



ASPHALT SYSTEMS

Asphalt System Startup Procedure

- Rev B

Using heat and gentle pressure to get asphalt moving

TECHNICAL PAPER

Rev B | 2026.09.23

Document BCP-TP-ASP

Rev B: Explains the cold-start method, required equipment and advantages over routine draining and flushing.



BearCat Pumps

1954 East Deer Valley Road | Phoenix, AZ 85024
www.bearcatpumps.com | 623-587-1350

Let heat and pressure work together

Cold asphalt does not always need to be cleared out of a system before the next run. With heat in the right places and a pump turning slowly, gentle pressure can move local cold slugs into heated sections and get circulation started.

Three things make the method work

Heat throughout the circuit. Trace the pump, screenbox, valves, meter and piping. Insulation helps retain that heat. Short connecting sections and flange joints often warm more slowly than the main equipment.

A heated relief valve. The pump body may warm enough to turn while an unheated relief remains packed with cold asphalt. Heating the relief passages allows the valve to bypass during startup and become part of the solution.

A variable-speed drive. At about **5-10% of maximum pump flow**, the heated relief can handle the reduced output and regulate startup pressure. The percentage is pump output before bypass; downstream flow may initially be zero.

Start gently, then follow the flow

- 1 Warm the pump and relief passages**
Apply heat throughout the system. Once product can move through the pump and relief, check liquid supply, valve routing and guards. Use the meter's heat blocks or tracing, not a torch.
- 2 Run at very low speed**
Start at the 5-10% flow level. Use the startup pressure established for the system and watch the gauge. The relief bypasses the reduced output while steady pressure helps shift cold slugs into warmer sections.
- 3 Increase speed as circulation develops**
Watch actual flow, pressure and drive load. As slugs soften, delivery increases. Bring the pump up gradually; if pressure rises abnormally, stop and check the heat and flow path. Higher flow changes the relief's bypass pressure.

Why this helps between runs

A system equipped for this method can stay filled between runs, reducing routine reverse-emptying and diesel flushing. Draining leaves a thin asphalt film exposed to air, where it can oxidize and harden. Flushing can also wash lubricating material away from bearings and seals. Keeping the system ready for a heated restart avoids that repeated cycle.

Any pump that is heated or pumping hot liquid should be operated with Safety Blankets properly installed. Use hot-product PPE and keep guards in place.

Method: BearCat heat-and-pressure startup paper, updated with low-flow guidance. Equipment details: [Pump and Meter Manual Rev E](#).