

GS Exhaust Manifold Gasket – Replacement Instructions



Caution: Servicing

- The plumbing and electrical compartments contain high voltage components and wiring. Access should be limited to authorized personnel only.
- Components in contact with steam can become hot and burn if touched.
- Condair does not accept any liability for installations of humidity equipment installed/serviced by unqualified personnel or the use of parts/ components/ equipment that are not authorized or approved by Condair.

Tools required:

Torque wrench
Imperial socket set
Med Phillip Screwdriver
Gas detector
Humidifier Maintenance Log

Recommended Safety Equipment:

Two Service Personnel
Safety Glasses
Electrical & Gas Lockout
Flame retardant clothing
(100% cotton, no acrylics)
Fire extinguisher
Work Gloves

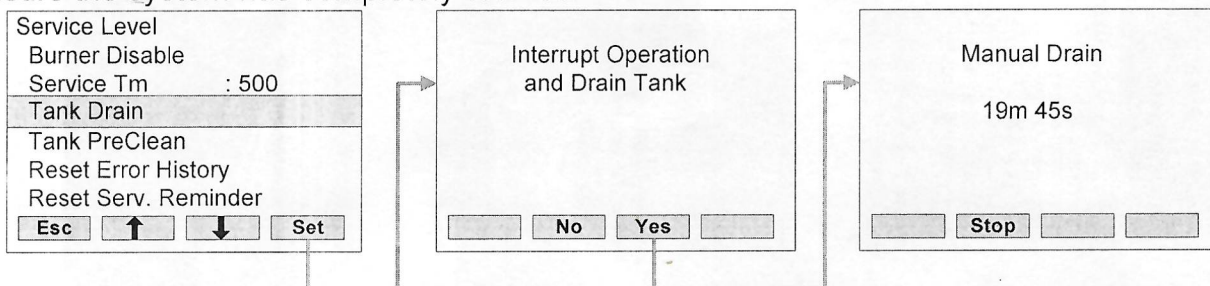


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Natural gas is a combustible gas that will settle into low level areas, remove potential sources of ignition. Inhalation of Natural Gas will displace oxygen, which may cause suffocation when inhaled. If the area is poorly ventilated, vacate the immediate area while bleeding gas lines and allow pooled gasses to ventilate. Keep an assistant outside the immediate work space as a safety precaution.

Step 1: Make Safe

- a) Access the service level menu (Menu>0335 (or 8808)>Service Level) and use the Tank Drain parameter to interrupt operation and drain the system. Wait for the timer to count down, then power the unit off using the front rocker switch. Open the manual drain to ensure the system has completely drained.



- b) Close the gas line and water shut-off valves. Open the electrical disconnect and lockout the gas shut-off and electrical panel using safe work practices.
- c) Remove the Blower Compartment Service door. Allow the exhaust stack to cool.



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- d) Wearing appropriate eye/ear protection, use a crescent wrench to partially open and slowly bleed one of the gas fittings on the gas flex tubes indicated in Figure 1 **Error! Reference source not found.** Continue to slowly bleed gas until no more gas can be heard escaping the fitting.

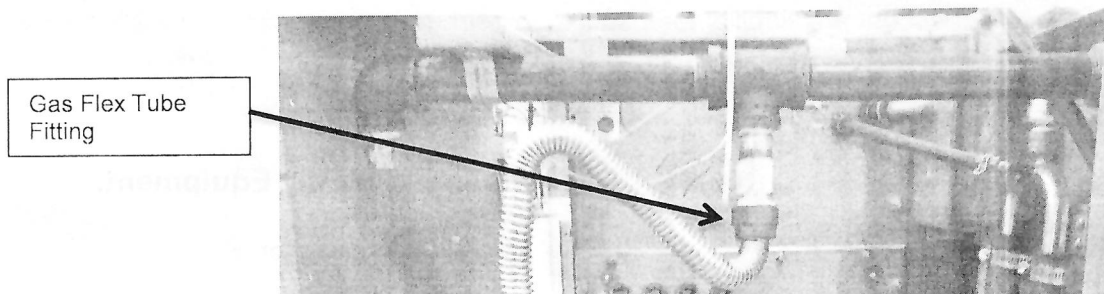


Figure 1: Gas Flex Mount

Step 2: Remove Burner Tubes

- Undo the electrical connections to the blower, igniter, and flame proving switch. See Figure 2.
- Remove one end of each of the gas flex tubes to allow service access to the exhaust manifold/Heat Exchanger(s).

