

CIGWELD

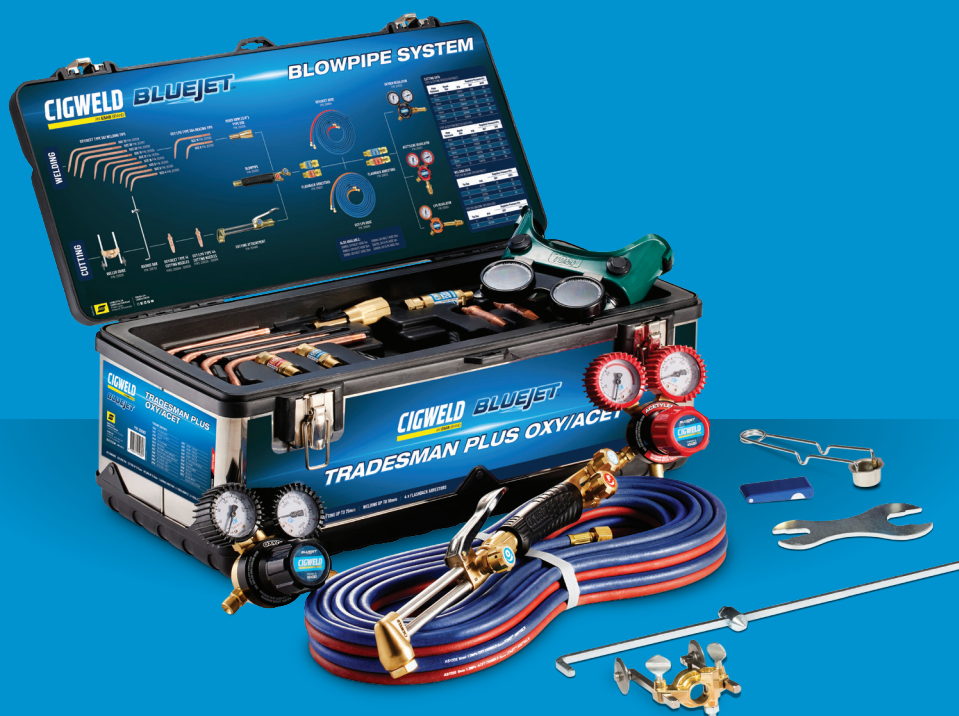
AN ESAB BRAND



DESIGNED
& TESTED
IN AUSTRALIA
FOR OVER 100 YEARS

BLUEJET

TRADESMAN & TRADESMAN PLUS GAS CUTTING AND WELDING KITS



OPERATING MANUAL

OXY / ACET / LPG
GAS TYPE

1 YEAR
WARRANTY

EXTENDED 5 YEAR
WARRANTY ON REGULATORS

CIGWELD

AN **ESAB** BRAND

WE APPRECIATE YOUR BUSINESS!

Congratulations on your new CIGWELD product. We are proud to have you as our customer and will strive to provide you with the best service and reliability in the industry. This product is backed by our extensive warranty and world-wide service network.

This Operating Manual has been designed to instruct you on the correct use and operation of your CIGWELD product. Your satisfaction with this product and its safe operation is our ultimate concern. Therefore please take the time to read the entire manual, especially the Safety Precautions. They will help you to avoid potential hazards that may exist when working with this product.

We have made every effort to provide you with accurate instructions, drawings, and photographs of the product(s) while writing this manual. However errors do occur and we apologize if there are any contained in this manual.

Due to our constant effort to bring you the best products, we may make an improvement that does not get reflected in the manual. If you are ever in doubt about what you see or read in this manual with the product you received, then check for a newer version of the manual on our website or contact our customer support for assistance.

YOU ARE IN GOOD COMPANY!

The Brand of Choice for Contractors and Fabricators Worldwide.

CIGWELD is a Market Leading Brand of Arc Welding Products for ESAB. We are a mainline supplier to major welding industry sectors in the Asia Pacific and emerging global markets including; Manufacturing, Construction, Mining, Automotive, Engineering, Rural and DIY.

We distinguish ourselves from our competition through market-leading, dependable products that have stood the test of time. We pride ourselves on technical innovation, competitive prices, excellent delivery, superior customer service and technical support, together with excellence in sales and marketing expertise.

We are committed to develop technologically advanced products to achieve a safer working environment for industry operators.



**DESIGNED
& TESTED
IN AUSTRALIA
FOR OVER 100 YEARS**

**WARNING**

Read and understand this entire Manual and your employer's safety practices before installing, operating, or servicing this product. While the information contained in this Manual represents the Manufacturer's best judgement, the Manufacturer assumes no liability for its use.

