

# WIA

## WELDMATIC 356

## WELDMATIC 396

### MIG Welder

OPERATORS MANUAL | CP147-1, CP148-1



From serial numbers C1472A\*, C1482A\*

WELD WITH THE BEST.

WELDING.COM.AU

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**READ FIRST**

The information contained in this manual is set out to enable you to properly maintain your new equipment and ensure that you obtain maximum operating efficiency.

Please ensure that this information is kept in a safe place for ready reference when required at any future time.

When ordering spare parts, please quote the model and serial number of the power source and part number of the item required. All relevant numbers are shown in lists contained in this manual. Failure to supply this information may result in unnecessary delays in supplying the correct parts.

**SAFETY**

Before this equipment is put into operation, please read the Safe Practices section of this manual. This will help to avoid possible injury due to misuse or improper welding applications.

**PLASTIC HANDLES ON POWER SOURCE**

Please note that the handles fitted to the Weldmatic 356 and 396 power source are intended for carrying the equipment by hand only.

**DO NOT** use these handles for suspending or mounting the power source in any other manner.

**SAFE PRACTICES WHEN USING WELDING EQUIPMENT**

These notes are provided in the interests of improving operator safety. They should be considered only as a basic guide to Safe Working Habits. A full list of Standards pertaining to industry is available from the Standards Association of Australia, also various State Electricity Authorities, Departments of Labour and Industry or Mines Department and other Local Health or Safety Inspection Authorities may have additional requirements. Australian Standard AS1674.2 provides a comprehensive guide to safe practices in welding.

**Eye Protection**

**NEVER LOOK AT AN ARC WITHOUT PROTECTION.** Wear a helmet with safety goggles or glasses with side shields underneath, with appropriate filter lenses protected by clear cover lens. This is a **MUST** for welding, cutting, and chipping to protect the eyes from radiant energy and flying metal. Replace the cover lens when broken, pitted, or spattered.

**Recommended Shade Filter Lens**

Amps	TIG	MMAW	MIG	Pulsed MIG
<b>0-100</b>	10	9	10	12-13
<b>100-150</b>	11	10	10	12-13
<b>150-200</b>	12	10-11	11-12	12-13
<b>200-300</b>	13	11	12-13	12-13
<b>300-400</b>	14	12	13	14
<b>400-500</b>	—	13	14	14
<b>500 +</b>	—	—	14	14

## Burn Protection

The welding arc is intense and visibly bright. Its radiation can damage eyes, penetrate light-weight clothing, reflect from light-coloured surfaces, and burn the skin and eyes. Burns resulting from gas-shielded arcs resemble acute sunburn, but can be more severe and painful.

Wear protective clothing - leather or heat resistant gloves, hat, and safety-toe boots. Button shirt collar and pocket flaps, and wear cuffless trousers to avoid entry of sparks and slag.

Avoid oily or greasy clothing. A spark may ignite them. Hot metal such as electrode stubs and work pieces should never be handled without gloves.

Ear plugs should be worn when welding in overhead positions or in a confined space. A hard hat should be worn when others are working overhead.

Flammable hair preparations should not be used by persons intending to weld or cut.

## Toxic Fumes

Adequate ventilation with air is essential. Severe discomfort, illness or death can result from fumes, vapours, heat, or oxygen depletion that welding or cutting may produce. **NEVER** ventilate with oxygen.

Lead, cadmium, zinc, mercury, and beryllium bearing and similar materials when welded or cut may produce harmful concentrations of toxic fumes. Adequate local exhaust ventilation must be used, or each person in the area as well as the operator must wear an air-supplied respirator. For beryllium, both must be used.

Metals coated with or containing materials that emit fumes should not be heated unless coating is removed from the work surface, the area is well ventilated, or the operator wears an air-supplied respirator.

Work in a confined space only while it is being ventilated and, if necessary, while wearing air-supplied respirator.

Vapours from chlorinated solvents can be decomposed by the heat of the arc (or flame) to form phosgene, a highly toxic gas, and lung and eye irritating products. The ultra-violet (radiant) energy of the arc can also decompose trichlorethylene and perchloroethylene vapours to form phosgene. Do not weld or cut where solvent vapours can be drawn into the welding or cutting atmosphere or where the radiant energy can penetrate to atmospheres containing even minute amounts of trichlorethylene or perchloroethylene.

