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Maine Department of Transportation

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BERGKAMP FP5 FLAMELESS POTHOLE PATCHER

Demonstration at MaineDOT's Topsham Maintenance Facility
August 2009



The FP5 is a truck-mounted all-in-one pothole patcher. This particular unit was based on a Kenworth chassis.

The FP5 features a rear-mounted pavement cutting hammer, swivel material chute, rear-mounted gravity dump spoils bin, and directional arrow lights. The flameless (electrical) heating system eliminates many of the dangerous issues found with other units such as propane and diesel-fired hot-boxes.

The heated hopper holds 5.1 cubic yards of asphalt paving material (hot or cold patch) at a constant pre-set temperature (325°F maximum.)

The FP5 can be ordered as a truck-mounted unit or it may be mounted on a trailer. The trailer-mounted unit requires an additional engine mounted on the trailer plus a tandem axle towing vehicle while the truck mounted unit uses a PTO from the vehicle's transmission. A 35,000 pound GVW truck is needed.

Electricity to run the heaters and hydraulic pumps is produced via a hydraulically-powered AC generator. The electric heating system keeps the paving material at the proper temperature at all times.

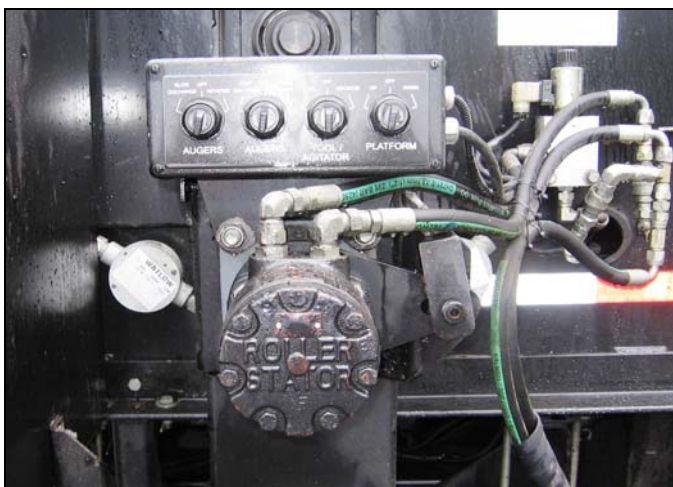
The heating system can be plugged into an external AC source to keep the paving material in the hopper at a constant temperature overnight, or over a weekend.



Rear-mounted hydraulic controls are within easy reach of the operator. These controls regulate auger speed (discharge rate) and raising & lowering of the rear-mounted tool platform.

A "weed burner" is available for heating pavement prior to patching or to help clean tools. A tack wand and on-board heated tack storage tank is included.

It is claimed by the manufacturer that the electric heating system heats the hopper more evenly than open flame heaters with fewer hot and cold spots.



Essential dash-mounted controls are within easy reach of the driver/operator from the driver's seat.

Recommended procedures for making a permanent repair:

1. The damaged pothole area is squared off
2. The old material is removed
3. A warm tack coating is applied
4. Fresh, hot asphalt is delivered to the pothole
5. The asphalt is compacted



Rear and curbside spoils bins are included to save steps and increase the safety of the crew by limiting their exposure to traffic.

An optional swing auger system delivers asphalt material in an 8.7-foot swing that ranges from the driver's side wheel track past the passenger's side wheel track.

The mix is delivered from the hopper through a rear-mounted, auger-driven swiveling chute. This chute also folds into a shoveling platform.

The hydraulic lift platform gently lowers the compactor and pavement cutter to the ground, saving wear and tear on human components.

In 2007 the City of Sanford, Florida purchased a similar Bergkamp FP5 Flameless Pothole Patcher mounted on a 2008 Freightliner M2 Chassis in the amount of \$101,569 (City of Sanford, City Commission Meeting, November 26, 2007).

A DVD of this demonstration is available from the Department's Library.

For more information on the FP5 unit, visit Bergkamp's website:
http://www.bergkampinc.com/pothole_patching.html