**BLUEJET TRADESMAN & TRADESMAN
PLUS GAS CUTTING AND WELDING KITS****PART NUMBERS: 208007, 208021,
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Publication Date: 11/2023

**RECORD THE FOLLOWING INFORMATION
FOR WARRANTY PURPOSES:****Where Purchased:****Purchase Date:****Equipment Serial #:****Revision Date:**

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SECTION 1:

GAS CUTTING & WELDING SAFETY

INSTRUCTIONS AND WARNINGS

The information shown under this note must be followed carefully to avoid injuring the operator or anyone in the operating area.

When an accident does occur with welding equipment, it's usually due to the operator having become careless through over-familiarity. Remember, the safest of equipment, if wrongly handled, can cease to be safe. For safe welding and cutting check and re-check the points in this article. Each point is there for a purpose.

1.01 PERSONAL SAFETY

Be neat and clean about your work. Maintain your equipment in good condition. Wear goggles with the correct shade filter when using gas equipment. Goggles protect your eyes against sparks and injurious rays. It is essential that the goggles and filters are of a type intended for welding work. Quite apart from safety, they help you see your work better. Wear suitable gloves, aprons, shoes and protective clothing. Watch for sparks in sleeves, cuffs and open pockets. Never use oxygen to dust clothes or work. Use a flint lighter or pilot light to light blowpipe. Never use matches. Keep flame, sparks or metal away from cylinders and tubing. When working with lead, lead bearing materials, steel coated with lead paints, cadmium-coated materials or any objects containing metals giving off toxic fumes, always use a suitable respirator. Never use a blowpipe when working on staging suspended from fibre rope.

1.02 CYLINDERS GENERAL

Industrial gas cylinders are made to rigid specifications and are inspected each time they are refilled by your supplier. They are safe if properly handled. All Government and insurance regulations relating to the storage of oxygen, acetylene and LPG cylinders should be closely observed. Keep all cylinders, empty or full, away from radiators, furnaces and other sources of heat. Also avoid contact with electrical circuits. **Keep oil and grease away from cylinders.** Cylinders standing in the open should be screened against direct rays of the sun. Protect cylinders valves from bumps and falling objects. Keep the valves clean, free from oil, grease and all foreign materials. Close cylinder valves when not in use, when empty, or when moving cylinders. Always remove regulators when moving cylinders. Be sure the cylinder valve is tightly closed before removing regulators. Never allow anyone to strike an arc or tap an electrode against any cylinder. Never try to fill a cylinder or mix gases in a cylinder. Never tamper with or alter cylinder numbers or markings. Never use cylinders as supports or rollers. When transporting cylinders using a crane, do not use slings- use a cylinder cradle. Never draw gas from cylinders except through properly attached pressure regulators or equipment designed for the purpose. If damaged, send the regulator to the supplier or appointed agent for repairs. If unable to make a gas-tight seal between the cylinder valve and a regulator spigot, first check whether the spigot nut is tight. If so check the regulator spigot. If the cylinder valve is damaged notify the gas supplier. Never insert washers of lead or other material between the

regulator and the cylinder valve. Never use oil or grease on these connections. Use only standard cylinder keys to open cylinder valves, never extend the length of these keys under any circumstances. If valves cannot be opened by hand, do not use a hammer or wrench; notify the supplier. Open all cylinder valves slowly. Leave cylinder key in position when fuel gas cylinder valves are open.

1.03 OXYGEN CYLINDERS

Oxygen cylinders are steel shells of ample strength for their purpose. Besides routine inspections, they periodically undergo a searching examination, which includes a hydraulic pressure test. Always call oxygen "Oxygen" not "Air".

Never use oxygen in pneumatic tools, in oil pre-heating burners, to start engines, to blow out pipelines or to freshen the atmosphere in confined spaces.

In short, under no circumstances use oxygen as a substitute for compressed air or other gases.

1.04 ACETYLENE CYLINDERS

Acetylene cylinders contain porous material, which is impregnated with acetone. The acetylene is dissolved under pressure in this acetone. All acetylene cylinders are fitted with fusible plugs. These are designed to vent the cylinder contents in the event of an unsafe condition arising in the cylinder due to any cause such as overheating or decomposition arising from either incorrect operating technique, faulty equipment alone, or in conjunction with excessive temperature. In the event of a safety device functioning, always notify the supplier. The reason for the device operating always warrants special investigation. Always call acetylene "acetylene" not Gas. Always keep acetylene cylinders upright, whether in use or in store, full or empty. Always keep acetylene cool, store them upright in a well-protected, well ventilated dry location, away from highly combustible materials and oxygen cylinders. Should an acetylene valve leak around the spindle, close the valve and tighten the gland. If this fails, or if the fusible plug is leaking, remove cylinder to open air. Keep the cylinder well away from anything which could possibly set the escaping acetylene on fire. Tag the cylinder to explain the trouble. Notify suppliers at once. If acetylene, escaping from a leaking cylinder valve gland or from an improperly seated regulator spigot ignites, immediately close the cylinder valve. If this is impossible, treat from point two below. If an acetylene cylinder is heated accidentally or becomes hot through severe flashback, or other cause, action should be taken promptly in the following manner:

1. Shut the cylinder valve
2. Clear all personal from the area
3. Cool the cylinder with a copious supply of water and notify the fire brigade



NOTE

The person directing the fire hose should be protected behind some suitable shelter. If the safety device functions and the issuing gas ignites, cool the cylinder as above, but avoid extinguishing the flames. If the escaping gas does not ignite, care must be taken to avoid an air/acetylene explosion. No source of ignition must be permitted to enter the area. Existing sources of ignition should be rendered safe.

