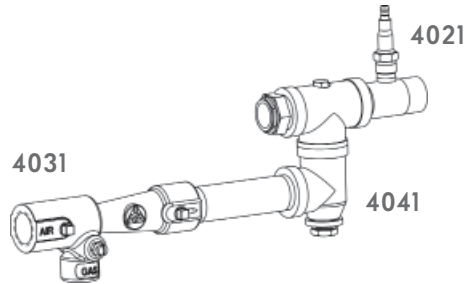


# Pilot Installation Tips | 4011/4021 Pilot

- To make it easier to remove a threaded pilot tip from the burner in the future. Use anti-seize compound on threaded discharges and screw hand tight into the burner mounting. Installing a pipe union or a 4041 between the pilot mixer and the pilot tip will also speed up pilot tip removal.

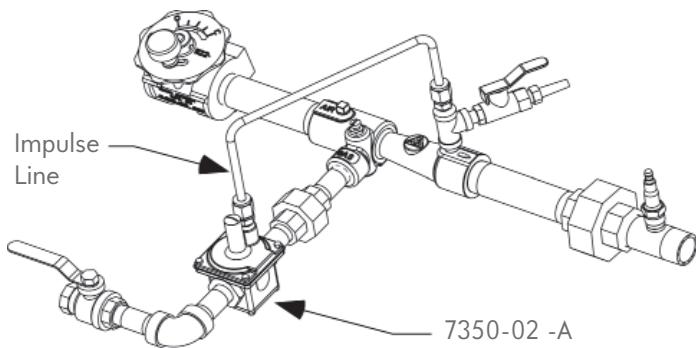


- Adding at least 5 pipe diameters of pipe between the mixer and the pilot tip adds additional mixing length to insure good quality premix.

- The preferred location for pilot tips (and UV cells) is on the top or side of a burner so that scale, dirt, and refractory crumbs cannot fall into it.

- "Zero governor" pilot systems require an atmospheric regulator (like the 7350-##-A) to supply gas at zero gauge pressure to the pilot mixer, but zero governor systems only work well in open air applications when there is no chance of back pressure.

If the burner back pressure varies (like in many pilot systems), the 7350 ratio regulator vent should be cross-connected with an impulse line to the 4031 mixture pressure tap or to the 4031 air pressure tap. Using the mixture pressure tap provides better air/fuel ratio control (especially on suction systems).

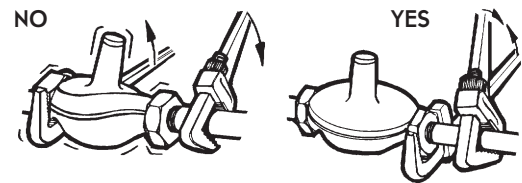


- Short run impulse lines for pilot systems should be 1/4" thin wall tubing. 304 stainless tube 1/4" OD x .035" wall is a good choice. Copper tubing can also be used, but is more susceptible to kinking.

- If the pilot regulator inlet gas pressure exceeds its pressure rating, install a pressure-reducing regulator upstream. 7344 Regulators reduce up to 25 psi gas to 4-12" w.c. For capacities or inlet pressures beyond the range of 7344 Regulators, see Bulletin 7337 and 7349. Use a separate pilot regulator. Do not run pilot gas through any of the regulators for main burner gas because those regulators cannot turn down low enough for pilot gas flow, and will therefore chatter or shut-off.

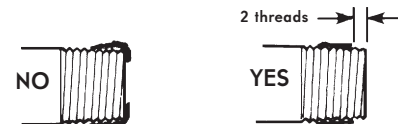
- The inlet pressure to the pilot gas ratio regulator (7350) should be at least 2 psi greater than the connected pilot air or mixture pressure.

- Avoid stressing and distorting valves and regulators, small pilot regulators may be easily damaged by incorrect use of wrenches. Put your wrench on the end nearest the pipe that it's being threaded into.

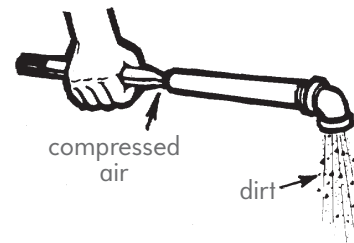


- Undersized piping and plugged lines are common causes of pilot problems. Avoid corrugated connectors and hoses, they cause more pressure loss than regular pipe and fittings. Tubing has 1/2 the area, and 4 times the pressure loss of the same "size" pipe. It's OK to use tubing that has as much flow area as pipe. (Example: use 7/8" OD x .045" wall tubing in place of 3/4" pipe)

- Avoid thread dope or Teflon tape applied over the ends of pipe thread, it can break loose and plug pilot tips.



- Always blow out each fitting and section of pipe before and after installing it, (but don't put pressure on regulators and solenoid).



- A filter on the combustion air blower inlet will help prevent plugging the small openings in the pilot system with dirt and debris.