

ADAMS INTERburner® Mark 10

HIGH EFFICIENCY COMBUSTION EQUIPMENT

INSTALLATION AND SERVICE INSTRUCTIONS



⚠ WARNING
ELECTRIC SHOCK HAZARD

HIGH VOLTAGES ARE PRESENT IN THIS EQUIPMENT. FOLLOW THESE RULES TO AVOID ELECTRIC SHOCK.

- ▲ Use only a properly grounded circuit. A ground fault interrupter is recommended.
- ▲ Do not spray water directly on burner.
- ▲ Turn off power before servicing.
- ▲ Read the owner's manual before using.



⚠ WARNING
OVERHEATING HAZARD

SHOULD OVERHEATING OCCUR:

- Shut off the manual oil valve to the appliance.
- Do not shut off the control switch.

⚠ WARNING NEVER ATTEMPT TO USE GASOLINE AS A FUEL FOR THIS BURNER, AS IT IS MORE COMBUSTIBLE AND COULD RESULT IN A SERIOUS EXPLOSION.

SPECIFICATIONS

FIRING CAPACITIES

.40 to .65 GPH., 50,000 to 125,000 Btu/hr. input G.P.H. based on sea level to 2000 Ft. altitude.

FUEL

No. 1, 2 or Diesel oil

ELECTRICAL

Power Supply - 115 Volts, 60 Hertz, 1 Phase

Motor - 3450 RPM, NEMA Flange, Manual Reset Overload Protection.

Ignition - 17,500 V/45 M.A. Secondary, Continuous Duty-Shielded Interrupted.

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

CONTROLS

24 Volts Primary Cad Cell Control Interrupted Ignition.

FUEL UNIT

3450 R.P.M., Single Stage with Integral Solenoid Valve.

**THESE INSTRUCTIONS SHOULD BE AFFIXED TO THE BURNER
OR ADJACENT TO THE HEATING APPLIANCE.**

BURNER SETTING

NOZZLE SELECTION

After determining the firing rate required, refer to Nozzle Chart (Fig. 1) for recommended nozzle size and spray angle.

NOTE: ALL CAPACITIES USE A 60 DEGREE HOLLOW NOZZLE

FIRING RATE G.P.H.	NOZZLE ANGLE
.40 - .50 - .60 - .65	60 deg. Hollow

Fig. 1

COMBUSTION HEAD SETTING

After installing nozzle, set combustion head per Fig. 3

Check combustion head for concentricity to the nozzle. An off-center location of the nozzle can result in oil impingement and smoky fire.

ELECTRODE

Check and adjust, if necessary, electrodes in accordance with Fig. 2. Improper adjustment can result in ignition difficulties.

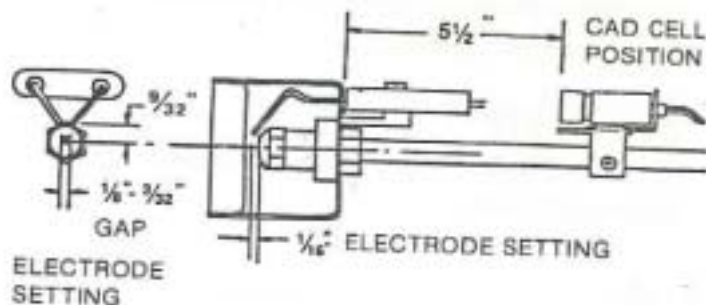


Fig. 2

CAD CELL POSITION

Refer to Fig. 2 for proper location of cad cell. Cell should be sighted at the top slot of the combustion head.

POSITIONING OF COMBUSTION HEAD

Each INTERburner unit has been factory fired and the combustion head assembly factory set for the firing rate (G.P.H.) specified. (see Fig. 1). If retention head is removed for any reason, be sure slide head into position against the (2) washers, (see Fig 3) and make sure that one of the (6) slots is in the top position.

NOTE: WHEN REMOVING NOZZLE, LOOSEN NOZZLE AND REMOVE THRU OPENING IN RETENTION HEAD.

