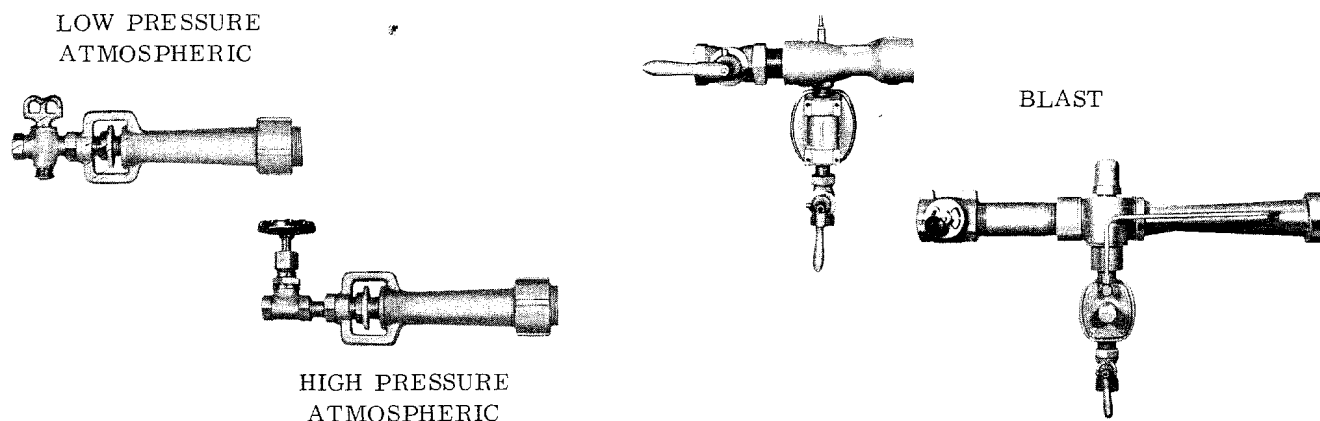


ECLIPSE INFORMATION GUIDE
FOR
PILOT MIXERS

Info 812

1/79



Eclipse Pilot Mixers are available as:

1. Atmospheric types, utilizing --
 - a) low pressure gas (4.0" w.c. to 1 psig)
 - b) high pressure gas (1.0 psig to 25 psig)
2. Blast type, utilizing --
 - a) low pressure air (4.0 to 32 psi) and low pressure gas (6.0" w.c. to 15" w.c.)

All Eclipse Pilot Mixers are designed to provide suitable air/gas mixtures for a variety of pilot nozzles used to ignite gas and/or oil burners. Selection of the type of mixer will depend upon the conditions surrounding the main burner selection and the application. All of the pilot mixers are available in complete and stripped assemblies. Stripped assemblies are furnished less all valves and fittings.

ATMOSPHERIC LOW PRESSURE PILOT MIXERS

1.0 INSTALLATION

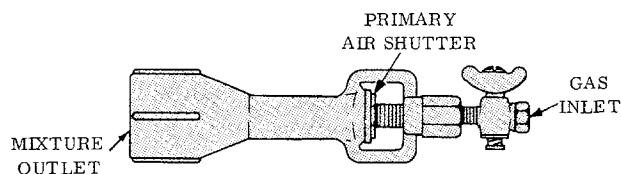
- 1.1 Since atmospheric low pressure pilot mixers will entrain only a limited amount of primary air and the balance of combustion air must be supplied as secondary air, these pilot mixers must be used on open burner applications where there is ample secondary air available to complete the combustion reaction.
- 1.2 Gas supply may be any clean, commercially available fuel gas. Atmospheric air should be dust- and dirt-free.
- 1.3 Connect low pressure gas (4.0" w.c. to 1 psig) to the gas inlet of the pilot mixer.
- 1.4 Pilot mixers should be connected directly to the pilot nozzle with one pilot mixer for each pilot nozzle.



Eclipse Combustion

2.0 LIGHT-OFF ADJUSTMENT

- 2.1 Close primary air shutter.
- 2.2 Apply torch or spark to pilot nozzle.
- 2.3 Open inlet gas cock.
- 2.4 When air has been bled from gas line, pilot will burn with a yellow flame.
- 2.5 Open air shutter until base of flame is blue and ends of flame are slightly reddish or orange in color. No yellow flames should be present if mixer is correctly adjusted.
- 2.6 Lock air shutter in place by means of locknut. (For potential field problems, see page 3.)



