



CERTIFIED ISO 9000 Universal Heating Tips Style 760/860

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.

Fuel Gas Supply

Proper operation requires ample fuel and pressure. Be sure available pressure is slightly higher than shown in operating manual. 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 acet-

ylene) to prevent hose failure. Grades R and RM are for use with acetylene only.

diameter of 1/4 in. for B size.

Ignition Procedure

- 1. Avoid ignition delays. Ensure sparklighter is in good working order.
- 2. Ignite with average fuel flow --- NO oxygen.
- 3. Increase fuel flow substantially.
- Carefully start oxygen flow and increase until flame goes from strongly carburizing to slightly carburizing.
- For large tips, alternately repeat steps 3 and 4 until full flowrate 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 prescribed flowrates. Reducing flowrates or allowing flames to backwash over tip (by blind hole, etc.) will raise temperature. Severe back wash will burn tip.

Check Valves

Prevent the reverse flow of mixed gases, by using check valves on either regulator or torch, depending upon type of work and fuel gas in use. Regulator Check Valve 'B' size: 830-4199 (Oxy), 830-4200 (Fuel) Torch Check Valves 'B' size: 831-4146 (Oxy), 831-4138 (Fuel).

Flashback Arrestors

For maximum safety, use either regulator or torch mounted flashback arrestors, depending upon type of work and fuel gas in use.

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

- 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.
- 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 pressures and light torch as outlined above. When torch valves are wide open (1½ to 2 turns), alternately increase gas pressures on regulators until flame cone is of recommended length and ratio.

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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 acet-

ylene) to prevent hose failure. Grades R and RM are for use with acetylene only.

Fittings (and check valves) with minimum flow passage diameter of 1/4 in. for B size.

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Adjusting With Test Gauges

Install test gauges 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 gauge 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.

WARNING

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

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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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			Oxygen/Acety	ene							Oxygen/Propa	ane			
-	-		Ratio 1.1.1	-	_				-		Ratio 4.1	-	-		
	MIN	TORCH INLET P (PSIG)	RESSURE	PRIMARY	FUEL	CONTINUOUS			MIN	TORCH INI	LET PRESSURE PSIG)†	PRIMARY	FUEL	CONTINUOUS	
SIZE ()	IZE ID	750 and 800 TOF	RCH INLET	LENGTH	RATE	(NUMBER OF	BTU	SIZE	SIZE ID (inches)	750 and 80	0TORCH INLET	LENGTH	RATE	(NUMBER OF	BTU
2	5' Long	FUEL	ОХҮ	(IIICII)	(01.1)				25' Long	FUEL	ОХҮ	(11001)	101.11		
Ch	3/16	7	7.5	1/2	30	1	44,400	Ch	3/16	5.5	6	1/2	10	1	25,000
7	3/16	7.5	8	1/2	50	-	74,000	7	3/16	7	10	1/2	15	-1	37,000
œ	1/4	10	10	1/2	70	N	104,000	8	1/4	7.5	10	1/2	25	N	63,000
9	1/4	14	14.5	1/2	110	N	163,000	9	1/4	9.5	16	1/2	8	N	100,000
10	5/16	15	15	1/2	140	з	207,200	10	5/16	10.5	20	1/2	50	з	125,000
		Oxygen	MAPP® Gas (N Ratio 2.5.1	eutral Flame						oxy	gen Natural Gas Pos Ratio 2.1	itive Pressu	ē		
-		TORCH INLET P (PSIG)	RESSURE	PRIMARY	FUEL	CONTINUOUS			MIN	TORCH INI	LET PRESSURE PSIG)†	PRIMARY	FUEL	CONTINUOUS	
SIZE (i	IZE ID nches)	750 and 800 TOR	CH INLET	LENGTH	RATE	(NUMBER OF	BTU	SIZE	SIZE ID (inches)	750 and 80	0TORCH INLET	LENGTH	RATE	(NUMBER OF	BTU
N	5' Long	FUEL	ОХҮ	1	1				25' Long	FUEL	ОХҮ	1	1		
σı	3/16	6	7	9/16	14	1	34,160	σı	3/16	-	1.5	1/4	10	-	10,500
7	3/16	6	7	9/16	25	-	61,000	7	3/16	1.5	1.5	1/4	15	-1	15,700
8	1/4	8	10	9/16	35	-	86,000	8	1/4	3.5	4.5	1/2	8	1	31,400
9	1/4	12	15	9/16	55	N	135,000	9	1/4	7.5	10	1/2	8	-1	63,000
10	5/16	12.5	16.5	9/16	70	2	172,000	10	5/16	9	14	1/2	8	-	84,000
Torch inle	t pressu	ire given only	y as a guid	e to set i	egulat	tors - with to	orch	_	For Max	imum Saf	ety Use Flash	back Ar	resto	ŝ	
alves wid	e open;	and to check	k restriction	ns in fuel	or oxy	ygen supply	sys-				.				
ems. Oxy	ge/fuel	ratio is set to	o flame app	earance	- whe	n primary c	ones of	Regulato	or Mount	ed	Regulator Mo	unted		Torch Mou	nted
ength liste	ed above	e are the sho	ortest obtaii	nable as	ratio i	s varied.		Model 78	Resetta	ble	Model 53			Model 46	30
000 07	2010 1010		CAUTION					801-0786	'B' Size (O	XV)	801-0536 'B' Size	(Oxy)	~	01-1466 'B' Siz	e (Oxy)
Acetylen	e is limit	ed to 15 PSIC	 Withdrav 	val is limi	ted to	10% of cylir	nder	801-0789	B' Size (Fi	lelì	801-0539 'B' Size	Fuel	20	01-1469 'B' Siz	e (Fuel)
contents	for inter	mittent use a	ind 6% cont	tinuous v	vithdra	awal.		0010100	U OFO		00-0000 0 000	1.001			
Use RMA	-CGA gr	ade T hose fo	or all fuel ga	ises to p	revent	hose failure	()	UL List	ed	Meets OS	HA Requireme	ints	Comp	lies with IS	O 5175
Use grad	es R and	IRM for acety	ylene only.										.		

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