4. Continue cooling the cylinder with copious quantities of water until it is quite cool. This may be determined by removing the cooling water at intervals and watching whether the water on the cylinder fries off, or whether the cylinder remains wet.
5. Notify the supplier
6. In cases where the supplier's representative is unavailable or cannot reach the scene of the incident within half an hour, the cylinder may after this period be removed carefully to an open space away from buildings and any source of ignition provided it remains cool and wet.
7. The cylinder valve should then be opened until the cylinder is empty. During this period a copious quantity of water should be poured on the cylinder.
8. When the cylinder is empty check whether the cylinder is cool, if so, close the valve.

1.05 LPG CYLINDERS

LPG cylinders are provided with relief valves or fusible plugs to discharge their contents and keep the cylinder pressure within safe limits should the cylinder be overheated by a fire. LPG cylinders should be used and stored upright in the open, away from combustible material. Do not store LPG cylinders with oxygen cylinders. Do not store LPG cylinders closer than 1.5 m horizontally from any opening into a building. If LPG cylinder valve leaks around the spindle, or if the relieve valve or fusible plug is leaking, remove the cylinder to open air away from buildings and sources of ignition; tag the cylinder to explain the trouble; notify the supplier as soon as possible. If LPG escapes from a leaking cylinder valve gland or from a regulator spigot ignites, immediately close the cylinder valve. If LPG escaping from a fusible plug ignites, direct a fine water spray at the cylinder and surrounding equipment. On no account should the flame be extinguished, since escaping unburned gas in a confined space may re-ignite and cause an explosion. LPG is not toxic and is odourless, but an odourant is added to give a distinctive smell. If the distinctive odour is detected an immediate check should be made for leaks. Soapy water is recommended for this purpose. As soon as the leak is located, turn off the LPG cylinder valve and tighten or repair the equipment. If LPG is leaking do not strike matches or operate any electrical appliance in the vicinity. Remove all sources of ignition and open all doors and windows. Do not attempt to relight LPG until all traces of LPG odour have disappeared. Remember, LPG is heavier than air and will remain in open containers, cellars and confined spaces for a considerable time.

1.06 BLOWPIPES AND REGULATORS

Do not work with damaged equipment. Have leaking or damaged equipment repaired by an authorized repair agent. Give your oxy-fuel gas equipment the care you would give any other dependable tool. Do not use oil or grease on any blowpipe or regulator. Do not handle equipment with an oil rag, oily gloves or hands. Keep your equipment clean. Never use a blowpipe as a hammer to knock slag from work. Damage to blowpipes or their tips can cause trouble. Never use regulators for purposes other than that for which they were intended. Inspect connections and all seating surfaces on regulators and blowpipes before use. Damaged connections can cause flashbacks. Never hang a blowpipe or tubing on a regulator or cylinder valve. Crack cylinder valves before attaching regulators. Cracking means to open the valve a little, then immediately close, to blow out dust or foreign matter. Cracking should always be done gently. Never crack a fuel gas valve near other welding works, sparks or open flame. Never force connections. Be sure all connections are tight. Never test for leaks with a flame. Never try to connect a regulator to a

cylinder containing gas other than that for which the regulator is meant. Should a leak develop around blowpipe valve spindle, tighten the packing nut. If necessary have the valve repacked. (Use only packing supplied by the manufacturer or the blowpipe). Daily maintenance of tips and nozzles is important for good results. Tip and nozzle cleaners and drills have been specially designed for this purpose. They will clean even the smaller bores without causing damage. Where you have distortion of the orifice itself, the drills are essential. If a regulator shows excessive creep (pressure build-up when blowpipe valve are closed), close cylinder valve and have regulator repaired at once. Quite apart from risks, creeping regulators lead to poor work. Pressure build-up in excess of 35 kPa is to be regarded as excessive and call for immediate attention. Periodically, have pressure gauges on regulators tested for accuracy. Ensure before using that regulators have both a cylinder pressure and a delivery pressure gauge in working order. Before opening cylinder valves always fully release regulator adjusting knob. A sudden pressure rise in a regulator whose adjusting knob is screwed in puts a heavy strain on the mechanism and may cause damage. Never release the regulator adjusting knob while there is pressure in the tubing. If the pressure gauge indicator fails to return to the stop when pressure is released, have the gauge checked.

