



Technical Service Bulletin

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Service Bulletin # 0114

Subject: SPHD BURNER LOCKOUT

Models Affected: SPHD-2.0, 3.0

SMCI has received several reports that the bottom fired SPHD units are experiencing burner lockout and difficulty with initial burner firing. Through testing Stepp has found that the current burner set up has a difficult time atomizing bio blended diesel fuels. We have found two simple solutions to this issue.

1) Use non bio blended diesel, diesel # 1, or kerosene

or

2) Change burner set up to allow for bio blended diesel usage with the following parts and settings:

- P10005135 F-6 fuel return head
- P10005136 0.75 GPH nozzle
- Increase fuel pressure to 160PSI
- Air settings remain the same as factory (large air 0) (small air 3)

Tools needed

9/16 wrench
9/16 socket , ratchet and extensions
5/8 wrench
Philips screw driver
Flat head screw driver

Replacement steps

- 1) unplug 4 pin electrical connector from burner
- 2) remove 4 nuts and washers holding burner onto mounting plate. For most units the burner can be spun around and worked on without removing the fuel hoses.
In the event you do have to remove the fuel hoses label the inlet hose. Damage to burner fuel pump and fuel pressure gauge can occur if fuel lines are hooked up incorrectly.
- 3) Remove old fuel return head and discard
- 4) Remove old fuel nozzle and discard (*do not move the ignitor electrodes while removing or installing nozzle, doing so could cause burner not to ignite*)
- 5) install new 0.75 burner nozzle
- 6) install new F-6 fuel return head
- 7) install burner back into unit and reconnect electrical connector(*note if fuel lines got removed please allow the burner fan to run for up to one minute before firing to allow the removal of air from system*) also (*if you turned off the fuel valve at tank remember to turn it back on before firing burner*)
- 8) check and adjust the air settings on the burner to factory specification (listed above and on page 3)
- 9) Fire burner use flat head screw driver to increase burner run pressure to 160 psi (see page 3 for adjustment screw location)



Direct any questions about this bulletin to Justin 952-698-8121 or Justin@steppmfg.com



return head

fuel nozzle