## Fire and Explosion Prevention

Be aware that flying sparks or falling slag can pass through cracks, along pipes, through windows or doors, and through wall or floor openings, out of sight of the operator. Sparks and slag can travel up to 10 metres from the arc.

Keep equipment clean and operable, free of oil, grease, and (in electrical parts) of metallic particles that can cause short circuits.

If combustibles are present in the work area, do NOT weld or cut. Move the work if practicable, to an area free of combustibles. Avoid paint spray rooms, dip tanks, storage areas, ventilators. If the work can not be moved, move combustibles at least 10 metres away out of reach of sparks and heat; or protect against ignition with suitable and snug-fitting fire-resistant covers or shields.

Walls touching combustibles on opposite sides should not be welded on or cut. Walls, ceilings, and floor near work should be protected by heat-resistant covers or shields.

A person acting as Fire Watcher must be standing by with suitable fire extinguishing equipment during and for some time after welding or cutting if;

- Combustibles (including building construction) are within 10 metres.
- Combustibles are further than 10 metres but can be ignited by sparks.
- Openings (concealed or visible) in floors or walls within 10 metres may expose combustibles to sparks.
- Combustibles adjacent to walls, ceilings, roofs, or metal partitions can be ignited by radiant or conducted heat.

After work is done, check that area is free of sparks, glowing embers, and flames.

A tank or drum which has contained combustibles can produce flammable vapours when heated. Such a container must never be welded on or cut, unless it has first been cleaned as described in AS.1674-2. This includes a thorough steam or caustic cleaning (or a solvent or water washing, depending on the combustible's solubility), followed by purging and inerting with nitrogen or carbon dioxide, and using protective equipment as recommended in AS.1674-2. Water-filling just below working level may substitute for inerting.

Hollow castings or containers must be vented before welding or cutting. They can explode. Never weld or cut where the air may contain flammable dust, gas, or liquid vapours.

## Shock Prevention

Exposed conductors or other bare metal in the welding circuit, or ungrounded electrically alive equipment can fatally shock a person whose body becomes a conductor. Ensure that the equipment is correctly connected and earthed. If unsure have the equipment installed by a qualified electrician. On mobile or portable equipment, regularly inspect condition of trailing power leads and connecting plugs. Repair or replace damaged leads.

Fully insulated electrode holders should be used. Do not use holders with protruding screws. Fully insulated lock-type connectors should be used to join welding cable lengths.

Terminals and other exposed parts of electrical units should have insulated knobs or covers secured before operation.

**If the supply cable is damaged it must be replaced by the manufacturer, their service agent or a similarly qualified person.**

## 1 INTRODUCTION

Gas Metal Arc Welding (G.M.A.W.) is an arc welding process where a consumable wire is fed by motor driven feed rolls to a welding gun, and where welding current is supplied from the welding power source. The welding arc is struck between the work piece and the end of the wire, which melts into the weld pool. The arc and the weld pool are both shielded by gas flow from the gun, or in the case of “self shielded” wires, by gases generated by the wire core.

The process is very versatile in that by selection of the correct wire composition, diameter and shielding gas, it can be used for applications ranging from sheet-metal to heavy plate, and metals ranging from carbon steel to aluminium alloys.

The Weldmatic Fabricator has been designed to be used with consumable wires in the range from 0.6mm to 1.6mm diameter. The smaller wire sizes are used when welding at lower currents, such as sheet-metal applications. Increasing the wire diameter permits higher welding currents to be selected.

A common application of G.M.A.W. is for welding Mild Steel. In this application, a Mild Steel solid consumable wire such as AUSTMIG ES6 is used with a shielding gas of Carbon Dioxide, or Argon mixed with Carbon Dioxide. Alternatively, Flux-cored consumable wires are available in both gas shielded, and ‘gasless’ self shielding types.

Stainless steel and Aluminium can be welded with G.M.A.W. using the correct consumable wire and shielding gas.

## 2 RECEIVING

Check the equipment received against the shipping invoice to make sure the shipment is complete and undamaged. If any damage has occurred in transit, please immediately notify your supplier.