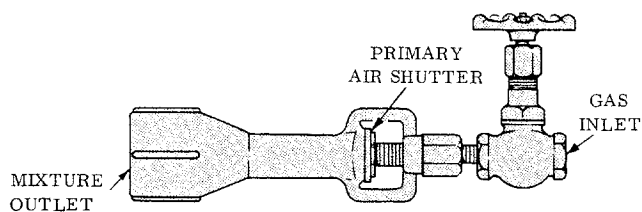
ATMOSPHERIC HIGH PRESSURE PILOT MIXERS

1.0 INSTALLATION

- 1.1 Eclipse High Pressure Pilot Mixers are capable of delivering all of the air required for combustion, making them applicable to open or sealed burner installations.
- 1.2 Gas supply may be any clean, commercially available fuel gas. Air must be dust- and dirt-free.
- 1.3 Connect high pressure gas (1.0 psig to 25 psig) to the gas inlet of the pilot mixer.
- 1.4 Pilot mixer should be connected directly to pilot nozzle (one nozzle per mixer). For multiple pilot nozzle installations using a single mixer, consult factory.

2.0 LIGHT-OFF AND ADJUSTMENT

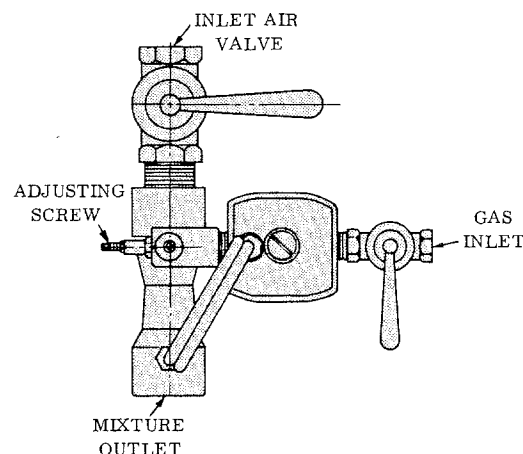
- 2.1 Close primary air shutter.
- 2.2 Apply torch or spark to pilot nozzle.
- 2.3 Open inlet gas cock.
- 2.4 When air has been bled from gas line, pilot will burn with a yellow flame.
- 2.5 Open air shutter until base of flame is blue and ends are slightly reddish or orange in color. No yellow flames should be present if mixer is correctly adjusted.
- 2.6 Lock air shutter in place by means of locknut. (For potential field problems, see page 3.)



BLAST PILOT MIXERS

1.0 INSTALLATION

- 1.1 Install pilot mixer so regulator is in a horizontal line with the top in an upright position.
- 1.2 Connect air supply (4 psi to 32 psi).
- 1.3 Connect gas supply (6" w.c. to 15" w.c.)
- 1.4 Connect mixture outlet directly to pilot nozzle on a single-pilot application. If mixer is to be used for a multiple-pilot installation, use mixture pipe at least as large as the mixer outlet.
- 1.5 In connecting mixer outlet to multiple-pilot nozzles, eliminate bends wherever possible to conserve pressure. DO NOT install cocks, valves, or restrictions at any point between mixer and pilot nozzles.



2.0 LIGHT-OFF AND ADJUSTMENT

- 2.1 Loosen locknut on gas adjusting screw.
- 2.2 Start blower and open inlet air valve.
- 2.3 Apply torch or spark to pilot nozzles and open inlet gas valve.
- 2.4 Turn gas adjusting screw until pilots light.
- 2.5 Once flame has been established, final adjustment can be made. If the mixture is lean, turn adjusting screw counter-clockwise to increase the proportion of gas in the mixture. If too rich, turn adjusting screw clockwise to decrease gas flow.
- 2.6 After proper adjustment, lock gas adjusting screw in place with locknut provided.

POTENTIAL FIELD PROBLEMS

If pilots burn with an unstable flame, check for fluctuating gas pressure with a manometer and, if necessary, add pilot regulator or re-pipe to assure constant gas pressure.

Insufficient pilot flame length can be caused by a variety of things:

- a) Dirt accumulation at the air shutter. Clean as required.
- b) Incorrect orifice size for Atmospheric Pilot Mixers. Check size and redrill or replace. Consult factory if problem persists, supplying all details including gas pressure, orifice size, pilot nozzle type and area.
- c) Insufficient air pressure on Blast Pilot Mixers. Check supply.
- d) Dirt in air jet. Clean as required.
- e) Incorrect air jet size. Check size and redrill or replace.