge Steel n∕a	10 gauge Steel 5'3" x 5'3"
EMULS. STORAGE & DEL.			
Emulsion capacity Compressor Delivery pressure Heating element Nozzle temp Flush Tank Capacity Tank Insulation Insulation R-Value	300 to 400 gallon 18 cfm 70psi 110 volt, 2000 watt; thermostatically controlled 160° F 30 gallon Polyurethane Foam 20	300 gallon 12 cfm 70psi 110 volt, 2000 watt; thermostatically controlled 160° F 30 gallon Polyurethane Foam 20	100 gallon 12 cfm 70psi 110 volt, 2000 watt; thermostatically controlled 160° F 30 gallon Polyurethane Foam 20
SAFETY EQUIPMENT			
Lighting Signage	Amber LED strobe light; Slow moving vehicle emblem; warning triangle; optional directional arrow board	Amber LED strobe light; Slow moving vehicle emblem; warning triangle; optional directional arrow board	Amber LED stobe light; Slow moving vehicle emblem; warning triangle; optional directional arrow board
Alarm Fire	Backup alarm 5 lb fire extinguisher	Backup alarm 5 lb fire extinguisher	Backup alarm 5 lb fire extinguisher
			5
PAINT Application	One coat sealer/primer; two coats	One coat sealer/primer; two coats	One coat sealer/primer; two coats
Brand Color	Axalta Imron Elite Standard white	Axalta Imron Elite Standard yellow	Axalta Imron Elite Standard yellow

Note: Design and specifications subject to change without notice.



**Repairs**:





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