### **The Weldmatic 356 package contains;**

- Weldmatic 356 Power Source CP147-2
- W64-1 Wire Feeder with 10m interconnection cable. 35mm<sup>2</sup> weld cable.
- 10m Work Lead with Clamp
- Welding Torch 300 A 3.6m with Centre Fire Consumables.
- Gas Regulator
- Gas Hose
- (This) Operating Manual

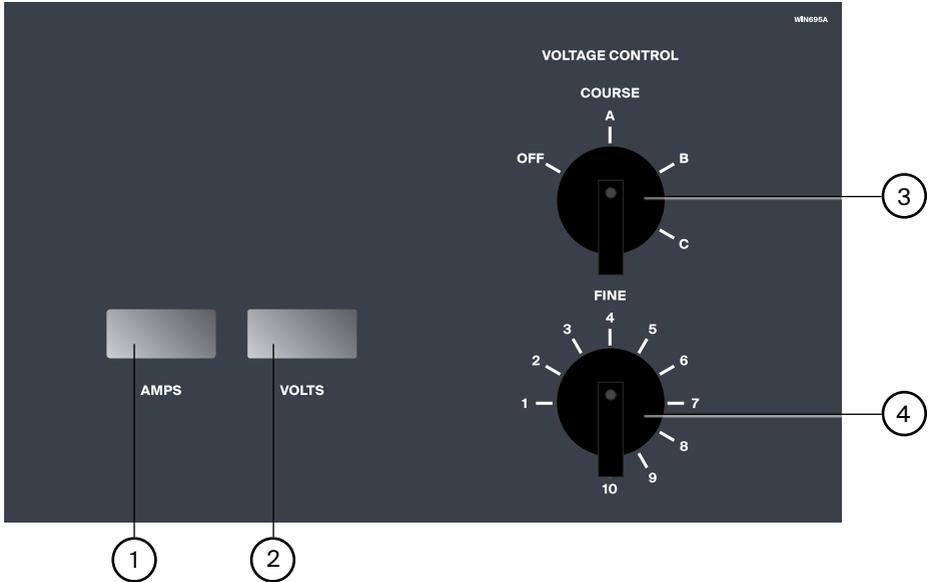
### **The Weldmatic 396 package contains;**

- Weldmatic 396 Power Source CP148-2
- W64-1 Wire Feeder with 10m interconnection cable. 50mm<sup>2</sup> weld cable.
- 10m Work Lead with Heavy Duty G Clamp
- Welding Torch 300 A 3.6m with Centre Fire Consumables.
- Gas Regulator
- Gas Hose
- (This) Operating Manual

### 3 SPECIFICATIONS

	<b>WELDMATIC 356</b>	<b>WELDMATIC 396</b>
<b>Manufactured to Standards</b>	AS60974-1.	AS60974-1.
<b>Rated Input Voltage</b>	415 Vac, 50 Hz	415 Vac, 50Hz
<b>Rated Primary Current</b>	15 Amps	15 Amps
<b>Maximum Primary Current</b>	23 Amps	27 Amps
<b>Recommended Generator kVA</b>	16.5 kVA	20 kVA
<b>Rated Output @ 40°C</b>	355 A , 31.8 V, 40% duty 225 A, 25.3 V, 100% duty	395 A, 33.8 V, 40% duty 220 A, 25 V, 100% duty
<b>Welding Current</b>	30 - 355 Amps	20 - 395 Amps
<b>Open Circuit Voltage</b>	16 - 44 V	16 - 46.5 V
<b>Shipping weight Includes wirefeeder &amp; leads</b>	163 kg	172 kg
<b>Mains Circuit Breaker Rating</b>	20 Amps	25 Amps
<b>Supply plug</b>	Min. 20 Amp (415 V 3 phase) 32 Amp fitted	Min. 20 Amp (415 V 3 phase) 32 Amp fitted
<b>Fitted Supply Cable</b>	47/0.20 Four Core, Heavy Duty PVC	50/0.20 Four Core, Heavy Duty PVC
<b>Cooling</b>	Fan on demand, fan operates only as required to cool internal components	Fan on demand, fan operates only as required to cool internal components
<b>Insulation</b>	Class H, 140°C Rise.	Class H, 140°C Rise.
<b>Wirefeeder Circuit Breaker Rating</b>	5 Amps	5 Amps

## 4 POWER SOURCE CONTROLS



**Fig 1 Power Source Controls**

### **1 Ammeter**

This meter displays actual welding current during welding operation, and a stored reading for 30 seconds after welding. Weldmatic 396 Only.