Always take care to keep the regulators free of oil and grease. Oil and grease should be removed chemically by a qualified repair technician. Never use oil or grease on the regulator, cylinder or manifold connections. Do not change the inlet connection on a regulator in an attempt to use the regulator for a different gas service.

1.07 HOSE HANDLING AND CARE

Long lengths of hose are not desirable. They tend to kink, are vulnerable to mistreatment. When long lengths must be used, be sure all connections are tight and ensure hose is protected from being stepped on, run over, kinked or tangled. Never use wire or insulation tape to fasten hose to connections nor to couple lengths of hose. Use only suitable hose connections and couplings.

Protect hose from sparks, hot slag, hot edges or open flames. Keep hose away from grease and oil. All new hose should be blown out before connecting welding equipment to remove, talc, dust or water. Do not crimp hose to stop flow of gases temporarily when, for example, changing blowpipe. Red hose should always be used for fuel gas blue hose for oxygen. Use only hose designed especially for oxygen and fuel gases.

Hose specially manufactured for the purpose should only be used in cases where it may come into contact with liquid LP gas, such as when used with cylinders fitted with an eductor tube.

Purge each length of hose before lighting the blowpipe. In other words, when hose is to be reconnected, treat it as you would new hose; before lighting up, pass through it some of the gas with which it is to be used.

Examine all hose periodically for leaks, worn parts, and loose connections. Test for leaks by immersing the hose in water. Carry out this test at normal working pressures. Should leaks or worn parts be found, at once cut out the section containing them. Remake joints with suitable hose couplings. Never use a steel or copper pipe to make a joint- either temporary or permanent. Do not try to repair hose with tape. If hose is burned in a flashback, discard that length of hose. Flashbacks may burn inner walls, making hose unsafe or cause further instability to the blowpipe equipment by blockage.

1.08 FLASHBACK ARRESTORS

All oxygen - fuel systems MUST be fitted with minimum an AS4603 compliant flashback arrestor and a non-return valve for each gas line, taking into consideration any pressure drops experienced in all components of the assembled gas control system, at the rated flow capacity of the tip or nozzle in use.

Contact your nearest distributor for advice on the correct type of flashback arrestors that should be fitted to cater for your application(s)

SECTION 2: INTRODUCTION

2.01 KIT CONTENTS

TRADESMAN PLUS (OXYGEN/ACETYLENE)

P/N: 208007

PART NUMBER	DESCRIPTION
201000	OXYGEN REGULATOR SI
210223	ACETYLENE REGULATOR VI
204001	BLOWPIPE
204005	CUTTING ATTACHMENT
204036	MIXER TYPE 550
208512	TORCH MOUNT FLASHBACK ARRESTOR SET
208513	REGULATOR MOUNT FLASHBACK ARRESTOR SET
308694	FITTED TWIN HOSE 10M OXY/ACET
206047	CUTTING NOZZLE 41 SIZE 8
206048	CUTTING NOZZLE 41 SIZE 12

PART NUMBER	DESCRIPTION
206049	CUTTING NOZZLE 41 SIZE 15
207013	WELDING TIP 551 SIZE 10
207014	WELDING TIP 551 SIZE 12
207015	WELDING TIP 551 SIZE 15
207016	WELDING TIP 551 SIZE 20
454031	LIFT-FRONT GAS WELDING GOGGLES
308789	FLINT LIGHTER
309258	COMBINATION SPANNER
308036	TIP CLEANER
308729	ROLLER GUIDE
308752	RADIUS BAR AND PIVOT
	HEAVY-DUTY STAINLESS TOOLBOX

TRADESMAN PLUS (OXYGEN/LPG)**P/N: 208021**

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
201000	OXYGEN REGULATOR SI	206028	CUTTING NOZZLE 44 SIZE 12
201003	LPG REGULATOR SI	206029	CUTTING NOZZLE 44 SIZE 15
204001	BLOWPIPE	207019	BRAZING TIP 554 SIZE 8
204005	CUTTING ATTACHMENT	207020	BRAZING TIP 554 SIZE 15
204036	MIXER TYPE 550	454031	LIFT-FRONT GAS WELDING GOGGLES
208512	TORCH MOUNT FLASHBACK ARRESTOR SET	308789	FLINT LIGHTER
208513	REGULATOR MOUNT FLASHBACK ARRESTOR SET	309258	COMBINATION SPANNER
308986	FITTED TWIN GAS HOSE 10M OXY/LPG	308036	TIP CLEANER
206026	CUTTING NOZZLE 44 SIZE 8	308729	ROLLER GUIDE
		308752	RADIUS BAR AND PIVOT
			HEAVY-DUTY STAINLESS TOOLBOX

