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

PACKING LIST

<u>QUANTITY</u>	<u>DESCRIPTION</u>
1	Low Temp. Ring Burner
1	1/8" - 1/4" NPT Orifice
1	1/2" NPT x 2" Pipe Nipple
1	1/2" NPT Pipe Coupler
3	3/8" - 16 UNC x 8" Carriage Bolt
1	Burner Inlet Cone Sealing Adaptor
1	1/2" NPT x 5" Pipe Nipple
1	1/4" - 1/4" NPT Orifice
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NOTE: Before starting conversion, check to see if all items called out on packing list are in the kit.

To convert your H24-NGE-PE heater to a H24LT-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 secure burner to heater. Then lift burner out of heater.



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4. Remove 5" long carriage bolts from heater, but make sure all remaining nuts and flatwashers are removed from carriage bolts. Otherwise carriage bolts will not slip through heater housing.
5. Remove orifice assembly from 6" long 1/2" NPT pipe. The 6" long 1/2" NPT pipe is part of the heater plumbing that passes through the heater housing. (Note: Orifice assembly includes orifice, screen, 3 1/2" long 3/8" NPT pipe, and 90° reducer elbow).
6. Loosen square headed setscrew securing the heater plumbing where heater plumbing passes through the heater housing. Then remove 6" long 1/2" NPT pipe from rest of the heater plumbing.
7. Thread 5" long 1/2" NPT pipe, which is provided in conversion kit, into heater plumbing. The 5" long 1/2" NPT pipe is to be threaded into the same place as previous 6" long pipe was removed from. Do not forget to use some type of pipe threading compound on pipe threads before threading pipe to heater plumbing.
8. Thread 1/2" NPT pipe coupler to end of 5" long pipe. Do not forget to use some type of pipe threading compound on pipe threads before threading coupler to 5" long pipe.
9. Thread 2" long 1/2" NPT pipe into 1/2" NPT coupler. Do not forget to use some type of pipe threading compound on pipe threads before threading into coupler.
10. Remove 4" O.D. screen and 3/8" NPT locknuts from orifice assembly.
11. Change orifice for low temperature drying depending on which fuel is being used.
  - a. If natural gas is being used put a 1/4" - 1/4" NPT orifice in orifice assembly. The 1/4" - 1/4" NPT orifice is provided in conversion kit.
  - b. If propane is being used, replace 3/16" - 1/4" NPT orifice with 1/8" - 1/4" NPT orifice in assembly. The 1/8" - 1/4" NPT orifice is provided in conversion kit.
12. After changing orifice thread burner inlet cone sealing adaptor to orifice assembly. The burner inlet cone sealing adaptor goes on the same end of the orifice assembly as the orifice. Do not forget to use some type of pipe threading compound on pipe threads before threading burner inlet cone sealing adaptor to orifice assembly.



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13. Thread orifice assembly onto 2" long 1/2" NPT pipe. When the orifice assembly is tight on the pipe point the orifice towards the air outlet end of the heater. Do not forget to use some type of pipe threading compound on pipe threads before threading orifice assembly to pipe.
14. Slip 8" long carriage bolts in square holes of heater so the threads are inside the heater. The 8" long carriage bolts are provided in the conversion kit.
15. Thread a nut onto each of the 8" long carriage bolts. Thread the nut about 4" down on each bolt. Then a flatwasher to each carriage bolt.
16. Lift low temperature burner into heater such that the burner inlet cone sealing adaptor slips into the burner premix cone. Then slip carriage bolts into burner mounting brackets. Add a flatwasher, lockwasher, and nut to each carriage bolt after slipping carriage bolts into burner mounting brackets.
17. Center low temperature burner in heater so there is a equal distance between burner and heater housing all the way around. Adjust for centering move nut and flatwasher that are on the outside of the burner mounting bracket on each carriage bolt up or down. Due to the fact that the burner inlet cone sealing adaptor is inside of burner premix cone, the burner plumbing by need to be adjusted in or out of the heater housing depending on the centering of burner. After burner is centered securely tighten burner in place by tightening down nuts that are on the inside of burner mounting bracket on each carriage bolt.
18. After burner is securely tightened, then tighten the square headed setscrew used to secure heater plumbing where heater plumbing passes through the heater housing.
19. Install spark plug on burner. Install flame probe on burner by using 5/16" bolt and lockwasher which holds flame probe mounting bracket to burner. For adjusting flame probe see adjusting section of heater installation and operation manual.
20. Reconnect spark plug wire to spark plug and make sure the wire is securely fasten. Reconnect flame probe wire to flame probe.