Note: Optional Direct Vent systems may have to be removed if equipped.

- Unbolt the Burner tube from the Heat exchanger, set the blower/burner tube assembly aside.

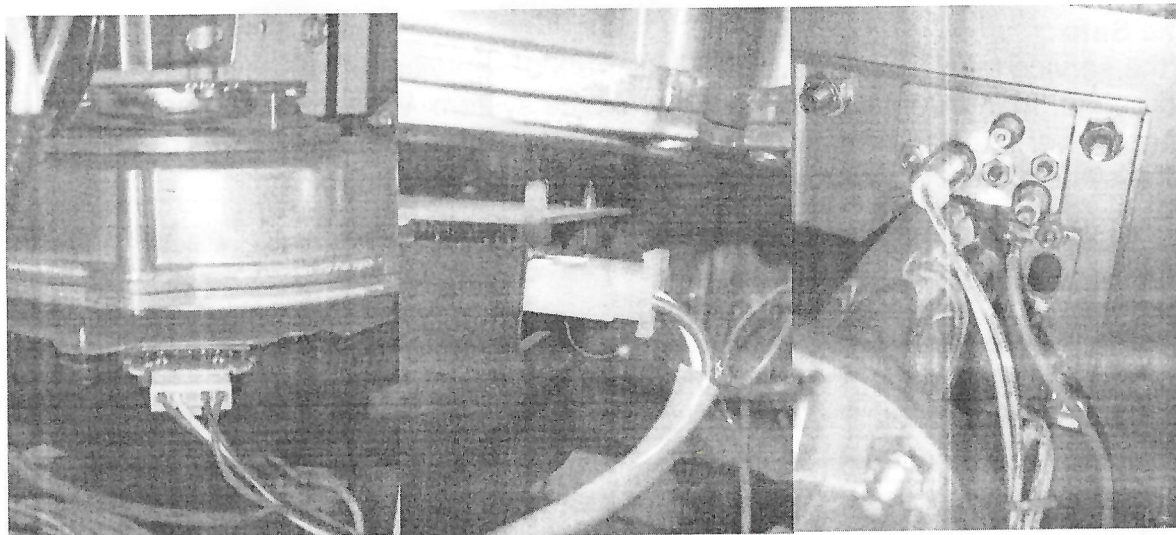


Figure 2: Burner Tube



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Step 3: Remove Exhaust Manifold

- a) Remove the stack temperature probe(s) from the stack, unbolt and remove the stack(s) and set them aside. Dispose of the used paper gasket(s) (silicone gaskets should be reusable) and clean any remaining debris from the old gasket off the manifold and probe assembly.

