

ADI 1850-D

CONCOA STYLE 759 #9 Heating Tip 8100979-00-1

SAFETY

Install pressure regulators on cylinders (or pipeline branch). Read and follow procedures in CONCOA manual "Safe Practices in Welding & Cutting" ADE 872, and torch and regulator instruction manuals. Also see ADC 1148 for more information.

FUEL GAS SUPPLY

To assure proper operation, check to be sure there is ample fuel and the available pressure is slightly higher than shown in 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

- 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.
- Carefully start oxygen flow and increase until flame goes from strongly carburizing to slightly carburizing.
- For tips size 10 and above, alternately repeat steps 3 and 4 until full flowrate is reached.
- 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

Use RMA-CGA grade T hose for all fuel gases to prevent hose failure. Use grades R and RM for acetylene only.

	#9 HE.	ATING TI	IP OPER	ATING D	ATA: CC	ONCOA ST	/LE 759 PA	#9 HEATING TIP OPERATING DATA: CONCOA STYLE 759 PART NO. 8100979-00-1	0979-00-	1
Number of H	leating Ori	ifices: 7 •	Drill Num	nber: 56 (ı	ø.0465")	• Minimum I	lose Size: ø	1/4 in • Maxi	mum Hos	Number of Heating Orifices: 7 • Drill Number: 56 (ø.0465") • Minimum Hose Size: ø1/4 in • Maximum Hose Length: 25 feet
			TORC	HINLET	PRESSU	TORCH INLET PRESSURE (PSIG)†				
	7 X	STYLE	≅ 800 TOR	CH 81908	00-01-1 wi	STYLE 800 TORCH 8190800-01-1 with Mixer Listed Below	ed Below	PRIMARY	FUEL	CYLINDERS
FUELS	FUEL	Mixer 8110899	110899	Mixer 8110891	110891	Mixer 8110881 or 8110890	cer r 8110890	LENGTH (inch)	RATE (CFH)	CONTINUOUS
		FUEL	ОХҮ	FUEL	ОХҮ	FUEL	ОХҮ			OF EXAMON:
Acetylene*	1.1:1	10	12	10	12	15	21	1/2	110	2
	2.5:1	10	15	10	15	14	30	9/16	55	2
гіоруівітв	4:1	9	19	10	15	13	34	9/16	40	1
Propane	4:1	9	15	8	14	13	33	1/2	40	2
Natural Gas	2:1	5	12	6	10	9	20	1/2	60	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.	ate is limit ure is give en:fuel rati	ed to 10% n as a gu io to neut nifold and	6 of the clide to se trail flamed comply	ylinder c t regulato with prin with with	ontents for with the mary con hdrawal I	for intermitt ne torch vah nes to lengtl limits.	ent withdra ves wide op n listed.	wal and 6% f en.	for contin	uous use.

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
Masta OSUA Bassissa	manta Camali	ing with ICO E17E

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.



CONTROLS CORPORATION OF AMERICA 1501 HARPERS ROAD • VIRGINIA BEACH, VA 23451

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1	60	1/2	20	9	10	6	12	5	2:1	Natural Gas
2	40	1/2	33	13	14	8	15	9	4:1	Propane
1	40	9/16	34	13	15	10	19	9	4:1	Горуюна
2	55	9/16	30	14	15	10	15	10	2.5:1	Dropylopo
2	110	1/2	21	15	12	10	12	10	1.1:1	Acetylene*
<u>.</u>			охү	FUEL	охү	FUEL	ОХҮ	FUEL		
CONTINUOUS	RATE (CFH)	LENGTH (inch)	Mixer 8110881 or 8110890	M 8110881	110891	Mixer 8110891	Mixer 8110899	Mixer 8	FUEL RATIO	FUELS
CYLINDERS	FUEL	PRIMARY	ed Below	STYLE 800 TORCH 8190800-01-1 with Mixer Listed Below	00-01-1 wi	CH 81908	E 800 TOF	STYLI	70 OX	
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Meets OSHA Requirer	ments Compli	ies with ISO 5175

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