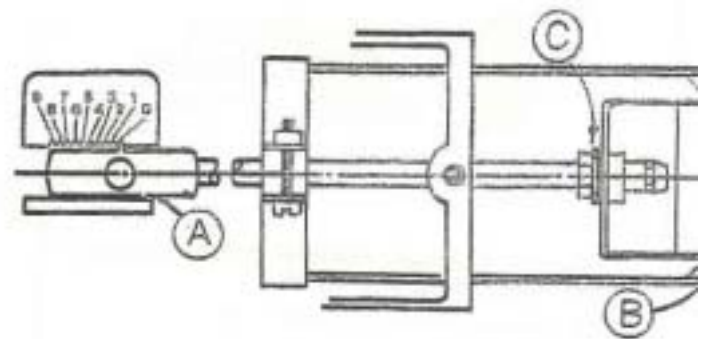


Fig. 3

(A) ADJUSTING BLOCK

(B) COMBUSTION HEAD ASSEMBLY

(C) WASHERS

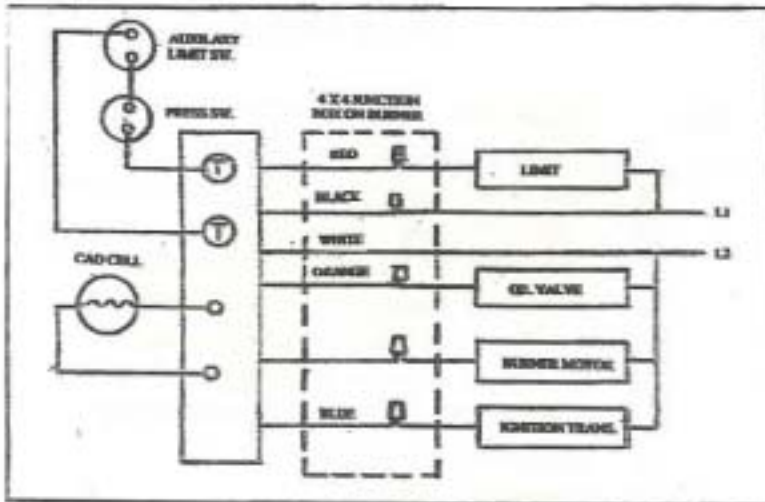
Firing Rate G.P.H. Nozzle 60 Degree Hollow	.40	.50	.60	.65
Adjusting Block	0	0	1	2
Air Band Setting	1.5	2.0	2.25	2.5

Fig. 4

The above suggested settings may change depending on the installation and fine tuning of the application with your test instruments.

WIRING DIAGRAM

All wiring should conform to the National Electrical Code or the code legally authorized in your locality.



INTERRUPTED IGNITION CONTROL

HOMEOWNER INFORMATION

PREVENTATIVE MAINTENANCE- The best way to avoid unnecessary expense and inconvenience is to have your heating system and INTERburner inspected at regular intervals by a qualified installer.

OIL SUPPLY- Do not allow the fuel tank to run out of oil. Keep fuel tank full especially in summer months to prevent condensation inside tank.

OIL FILTER- Replace oil filter cartridge annually with our AF-2 filter to insure only clean oil enters fuel pump and nozzle.

INSTRUCTIONS FOR HOME OWNER

If difficulty occurs with INTERburner, follow these simple checks before calling for service:

1. Check room thermostat. Is it calling for heat?
2. Check supply tank for oil. Is there oil?
3. Check oil supply valves. Are they open?
4. Check line switch. Is it in the "ON" position?
5. Check circuit breaker or fuse. Is it good?
6. Depress safety thermal switch on primary control. (NOT MORE THEN 2 TIMES)
7. Depress thermal protector in burner motor.

BURNER ADJUSTMENT

IT IS NOT POSSIBLE TO ADJUST AN OIL BURNER WITHOUT USING THE PROPER TEST INSTRUMENTS.

An improperly adjusted oil burner will cause inefficient and troublesome operation and may cause property damage or personal injury. Failure to follow the adjustment procedures outlined below will void the warranty and give you an unsatisfactory performance. Burner adjustments must be made by an experienced service contractor familiar with fuel oil burners.

IMPORTANT:

The following instruments must be used to adjust the burner on start-up. Failure to use the proper instruments will void warranty and result in an unsatisfactory installation