TRADESMAN (OXYGEN/ACETYLENE)**P/N: 208001**

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
201000	OXYGEN REGULATOR SI	206047	CUTTING NOZZLE 41 SIZE 8
210223	ACETYLENE REGULATOR VI	206048	CUTTING NOZZLE 41 SIZE 12
204001	BLOWPIPE	207013	WELDING TIP 551 SIZE 10
204005	CUTTING ATTACHMENT	207014	WELDING TIP 551 SIZE 12
204036	MIXER TYPE 550	454031	LIFT-FRONT GAS WELDING GOGGLES
208512	TORCH MOUNT FLASHBACK ARRESTOR SET	308789	FLINT LIGHTER
208513	REGULATOR MOUNT FLASHBACK ARRESTOR SET	309258	COMBINATION SPANNER
308693	FITTED TWIN HOSE 5M OXY/ACET	308036	TIP CLEANER
			HEAVY-DUTY STAINLESS TOOLBOX

TRADESMAN (OXYGEN/LPG)**P/N: 208011**

PART NUMBER	DESCRIPTION	PART NUMBER	DESCRIPTION
201000	OXYGEN REGULATOR SI	206026	CUTTING NOZZLE 44 SIZE 8
201003	LPG REGULATOR SI	206028	CUTTING NOZZLE 44 SIZE 12
204001	BLOWPIPE	207019	BRAZING TIP 554 SIZE 8
204005	CUTTING ATTACHMENT	207020	BRAZING TIP 554 SIZE 15
204036	MIXER TYPE 550	454031	LIFT-FRONT GAS WELDING GOGGLES
208512	TORCH MOUNT FLASHBACK ARRESTOR SET	308789	FLINT LIGHTER
208513	REGULATOR MOUNT FLASHBACK ARRESTOR SET	309258	COMBINATION SPANNER
308755	FITTED TWIN HOSE 5M OXY/LPG	308036	TIP CLEANER
			HEAVY-DUTY STAINLESS TOOLBOX

2.02 GAS REQUIREMENTS

The BlueJet® TRADESMAN & TRADESMAN PLUS kits are available in Oxygen/Acetylene and Oxygen/LPG. Cylinders of these gases are available in various sizes dependent upon your usage requirements. Your local gas distributor will be able to assist in obtaining the suitable grades of gases and cylinder sizes required for this kit.

For correct and safe operation it is essential that only regulators, hoses, nozzles and tips compatible with the chosen fuel gas be used. Please consult your distributor should you wish to change to an alternate fuel gas.

SECTION 3: INSTALLATION

3.01 FITTING REGULATORS TO CYLINDERS

- Place Cylinders in intended position ready for use. Secure firmly in position.
- Momentarily open and then close (called "cracking") the cylinder valve before attaching the regulator to blow out foreign matter.
- Place the inlet of the Oxygen regulator (colour coded black) onto the cylinder valve of the black Oxygen cylinder. Tighten the nut on the oxygen regulator inlet using the combination spanner supplied. The nut is right hand (RH) threaded and needs to be turned in a clockwise direction in order to tighten.
- Place the inlet of the Acetylene regulator (colour coded red) or LPG regulator (colour coded orange) onto the cylinder valve. Tighten the nut on the regulator inlet using the combination spanner supplied.

3.02 HOSE (REGULATOR END)

- Connect the blue hose (part of twin fitted hose assembly) to the outlet of the Oxygen regulator (colour coded black). Tighten the nut using the combination spanner supplied. The nut is right hand (RH) threaded and needs to be turned in a clockwise direction in order to tighten.
- For acetylene connect the red hose (part of twin fitted hose assembly) to the outlet of the Acetylene regulator (colour coded red). For LPG connect the orange hose (part of twin fitted hose assembly) to the outlet of the LPG regulator (colour coded orange). Tighten the nut using the combination spanner supplied. The nut is left hand (LH) threaded and needs to be turned in an anti-clockwise direction in order to tighten.

3.03 HOSE (BLOWPIPE END)

- Connect the blue hose (part of twin fitted hose assembly) to the Oxygen inlet connection of the blowpipe (marked 'O'). Tighten the nut using the combination spanner supplied. The nut is right hand (RH) threaded and needs to be turned in a clockwise direction in order to tighten.
- Connect the red hose for Acetylene or Orange hose for LPG (part of twin fitted hose assembly) to the Fuel inlet of the blowpipe (marked 'F'). Tighten the nut using the combination spanner supplied. The nut is left hand (LH) threaded and needs to be turned in an anti-clockwise direction in order to tighten.

3.04 WELDING ASSEMBLY

- Connect the welding mixer onto the blowpipe until hand tight.
- Screw the selected welding tip into the welding mixer until hand tight.
- Loosen the connection between the blowpipe and the welding mixer. Align the welding tip with the blowpipe to obtain the best working position to suit you and then re-tighten to hand tight.

