



# COMMON PROBLEMS FOR GAS MODELS

Rev. 1

| CONDITION                              | CAUSE                                                                                                                                                                                                                                                                    | REMEDY                                                                                                                                                                                                                                                                                                                                                       | CONDITION                     | CAUSE                                                                                                                                                                                                                                                               | REMEDY                                                                                                                                                                                                                                                                                               |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Burner will not ignite.                | No gas.<br>Dirt in gas line.<br>Pilot line clogged.<br>Main burner line clogged.<br>Defective thermocouple.<br>Defective thermostat.<br>Thermostat set too low.<br>Heater installed in confined area.                                                                    | Check with utility.<br>Notify utility - install dirt trap in gas lines.<br>Clean - check for source of trouble and correct.<br>Clean - check for source of trouble and correct.<br>Replace with new thermocouple.<br>Replace with new thermostat.<br>Turn temperature knob to desired temperature.<br>Provide ventilation by use of louvers in wall or duct. | Insufficient hot water.       | Low gas pressure.<br>Orifice too small.<br>Improper calibration.<br>Thermostat set too low.<br>Heater too small for job.<br>Sediment or lime in tank.<br>Leaking faucets.<br>Wasted hot water.<br>Long runs of exposed piping.<br>Hot water piping in outside wall. | Check with utility.<br>Replace with correct valve.<br>Replace control valve.<br>Turn temperature knob to desired temperature.<br>Install adequate heater.<br>Drain - check to see if water treatment is necessary.<br>Repair faucets.<br>Advise customer.<br>Insulate.<br><br>Insulate.              |
| Burner flame floats - lifts off ports. | High gas pressure.<br>Orifice too large.<br>Flue clogged.<br>Heater installed in confined area.<br>Cold drafts.                                                                                                                                                          | Check with utility.<br>Replace with correct orifice.<br>Clean - check for source of trouble and correct.<br>Provide ventilation by use of louvers in wall or duct.<br>Check source and correct.                                                                                                                                                              | Slow hot water recovery.      | Insufficient secondary air.<br>Low gas pressure.<br>Orifice too small.<br>Thermostat set too low.<br>Sediment or lime in tank.<br>Heater too small for job.<br>Wrong piping connection.<br>Wasted hot water.                                                        | Provide ventilation to heater.<br>Check with utility.<br>Replace with correct orifice.<br>Turn temperature knob to desired temperature.<br>Drain - check to see if water treatment is necessary.<br>Install adequate heater.<br>Correct piping - dip tube must be in cold inlet.<br>Advise customer. |
| Burner flame yellow, lazy.             | Insufficient secondary air.<br>Flue clogged.<br>Main burner line clogged.<br>Heater installed in confined area.                                                                                                                                                          | Provide ventilation to heater.<br>Clean - check for source of trouble and correct.<br>Clean - check for source of trouble and correct.<br>Provide ventilation by use of louvers in wall or duct.                                                                                                                                                             | Drip from relief valve.       | Heater stacking.<br>Excessive water pressure.                                                                                                                                                                                                                       | Lower thermostat setting.<br>Use pressure reducing valve and pressure relief valve.                                                                                                                                                                                                                  |
| Burner flame too high.                 | Insufficient secondary air.<br>Orifice too large.<br>Defective thermostat.                                                                                                                                                                                               | Provide ventilation to heater.<br>Replace with correct orifice.<br>Replace with new thermostat.                                                                                                                                                                                                                                                              | Thermostat fails to close.    | Defective thermostat.<br>Improper calibration.                                                                                                                                                                                                                      | Replace with new thermostat.<br>Replace control valve.                                                                                                                                                                                                                                               |
| Flame burns at orifice.                | Low gas pressure.<br>Defective thermostat.                                                                                                                                                                                                                               | Check with utility.<br>Replace with new thermostat.                                                                                                                                                                                                                                                                                                          | Condensation.                 | Heater installed in confined area                                                                                                                                                                                                                                   | See page 12.                                                                                                                                                                                                                                                                                         |
| Pilot will not remain lit.             | No gas.<br>Dirt in gas lines.<br>Pilot line clogged.<br>Thermocouple connection loose.<br>Defective thermocouple.<br>Cold drafts.                                                                                                                                        | Check with utility.<br>Notify utility - install dirt trap in gas lines.<br>Clean - check for source of trouble and correct.<br>Tighten with fingers - then take ¼ turn with wrench.<br>Replace with new thermocouple.<br>Check source and correct.                                                                                                           | Combustion odours.            | Insufficient secondary air.<br>Heater installed in confined area.<br>Flue clogged.                                                                                                                                                                                  | Provide ventilation to heater.<br>Provide ventilation by use of louvers in wall or duct.<br>Clean - check for source of trouble and correct.                                                                                                                                                         |
| High operating costs.                  | Improper calibration.<br>Thermostat set too high.<br>Sediment or lime in tank.<br><br>Heater too small for job.<br>Wrong piping connections.<br>Leaking faucets.<br>Gas leaks.<br>Wasted hot water.<br>Long runs or exposed piping.<br>Hot water piping on outside wall. | Replace control valve.<br>Turn temperature knob to desired temperature.<br>Drain - check to see if water treatment is necessary.<br>Install adequate heater.<br>Correct piping - dip tube must be in cold inlet<br>Repair faucets.<br>Check with utility - repair at once.<br>Advise customer.<br>Insulate.<br><br>Insulate.                                 | Smoking and carbon formation. | Insufficient secondary air.<br>Low gas pressure.<br>Burner clogged with lint.                                                                                                                                                                                       | Provide ventilation to heater.<br>Check with utility.<br>Remove - clean.                                                                                                                                                                                                                             |
|                                        |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                              | Sooting.                      | Flue clogged.<br>Defective thermostat.<br>Heater installed in confined area.                                                                                                                                                                                        | Clean - check for source of trouble and correct.<br>Replace with new thermostat.<br>Provide ventilation by use of louvers in wall or duct.                                                                                                                                                           |
|                                        |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                              | Pilot flame too small.        | Low gas pressure.<br>Pilot line or orifice clogged.<br>Wrong pilot burner.                                                                                                                                                                                          | Check with utility.<br>Clean - check for source of trouble and correct.<br><br>Replace.                                                                                                                                                                                                              |
|                                        |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                              | Pilot flame too large.        | Wrong pilot burner.                                                                                                                                                                                                                                                 | Replace.                                                                                                                                                                                                                                                                                             |
|                                        |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                              | Smelly water.                 | Sulphides in the water.                                                                                                                                                                                                                                             | Replace the anode with a McRay anode.                                                                                                                                                                                                                                                                |