



## **Best Practice Update: MINIMUM ELECTRICAL LOADS ARE REQUIRED WHEN RUNNING**

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**SUBJECT: Electrical load of at least 3 kilowatts is required for successful and reliable operation**

### **Models:**

PP20, PC20

### **Symptom:**

Running a Power Pallet without enough electrical load can cause fast tar build up in gas pipes as well as clogging of filter, sticking of engine valves and failure of the governor.

### **Cause:**

Low loads result in lowered and uneven temperatures within the reactor, leading to reduced tar cracking, which can overwhelm filtration capacity and contaminate gas plumbing and engine.

### **NOTE:**

*One of the leading causes of engine failure is 'babying' the engine (extended running of the engine with very low load). With low loads the engine runs more quietly and smoothly which may seem easier on the system, but low loads also reduce the temperature within the reactor, leading to poor quality gas that will eventually damage the engine.*

### **Action:**

Do not start your Power Pallet/Cube until an adequate electrical load of at least 3000 W has been prepared and attached to the generator output. Do not apply load, i.e close contactors, until the engine is running.

Once the engine is running, always apply a load of at least 3 kW within 5 minutes of starting.

Avoid flaring for more than 10 minutes during maintenance or other operations that require an engine shut down. Do not run flare for more than 20 minutes.

After a shutdown, make sure to run the flare until the gasifier is back up to proper operating temperatures before restarting engine.

The latest *Operation Manual* and *Technician's Handbook* for your model are available online at [www.allpowerlabs.com/support](http://www.allpowerlabs.com/support)

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