3.05 CUTTING ASSEMBLY

- If changing from welding to cutting, remove the welding mixer and tip from the blowpipe.
- Connect the cutting attachment to the blowpipe. Align the head of the cutting attachment with the blowpipe and hand tighten.
- Select the correct size cutting nozzle for the application intended.
- Assemble the cutting nozzle with the nozzle retaining nut and screw into the cutting attachment.
- Tighten nozzle retaining nut with spanner provided.

3.06 TESTING FOR LEAKS

- After assembly and before lighting up and using your welding or cutting plant, it is recommended that the following procedure be adopted to check for leaks.
- Close the blowpipe oxygen valve
- Open the oxygen cylinder valve slowly and set the regulator to show approximately 100 kPa on the delivery gauge
- Close the oxygen cylinder valve
- Watch the cylinder pressure gauge and if the pressure decreases there is a leak in the oxygen system. If no pressure drop is experienced, then there are no leaks up to the blowpipe valve
- Open blowpipe oxygen valve to release oxygen gas pressure from the system
- Release regulator control knob to fully out position
- Close blowpipe oxygen valve
- Repeat test for the fuel gas system

All that is needed to locate the leak(s) is a suitable leak detection solution or soapy water.



WARNING

This test should be done quickly, and it is important that there are no sources of ignition present during this process, as a certain amount of Oxygen and Fuel gas will be released to the atmosphere. If no leaks are detected, the system is ready for use. If any leaks are detected on the blowpipe, it should be returned to the distributor from which it was purchased. If leaks are detected elsewhere in the system, then the joint should be re-tightened and re-tested, or the leaking item replaced.

SECTION 4:

LIGHTING UP / CLOSING DOWN PROCEDURE

4.01 WELDING/BRAZING LIGHTING UP

STEP 1

- Release both regulator pressure adjusting knobs
- Open both cylinder valves slowly
- Slowly turn the Oxygen regulator adjusting knob in a clockwise direction until outlet pressure gauge indicates the required pressure (ref: Table 1 or 2)

STEP 2

- Open blowpipe Oxygen control valve to allow a small amount of gas to flow through the hose to (purge) clean the gas passage and obtain a true pressure reading on the outlet pressure gauge
- Re-adjust Oxygen regulator pressure if necessary
- Close blowpipe Oxygen control valve
- Repeat for Acetylene or LPG

STEP 3

- Slightly open blowpipe fuel control valve
- Light Acetylene or LPG gas with flint lighter

STEP 4

- Continue to open blowpipe fuel control valve until all soot disappears from the flame

STEP 5

- Open blowpipe Oxygen control valve and adjust for Neutral flame
- A NEUTRAL flame is characterised by an almost colourless outer envelope and a sharply defined innercone without feather or secondary flame.



CAUTION

Do not use cigarette lighters or matches

4.02 WELDING/BRAZING CLOSING DOWN

STEP 1

- Close blowpipe fuel control valve
- Close blowpipe Oxygen control valve

STEP 2

- Close both cylinder valves
- Open blowpipe fuel control valve to drain Acetylene or LPG out of system
- Repeat for Oxygen
- Close all valves

STEP 3

- Release regulator control knobs

4.03 CUTTING LIGHTING UP

STEP 1

- Release both regulator pressure adjusting knobs
- Open both cylinder valves slowly
- Slowly turn the Oxygen regulator adjusting knob

STEP 2

- Open blowpipe Oxygen control valve fully
- Open cutting attachment Oxygen control valve to allow a small amount of gas to flow through the hose
- to (purge) clean the gas passage and obtain a true pressure reading on the outlet pressure gauge
- Re adjust regulator pressure if necessary
- Close cutting attachment Oxygen control valve
- Repeat for Acetylene or LPG

STEP 3

- Slightly open blowpipe fuel control valve
- Light fuel gas with flint lighter



CAUTION

Do not use cigarette lighters or matches

4.04 CUTTING – CLOSING DOWN

STEP 1

- Close blowpipe fuel control valve
- Close cutting attachment Oxygen control valve

STEP 2

- Close both cylinder valves
- Open cutting attachment Oxygen control valve and depress cutting lever to drain Oxygen out of system
- Open blowpipe control valve to drain Acetylene or LPG out of system
- Close all valves

STEP 3

- Release regulator control knobs



NOTE

After connecting welding or cutting apparatus to the oxygen and fuel gas cylinders or when starting to re-use the apparatus after an interval of ½ hour or more, each gas line should be purged to remove any gas mixtures.

When purging, ensure that the Fuel valve is fully closed before opening the Oxygen valve, and the Oxygen valve is closed before opening the Fuel valve.

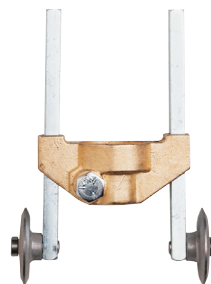
SECTION 5: OPERATING PROCEDURE

For information on how to cut and weld with your CIGWELD BlueJet® kit, refer to an appropriate, qualified publication on the subject.