### **2 Voltmeter**

This meter displays actual welding voltage during welding operation, and a stored reading for 30 seconds after welding. Weldmatic 396 Only.

### **3 Coarse Voltage, On/Off Control**

This switch provides mains power ON/OFF and Coarse adjustment of the output welding voltage over three ranges.

### **4 Fine Voltage Control**

This switch provides Fine adjustment of the output welding voltage over ten steps.

## 5 INSTALLATION

### Do Not Touch Live Electrical Parts

Touching live electrical parts can cause fatal shocks or severe burns. The electrode and work circuit is electrically live whenever the output is on. The input power circuit and machine internal circuits are also live when power is on. In semi-automatic wire welding, the wire, wire reel, drive roll housing, and all metal parts touching the welding wire are electrically live. Incorrectly installed or improperly grounded equipment is a hazard. Do not touch live electrical parts. **ELECTRIC SHOCK can kill.** Wear dry, hole-free insulating gloves and body protection. Insulate yourself from work and ground using dry insulating mats or covers big enough to prevent any physical contact with the work or ground.

### Connection to Electrical Mains Power Supply

**NOTE. All electrical work shall only be undertaken by a qualified electrician.**

The Weldmatic 356 is supplied with a 5 metre 4 core 47/0.20 Heavy Duty PVC mains power supply cable. The Weldmatic 396 is supplied with a 5 metre 4 core 50/0.25 Heavy Duty PVC mains power supply cable. This cable should be correctly connected to a suitable 3 Phase plug top or fixed connection point.

The minimum capacity of the mains wiring and power outlet supplying a welder is selected according to the effective primary current of the machine. The effective primary current for Weldmatic 356 and Weldmatic 396 are 15 Amps.

The minimum recommended mains circuit breaker rating for a Weldmatic 356 is 20 Amps and Weldmatic 396 is 25 Amps.

**Note:** Due to normal variations of sensitivity, the tripping time of some circuit breakers may limit the duty cycle available from the Weldmatic 356 & 396 machines. A higher rated circuit breaker can be selected, but the mains wiring capacity must be increased to suit.

The current rating of the mains cable depends on cable size and method of installation. Refer to AS/NZS 3008.1, Table 9.

If it becomes necessary to replace the mains flexible supply cable, use only cable with correct current rating. Access to the supply terminals is gained by removing the power source side panels. The replacement cable must be fitted and retained in the same manner as the original.

### Output Voltage Polarity

The design of the Weldmatic 356 & 396 allows selection of the output voltage polarity.

#### Positive Wire

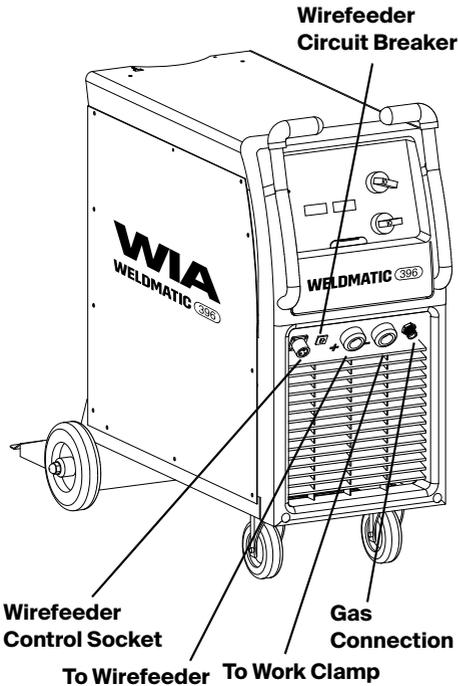
G.M.A.W. with solid consumable wires is carried out with the work piece Negative and the welding wire Positive.