Carbon Dioxide (CO₂) tester

Bachrach Model Fyrite Pro Analyzer

Oxygen (O₂) tester

Bachrach True-Spot Smoke Tester

Thermometer 0-220 F

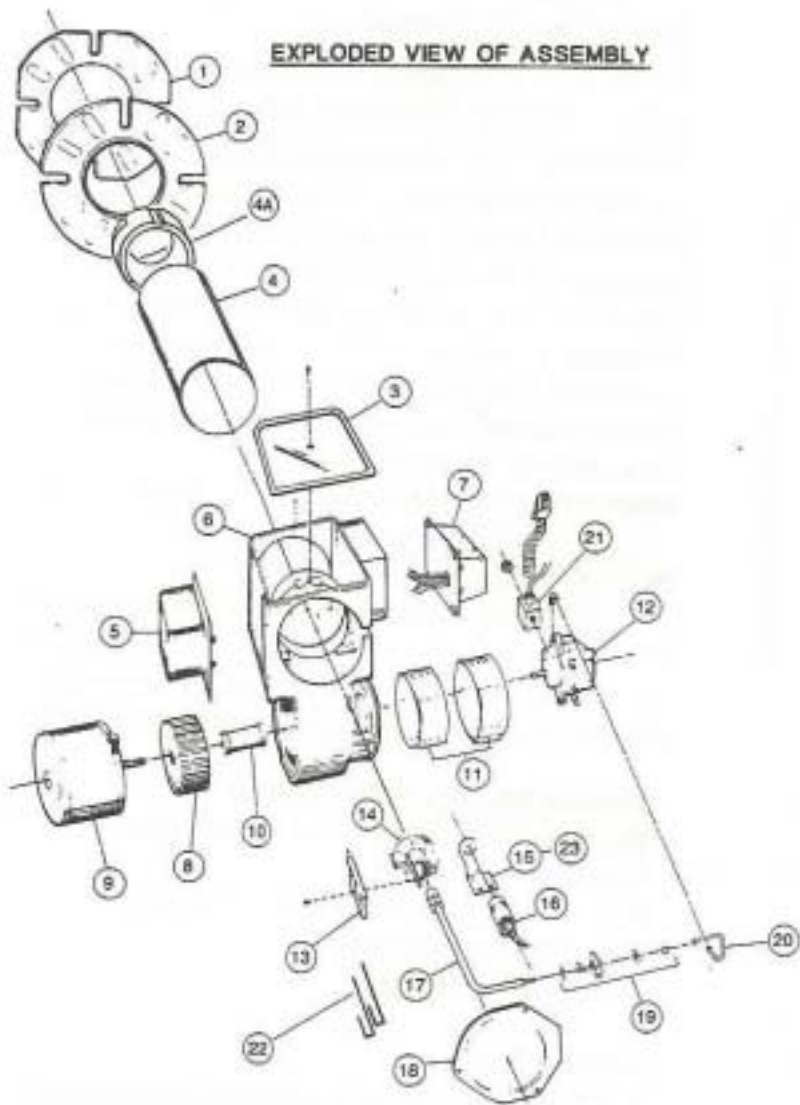
Oil Pressure Gauge

Do the following:

1. Adjust the primary air (see Adjustment Block Position Fig. 4)
2. Start the burner and let it run for 15 min. Adjust the primary air setting to obtain flame for "O" smoke. Adjust the fuel pressure to 150 PSI. Check to see that the flue temperatures do not exceed 160 F. Best results are with temperatures between 90 F and 160 F.
3. After the initial run-in period, adjust the primary air setting to obtain highest CO₂ (10.5%-12.5% or equivalent reading) while maintaining a zero smoke reading

FINAL CHECK

Re-check air shutter. Secure in place. Re-check fuel unit and oil line connections for leaks. Instruct the homeowner in the operation and care of the heating system, setting of thermostat, resetting the overheat protection and simple checks to make before calling for service.



**INTERburner
MARK 10
HIGH EFFICIENCY
COMBUSTION EQUIPMENT**

PARTS LIST

NO.	CODE NO.	DESCRIPTION
1	7000151	Mounting Gasket
2	7000159	Mounting Flange Assem
3	7000334	Top Cover Plate
4	7000226	3" Draft Tube Assembly
4A	7000255	Heat Shield Refractory
5	7000150	Ignition Transformer
6	7000237	Burner Housing
7	7000132P	Primary Control Relay
8	7000063	Blower Wheel
9	7000148	Motor
10	7000114	Flexible Coupling
11	7000166	Air Band Assembly Kit
12	7000123	Single Stage Pump
	7000167	Two Stage Pump
13	7000104	Electrode
14	7000001	Combustion Head Asser
15	7000107	Cad Cell Bracket
16	7040001	Cad Cell W/ Lead
17	7010003	3" Oil Pipe Assembly
18	7000335	Back Cover Plate
19	7010008	Adjustment Block Asser
20	7000131	Oil Li ne
21	7000168	Solenoid Coil
22	7019995	I gnition wire assembly

DIMENSIONS