SECTION 6: ROLLER GUIDE

The roller guide allows straight, clean cuts to be obtained more effectively. The guide can be adjusted to suit the material and nozzles being utilised. When setting up the roller guide, the following should be observed:

- Place the roller guide over the cutting nozzle and secure the locking nut using the combination spanner provided.
- Adjust both rollers to ensure that the inner cones of the pre-heat flame are approximately 4 - 6mm from material to be cut. Secure rollers in place by securing both locking nuts using the combination spanner provided.
- Ensure that positive pressure is maintained on guide whilst cutting to avoid slippage.



Roller Guide
P/N: 308729



Radius Bar
P/N: 308752

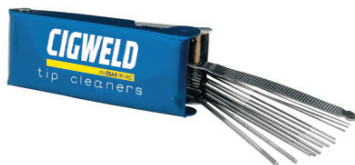
SECTION 7: NOZZLE CLEANING INFORMATION

Do not mistreat the nozzle. Do not use it as a hammer or as a lever to prise away cut portions of metal. To clear the orifices, use the nozzle cleaning reamers supplied with this kit. It is strongly recommended that these be used in preference to other means. When cleaning a nozzle, the following process should be observed:

- Select the correct size cleaning reamers for the nozzle/orifice to be cleaned
- Secure the nozzle firmly with the cutting end facing upward
- Insert the cleaner into the orifice to be cleaned
- Work the reamer gently in an “up and down” motion until the orifice has cleared

It is most important that the small holes at the seating end of the nozzles are not enlarged in any way. Effective pre-heat flame shape and cutting oxygen stream can only be maintained when the edges of the orifice are sharp and square. If a nozzle becomes damaged on the end, rub it down with a piece of fine emery paper over a plate of glass, holding the nozzle at right angles to the glass.

Do not use old pieces of wire, reamers or brooches to clean out pre-heat and cutting stream orifices. Do not interfere in any way with the seating surfaces either on the nozzles or in the blowpipe head.



Tip Cleaners
P/N: 308036

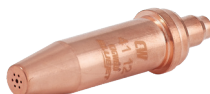
SECTION 8: SERVICE AND REPAIR

Apparatus improperly maintained or repaired can be dangerous. Improper service or repair, service or modification of the product could result in damage to the product and/or injury to the operator. **Under no circumstances, should you attempt to service or repair the product.** Service and repairs are to be carried out by trained personnel only, so as to ensure that the product is returned to you in a safe working order. Please consult your local CIGWELD PTY LTD distributor for information on approved repair agents.

SECTION 9: DATA FOR CUTTING AND WELDING

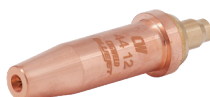
9.01 TYPE 41 CUTTING NOZZLES (OXYGEN/ACETYLENE)

SIZE	CUTTING THICKNESS (mm)	FUEL GAS FLOW l/min @100kPa	TOTAL OXYGEN FLOW & PRESSURE l/min (@kPa)	P/N
8	6-10	3.5	20 (200)	206047
12	12-20	4	38 (200)	206048
15	25-75	7	75 (350)	206049



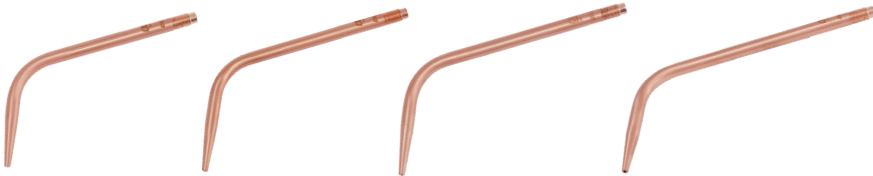
9.02 TYPE 44 CUTTING NOZZLES (OXYGEN/LPG)

SIZE	CUTTING THICKNESS (mm)	FUEL GAS FLOW l/min @100kPa	TOTAL OXYGEN FLOW & PRESSURE l/min (@kPa)	P/N
8	6-12	3.5	30 (200)	206026
12	12-20	4.4	58 (250)	206028
15	25-75	5.5	99 (400)	206029



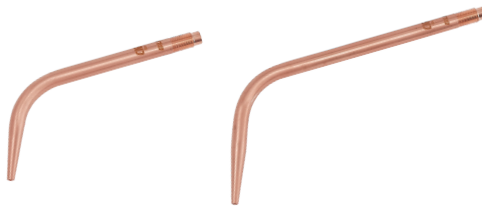
9.03 TYPE 551 WELDING TIPS (OXYGEN/ACETYLENE)

SIZE	STEEL THICKNESS (mm)	PRESSURE kPa OXYGEN	PRESSURE kPa ACET	CONSUMPTION EACH GAS l/min	P/N
10	2.6	50	50	3	207013
12	3.2-4.0	50	50	4	207014
15	5-6.5	50	50	6.5	207015
20	8.2-10	50	50	12	207016



9.04 TYPE 554 BRAZING TIPS (OXYGEN/LPG)

SIZE	STEEL THICKNESS (mm)	PRESSURE kPa OXYGEN	PRESSURE kPa ACET	P/N
8	2	50	50	207019
15	5-6.5	50	50	207020



NOTE

Significant deviation from these pressures may result in sub-optimal flame settings and in extreme cases could lead to hazardous situations and potential flashbacks.