To setup for this condition, connect the 'WORK' lead plug into the (-) output socket on the Power Source, and the 'WELDING' lead from the wirefeeder into the (+) socket on the Power Source, as in Figure 2.

#### Negative Wire

Some 'self-shielded' flux cored consumable wires are operated with the work piece Positive and the consumable wire Negative. Refer to the manufacturers data for the particular consumable wire to be used.

To setup for this condition, connect the 'WORK' lead plug into the (+) output socket on the Power Source, and the 'WELDING' lead from the wirefeeder into the (-) socket on the Power Source, as in Figure 3.



**Fig 2 Positive Wire**

### Fitting the Gas Cylinder

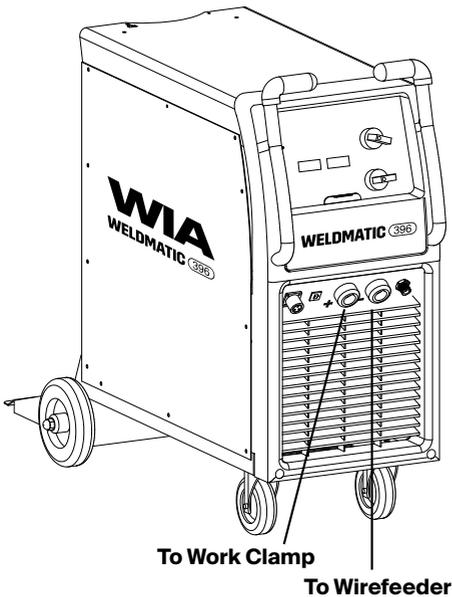
Place the gas cylinder on the tray at the rear of the welder. Retain the cylinder with the chain provided.

Fit the gas regulator to the cylinder. DO NOT apply grease or oil to these joints.

Fit the end of the gas inlet hose from the rear of the machine to the connector supplied with the gas regulator, and secure with the clamp also supplied.

### Remote Wirefeeder

The remote wirefeeder is connected to the Weldmatic 356 & 396 power source via the composite cable interconnecting lead. Check all connections are firmly made to ensure good electrical contact, and to prevent gas leaks.



**Fig 3 Negative Wire**

## 6 NORMAL WELDING SEQUENCE

### Weld Start

Closing the welding gun switch initiates this sequence of events:

- The gas valve is energised and gas flow commences and continues for any pre-gas time set
- The power source contactor function is initiated. Welding voltage is applied between the work piece and the consumable wire
- The wire drive motor is energised
- The wire touches the work piece, and the arc is established.

### Weld End

Releasing the gun switch initiates this sequence of events:

- The wire drive motor is de-energised, and is dynamically braked to a stop
- After a short pre-set period, known as the 'burn-back' time, the Power-source contactor function is released. This period ensures that the consumable wire does not 'freeze' in the weld pool
- At the completion of any post-gas time set, the gas valve is de-energised and the flow of shielding gas ceases.

## 7 BASIC WELDING INFORMATION

### Choice of Shielding Gas

The choice of shielding gas is largely determined by the consumable wire to be used. Many proprietary shielding gas mixtures are available.

The recommended shielding gases for use with the Weldmatic 356 & 396 are:

- Mild Steel: Argon + 5 to 25% Carbon Dioxide;  
100% CO<sub>2</sub>
- Aluminium: Argon;
- Stainless Steel: Argon + 1 to 2% Oxygen.

Consult your gas supplier if more specific information is required.

### Shielding Gas Flow Rate

In G.M.A. welding, one function of the shielding gas is to protect the molten weld pool from the effects of oxygen in the atmosphere. Without this protection the weld deposit becomes 'honeycombed' in appearance, an effect which is described as weld porosity.

In draft-free conditions the gas flow rate required to give adequate protection is typically 10-12 litres/min. In situations where drafts cannot be avoided, it may be necessary to increase this rate up to 20 litres/min, and/or to provide screening of the work area.

Weld porosity can also be caused by air entering the gas stream through a damaged hose, loose gas connection, or from restriction in the nozzle, such as from excess build-up of spatter.

When welding aluminium, particular care must be taken with all aspects of shielding gas delivery and workpiece preparation in order to avoid weld porosity.