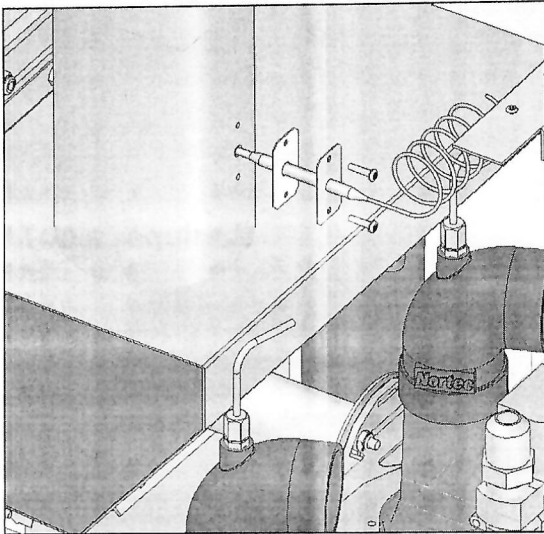


Figure 4:
Stack Temp
Probe

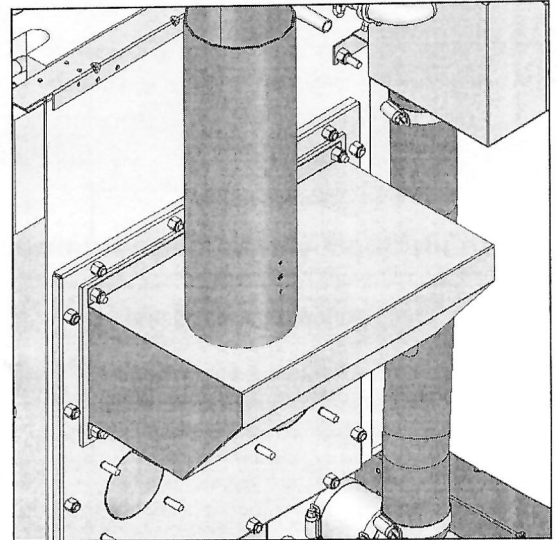


Figure 4:
Stack
Mounting

Step 4: Remove Heat Exchanger

Note: It may be required to open the service hatch and remove scale deposits from, and under, the heat exchanger in order to extract from the humidifier tank. It is advised to use two personnel to extract the heat exchanger(s).

- a) Unbolt and pull the Heat Exchanger from the Tank.
- b) Dispose of the used Heat Exchanger O-Ring.
- c) Clean the mounting surface for the O-Ring and the mating faceplate of the Heat Exchanger.

Step 5: Reassembly

- a) Install the new O-Ring on the tank as per Figure 5 and remount the heat exchanger. Tighten the mounting nuts in a cross tightening pattern to 30 lb-in (3.4 Nm), maximum 50 lb-in (5.7 Nm).

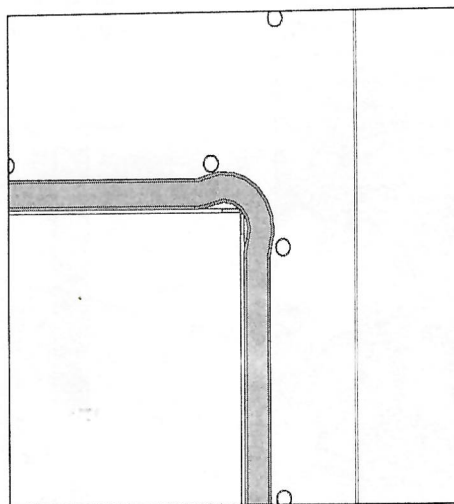


Figure 5: O-Ring Install

- b) Install the Burner Tube assemblies with the new gasket. Tighten the mounting nuts to 30 lb-in (3.4 Nm), maximum 50 lb-in (5.7 Nm). Reconnect the electrical connectors.
- c) Install the new silicone gasket and remount the exhaust manifold. Tighten the mounting nuts to 30 lb-in (3.4 Nm), maximum 50 lb-in (5.7 Nm).

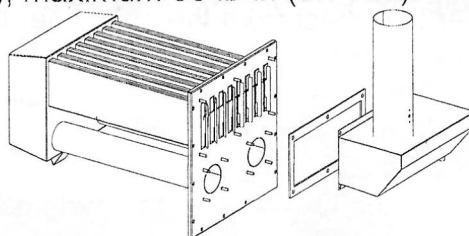


Figure 6: Gasket/Exhaust manifold mounting

- d) Install the new stack temperature probe with the new gasket.
- e) Reconnect the gas flex lines.

Step 6: Test

- a) Remove the lockouts and close the electrical disconnect and water shut off valve. Open the gas shut-off.
- b) Perform a leak test on the gas fittings. Fix any leaks as identified.
- c) Turn the humidifier On and generate system demand. Observe for correct operation.
- d) Once ignition is completed use the gas tester to inspect gas pipe fittings for gas leaks, repair any leaks using safe work practices.
- e) Reinstall the Blower Compartment Service door panel. Fill out the maintenance log.