AN ESAB BRAND

LIMITED WARRANTY TERMS

LIMITED WARRANTY: CIGWELD Pty Ltd, An ESAB Brand, hereafter, "CIGWELD" warrants to customers of its authorized distributors hereafter "Purchaser" that its products will be free of defects in workmanship or material. Should any failure to conform to this warranty appear within the time period applicable to the CIGWELD products as stated below, CIGWELD shall, upon notification thereof and substantiation that the product has been stored, installed, operated, and maintained in accordance with CIGWELD's specifications, instructions, recommendations and recognized standard industry practice, and not subject to misuse, repair, neglect, alteration, or accident, correct such defects by suitable repair or replacement, at CIGWELD's sole option, of any components or parts of the product determined by CIGWELD to be defective.

CIGWELD MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED. THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHERS, INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

LIMITATION OF LIABILITY: CIGWELD SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO, LOST PROFITS AND BUSINESS INTERRUPTION. The remedies of the Purchaser set forth herein are exclusive and the liability of CIGWELD with respect to any contract, or anything done in connection therewith such as the performance or breach thereof, or from the manufacture, sale, delivery, resale, or use of any goods covered by or furnished by CIGWELD whether arising out of contract, negligence, strict tort, or under any warranty, or otherwise, shall not, except as expressly provided herein, exceed the price of the goods upon which such liability is based. No employee, agent, or representative of CIGWELD is authorized to change this warranty in any way or grant any other warranty.

PURCHASER'S RIGHTS UNDER THIS WARRANTY ARE VOID IF REPLACEMENT PARTS OR ACCESSORIES ARE USED WHICH IN CIGWELD'S SOLE JUDGEMENT MAY IMPAIR THE SAFETY OR PERFORMANCE OF ANY CIGWELD PRODUCT. PURCHASER'S RIGHTS UNDER THIS WARRANTY ARE VOID IF THE PRODUCT IS SOLD TO PURCHASER BY NON-AUTHORIZED PERSONS.

The warranty is effective for the time stated below beginning on the date that the authorized distributor delivers the products to the Purchaser. Notwithstanding the foregoing, in no event shall the warranty period extend more than the time stated plus one year from the date CIGWELD delivered the product to the authorized distributor.

Any claim under this warranty must be made within the warranty period which commences on the date of purchase of the product. To make a claim under the warranty, take the product (with proof of purchase from a Cigweld Accredited Seller) to the store where you purchased the product or contact Cigweld Customer Care 1300 654 674 for advice on your nearest Service Provider. CIGWELD reserves the right to request documented evidence of date of purchase. CIGWELD or our Accredited Distributor must be notified in writing of its claim within seven (7) days of becoming aware of the basis thereof, and at its own expense returning the goods which are the subject of the claim to CIGWELD or nominated Accredited Distributor/Accredited Service Provider

This warranty is given.

Cigweld Pty Ltd

A.B.N. 56007226815

71 Gower Street, Preston

Victoria, Australia, 3072

Phone: 1300 654 674

Email: enquiries@cigweld.com.au

Website: www.cigweld.com.au

This warranty is provided in addition to other rights and remedies you have under law: Our goods come with guarantees which cannot be excluded under the Australian Consumer Law. You are entitled to replacement or refund for a major failure and to compensation for other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

WARRANTY

WARRANTY PERIOD

Hand held welding, cutting and heating blowpipe	12 Months
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Blowpipe mixer and cutting attachment	12 Months
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Gas regulators (excluding seat assembly and pressure gauges)	5 Years
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Gas regulator seat assemblies and pressure gauges	6 Months
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Elastomer seals and "O" rings used in the equipment	3 Months
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Accessories, defined as items used to ignite, maintain or repair, including hoses and fittings, cutting nozzles, welding and heating tips	1 Month
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CIGWELD

AN **ESAB** BRAND

BLUEJET

Instruction Part No: 213060-01-N23



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CUSTOMER CARE: Tel: 1300 654 674 | Intl Tel: +61 9474 7400
Email: enquiries@cigweld.com.au



CIGWELD.COM.AU

In the interest of continuous improvements, CIGWELD Pty Ltd ABN 56 007 226 815 (An ESAB Brand) reserves the right to change specifications or design on any of its products without prior notice.