## Establishing a Weld Setting

Once the consumable wire type, wire size and shielding gas have been chosen, the two variables that are adjusted in order to obtain a the desired weld setting are;

- Wirefeed speed,
- Welding arc voltage.

The wirefeed speed determines the welding current; increasing the speed increases the current, and decreasing it decreases current.

The selected wirefeed speed must be matched with sufficient arc voltage; a speed increase requires an increase of arc voltage.

If the voltage is too low the wire will stub and stutter, and there will not be a steady arc. If the voltage is too high the arc will be long with metal transfer occurring as a series of large droplets.

**Important:** Do not operate the Voltage Control switches during welding.

The weld setting should be chosen to suit the application and the thickness of the metal to be welded. It is important to check that the deposited weld provides sufficient strength to suit the application.

A “good” weld will have the characteristics illustrated in Figure 4. The weld has penetrated into the parent metal, fusing the root of the joint where the two plates meet, and the weld blends smoothly into the side walls.

A “bad” weld is shown in Figure 5. The weld has not penetrated the joint root, and there is poor side wall fusion. This lack of fusion would normally be corrected by increasing the arc voltage, or by increasing both wirefeed speed and arc voltage to achieve a higher current weld setting.

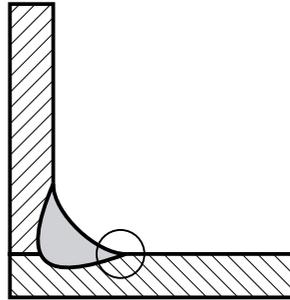


Fig 4 “Good” Weld

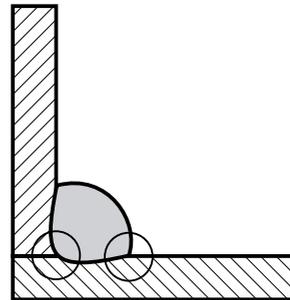
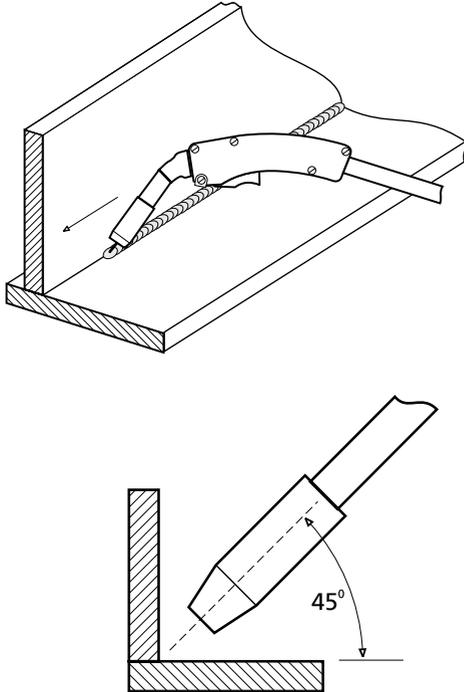


Fig 5 “Bad” Weld

## 8 GENERAL MAINTENANCE

### Gun Position

For “down hand” fillet welding, the gun is normally positioned as shown in Figure 6 below with the nozzle end pointing in the direction of travel.



**Fig 6 Gun Position**

**Before removing the power source covers, ENSURE that the equipment is disconnected from the mains power supply. When the equipment is energised LETHAL VOLTAGES are present on the electrical components enclosed.**

### Dust

Care should be taken to prevent excessive build-up of dust and dirt within the welding power source. It is recommended that at regular intervals, according to the prevailing conditions, the equipment covers be removed and any accumulated dust be removed by the use of a dry, low pressure compressed air, or a vacuum cleaner. The machine should be blown out with compressed air at least every 12 months as grinding dust can settle on PCB componentry causing failure. Failure to maintain machines may void warranty.

### Wirefeed

In order to obtain the most satisfactory welding results from the G.M.A.W. process, the wirefeed must be smooth and constant. Most causes of erratic wirefeed can be cured by basic maintenance. Check the General Maintenance section of the Wirefeeder Operators Manual for more details.

