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INSTALLATION INSTRUCTION TO CONVERT
H24LT-NGE-PE HEATER TO A H24-NGE-PE HEATER

PACKING LIST

<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	H24 Ring Burner
1	3/16" - 1/4" NPT Orifice
1	1/2" NPT x 6" Pipe
1	4" O.D. Screen
2	3/8" NPT Locknut
1	Installation Instruction Bulletin #1114

NOTE: Before starting conversion, check to see if all items called out on packing list are in the kit.

To convert your H24LT-NGE-PE heater to a H24-NGE-PE heater perform the following steps:

1. Remove spark plug wire from spark plug and remove flame probe wire from flame probe.
2. Remove spark plug from burner. Remove flame probe by removing 5/16" bolt and lockwasher which holds flame probe mounting bracket to burner.
3. Remove present burner by removing nuts, lockwashers, and flatwashers from carriage bolts that secures the burner to the heater housing. Then lift burner out of heater.



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4. Remove orifice assembly from 2" long 1/2" NPT pipe. The 2" long 1/2" NPT pipe is part of the heater plumbing that passes through the heater housing. (NOTE: Orifice assembly includes orifice, burner inlet cone sealing adaptor, 3 1/2" long 3/8" NPT pipe, and 90° reducer elbow).
5. Loosen square headed setscrew securing the heater plumbing, where heater plumbing passes through the heater housing. Then remove assembled pipe, which includes 2" long 1/2" NPT pipe, 1/2" NPT coupler, and 5" long 1/2" NPT pipe, from the rest of the heater plumbing.
6. Thread 6" long 1/2" NPT pipe, which is provided in conversion kit, into heater plumbing. The 6" long pipe is to be threaded into the same place as the previous pipe assembly was removed from. Do not forget to use some type of pipe threading compound on pipe threads before threading pipe through heater plumbing.
7. Remove burner inlet cone sealing adaptor from orifice assembly.
8. Change orifice for high temperature drying depending on which fuel is being used:
 - a. If natural gas is being used remove orifice from orifice assembly.
 - b. If propane is being used replace 1/8" - 1/4" NPT orifice with 3/16" - 1/4" NPT orifice in orifice assembly. The 3/16" - 1/4" NPT orifice is provided on conversion kit.
9. Add 4" O.D. screen and two locknuts to orifice assembly. First, thread one locknut onto 3/8" NPT pipe at the same end as the orifice goes. Second, slip 4" O.D. screen onto the 3/8" NPT pipe and up against first locknut. Third, thread second locknut onto the 3/8" NPT pipe. Tighten the second locknut up against screen, so the screen is securely fastened.
10. Thread orifice assembly onto the 6" long 1/2" NPT pipe. When the orifice assembly is tight on the pipe point the orifice toward the air outlet end of the heater. Do not forget to use some type of pipe threading compound on the pipe threads before threading orifice assembly to pipe.
11. Move the nuts that remain on the carriage bolts after the burner was removed, down the carriage bolts so there is a distance of 5" from end of carriage bolts to nuts. Add a flatwasher to each carriage bolt if a flatwasher is not already on the bolt.
12. Lift high temperature burner into the heater such that the premix cone of the burner is on the same side of the heater as the orifice assembly and the premix cone is pointing toward the air inlet end of the heater. Then slip carriage bolts into mounting brackets of burner. Add a flatwasher, lockwasher, and nut to each carriage bolt after slipping carriage bolt into burner mounting brackets.



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13. Center the high temperature burner in the heater so there is a equal distance between the burner and the heater housing all the way around. To adjust for centering, move nut and flatwasher that are on the outside of burner mounting bracket on each carriage bolt up or down. After the burner is center, securely tighten the burner in place by tightening down the nuts that are on the inside of burner mounting brackets on each carriage bolt.

14. Center orifice into the premix cone by moving 6" long pipe in and out of the heater. When orifice is centered tighten the square headed setscrew used to secure the heater plumbing where the heater plumbing passes through heater housing.

If screen on orifice assembly is squashed up against the premix cone, loosen the nuts that are securing the burner and move the burner back away from the screen as far as possible. Then retighten nuts securing the burner and recheck the centering of burner and the centering of the orifice.

15. Install the spark plug on the burner. Install the flame probe on the burner by using 5/16" bolt and lockwasher, which holds flame probe mounting bracket to the burner. For adjusting flame probe see adjustment section of the heater installation and operation manual.

16. Reconnect the spark plug wire to the spark plug and make sure that the wire is securely fasten. Reconnect the flame probe wire to the flame probe.