CONCOA
CERTIFIED ISO 9001

ADI 1848-F
CONCOA STYLE 759
#7 Heating Tip
8100977-00-1

SAFETY
Install pressure regulators on cylinders (or pipeline branch). Comply with CONCOA manual “Safe Practices in Welding & Cutting” ADE 872, and torch and regulator instruction manuals.

FUEL GAS SUPPLY
To assure proper operation, check that there is ample fuel and that the available pressure is slightly higher than shown on operating data. To provide adequate gas flows, use:
- Manifolds for cylinders where required.
- Regulators that provide required flow capacity.
- Hose size as recommended in operating manual.
- Minimum hose lengths with minimum couplings. Use RMA-CGA Grade T Hose for fuel gas (including acetylene) to prevent hose failure. Grades R and RM are for use with acetylene only.
- Fittings (and check valves) with a minimum flow passage diameter of ¼-inch for B size.

IGNITION PROCEDURE
1. Avoid ignition delays. Be sure you have a sparklighter in good working order.
2. Ignite with average fuel flow -- NO oxygen.
3. Increase fuel flow to maintain carburizing flame.
4. Carefully start oxygen flow and increase until flame goes from strongly carburizing to slightly carburizing.
5. For tips size 10 and above, alternately repeat steps 3 and 4 until full flow rate is reached.
6. Trim flame to proper ratio by appearance (see guide for fuel being used).

TO PREVENT TIP BURNOUT
Keep the tip cool by using flow rates in guide. Reducing flow rates or allowing flames to backwash over tip (by blind hole, etc.) will raise temperature. Severe backwash will burn tip.

WARNING
A flashback (oxygen-fuel mixture burning inside extension tube) can cause a severe burn hazard.To avoid injury in case of flashback, immediately close oxygen and (without delay) fuel valves tightly to extinguish flame. Do not touch mixer, extension tube, or tip until they are cool.

FOR EFFICIENT LOW COST HEATING
1. Use proper size tip. A tip too small takes excessive time to reach desired temperature. A tip too large wastes fuel and oxygen without substantially reducing heating time. Make trial heats with different tips, comparing fuel consumption (cfh x elapsed time) to determine most economical tip.
2. Use the flowrate recommended in this guide. This rate gives the most efficient flame velocity, an important factor in transferring heat to the work. If heat is too small or too great, do not change flowrate, change to smaller or larger tip.

VISUALLY ADJUSTING FLAME
Experienced operators making frequent tip changes can take advantage of this simple method. See the recommended gas pressure and light torch as outlined above. When torch valves are wide open (1½ to 2 turns), alternately increase gas pressure on delivery regulators until flame cone is of recommended length and ratio.

ADJUSTING WITH TEST GAUGES
Install test gauges (stock numbers: 803-0503 for oxygen and 803-0504 for fuel) between hose and torch valves. Adjust delivery pressures as recommended in guide. Follow ignition procedure steps 1-4 and adjust delivery pressures while observing test gauges until recommended levels are reached.

NOTE
The regulator gauges will always show a higher pressure than the test gauges because of loss, or drag, in the hoses. A large disparity results from too small a diameter, too long a hose, or old hose with too many splices.

Make final ratio adjustment while keeping recommended flame cone length and record regulator delivery pressures for future use. After shutdown, remove test gauges and reconnect hoses and check valves.

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WARNING

Use in well-ventilated area. Operation in closed area can result in oxygen-deficient atmosphere.

CAUTION

Acetylene should not be withdrawn at a rate of more than 1/10 of the cylinder capacity intermittent and 1/15 of capacity for continuous withdrawal. (GGA G1)

#7 HEATING TIP OPERATING DATA: CONCOA STYLE 759 PART NO. 8100977-00-1

Number of Heating Orifices: 7 • Drill Number: 67 (ø.032") • Minimum Hose Size: ø3/16 in • Maximum Hose Length: 25 feet

FUELS	OXY TO FUEL RATIO	TORCH INLET PRESSURE (PSIG)†						PRIMARY CONE LENGTH (inch)	FUEL FLOW RATE (CFH)	NO. OF 100 LB CYLINDERS REQUIRED FOR CONTINUOUS OPERATION‡
		STYLE 800 TORCH 8190800-01-1 with Mixer Listed Below								
		Mixer 8110899		Mixer 8110891		Mixer 8110881 or 8110890				
		FUEL	OXY	FUEL	OXY	FUEL	OXY			
Acetylene*	1.1:1	10	12	11	13	10	14	1/2	50	1
Propylene	2.5:1	6	9	8	14	9	15	9/16	25	1
Propane	4:1	7	10	5	10	7	14	1/2	15	1
Natural Gas	2:1	1.5	3	2	3	2	8	1/4	15	1

Withdrawal rate is limited to 10% of the cylinder contents for intermittent withdrawal and 6% for continuous use.

†Torch pressure is given as a guide to set regulator with the torch valves wide open. Set the oxygen:fuel ratio to neutral flame with primary cones to length listed.

‡Use cylinders with manifold and comply with withdrawal limits.

FLASHBACK ARRESTORS/CHECK VALVES

Flashback arrestors with integral check valves prevent the reverse flow of mixed gas and flame flashback into the gas supply lines.

For Regulators	Resettable for Regulators	For Torches
801-7003 “B” Size, Fuel	801-7001 “B” Size, Fuel	801-7007 “B” Size, Fuel
801-7004 “B” Size, Oxygen	801-7002 “B” Size, Oxygen	801-7008 “B” Size, Oxygen
Meets OSHA Requirements		Complies with ISO 5175

CUSTOMER ASSISTANCE

In the event of equipment failure, call the CONCOA Customer Assistance Line: 1-800-225-0473. Please be prepared to provide the model number and serial number of the equipment involved, in addition to details regarding its application.

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801-7004 “B” Size, Oxygen	801-7002 “B” Size, Oxygen	801-7008 “B” Size, Oxygen
Meets OSHA Requirements		Complies with ISO 5175

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ADI 1848-F June, 2024