## 9 EXTERNAL TROUBLE SHOOTING

**If you are in Australia and the following checks do not identify the fault condition, the equipment should be returned to a WIA Service agent. Phone 1300 300 884 for details of your nearest service agent.**

**If you are in New Zealand and the following checks do not identify the fault condition, the equipment should be returned to the original place of purchase with proof of purchase, or contact Weldwell on 06 8341 600.**

**If you are in South East Asia and the following checks do not identify the fault condition, the equipment should be returned to the original place of purchase with proof of purchase, or contact ITW Welding Singapore Pte Ltd on +65 6552 1223.**

**If the welding machine requires service or repair, take the machine to an authorized service agent.**

**Australian service agents can be located on the [welding.com.au](http://welding.com.au) website.**

**Alternatively call customer service; Australian 1300 300 884  
New Zealand 0800 9353 9355**

**When contacting a service agent please have an accurate description of the fault, and the machine serial number located on the base on the machine.**

**C1472A.....**

**C1482A.....**

## 10 TROUBLE SHOOTING CHART

<b>Problem</b>	<b>Likely Reason</b>	<b>Outcome</b>
<b>All Transformer Models</b>		
No welding current, no display.	The machine is not turned on at both the mains supply and the machine power switch.	If confirmed that the machine is switched on correctly, test the same outlet using a known serviceable appliance.
Mains Circuit breaker nuisance tripping during welding.	Mains Circuit breaker inadequately rated, or duty cycle exceeded.	The circuit breaker may be rated for I <sub>eff</sub> (effective current). If Weld output is greater than the 100% rating the machine will require mains current higher than I <sub>eff</sub> The duty cycle should be observed and understood.
Machine continually cuts out on thermal overload	The machine duty cycle has been exceeded.	Leave the machine energized, with the fan running until the machine has cooled sufficiently. The duty cycle should be observed and understood.
No welding current, but display on.	The connections may not be made securely.	Ensure all connections are in position and securely made.
Machine gives poor quality weld.	The polarity of the electrode/return cables is incorrect.	Polarity should be confirmed for the process/wire type in use.
	The return lead contacts, or workbench surface requires cleaning.	The return lead contacts and connections should be inspected and cleaned, and the workbench cleared of waste materials.
Machine works fine on mains power but does not work when connected to a generator.	Generator cannot provide high peak cycle currents for inverter	Use larger kVA generator or sometimes a different band generator will work..
Machine works fine on mains power but does not work when connected with extension lead.	Extension leads creating additional resistance, and voltage drop	Use larger cable size, and keep extension lead as short as possible.

<b>Problem</b>	<b>Likely Reason</b>	<b>Outcome</b>
<b>GMAW/MIG Models</b>		
The machine feeds slowly and then speeds up after 3-5 seconds.	Creep mode is selected, or machine has a permanent creep mode function.	Some models have a creep mode function that cannot be adjusted. Other models have a push button selection for creep mode on/off.
Nothing happens for first x seconds after trigger is pulled.	Pre gas is selected to x seconds.	Allow for Pre Gas time, or adjust time.
The arc starts normally but then stops x seconds.	Spot time is selected to x seconds.	Spot time selection should be adjusted to 0 seconds.
The arc does not stop after trigger is released.	Latch mode is selected.	Latch mode should be switched off.
Motor continues to run once arc is extinguished.	Latch mode is selected.	Latch mode should be switched off.
Weld is contaminated with small bubbles (presence of porosity).	Air in the gas hose. The torch gas hose has not been purged sufficiently.	Purge the system and confirm sufficient gas flow through the regulator.
	The gas hose is not securely connected at the machine or at the regulator.	Ensure the gas connections from regulator through to the torch connection are sufficiently tightened.
	Air is being drawn into arc through torch nozzle	Remove nozzle, check O ring on torch head, check condition of insulator in nozzle
Wire feed stutters and arc is erratic. Also, motor turns correctly under no load.	Torch consumables are blocked/partially blocked.	Liners and contact tips are consumable and wear over time.
	Rusty MIG wire.	Replace the torch liner and reduce wire feed tension.
Presence of porosity at weld start.	The torch gas hose has not been purged sufficiently.	Purge the system and confirm sufficient gas flow through the regulator.

### 11 CIRCUIT DIAGRAMS - POWER SOURCE

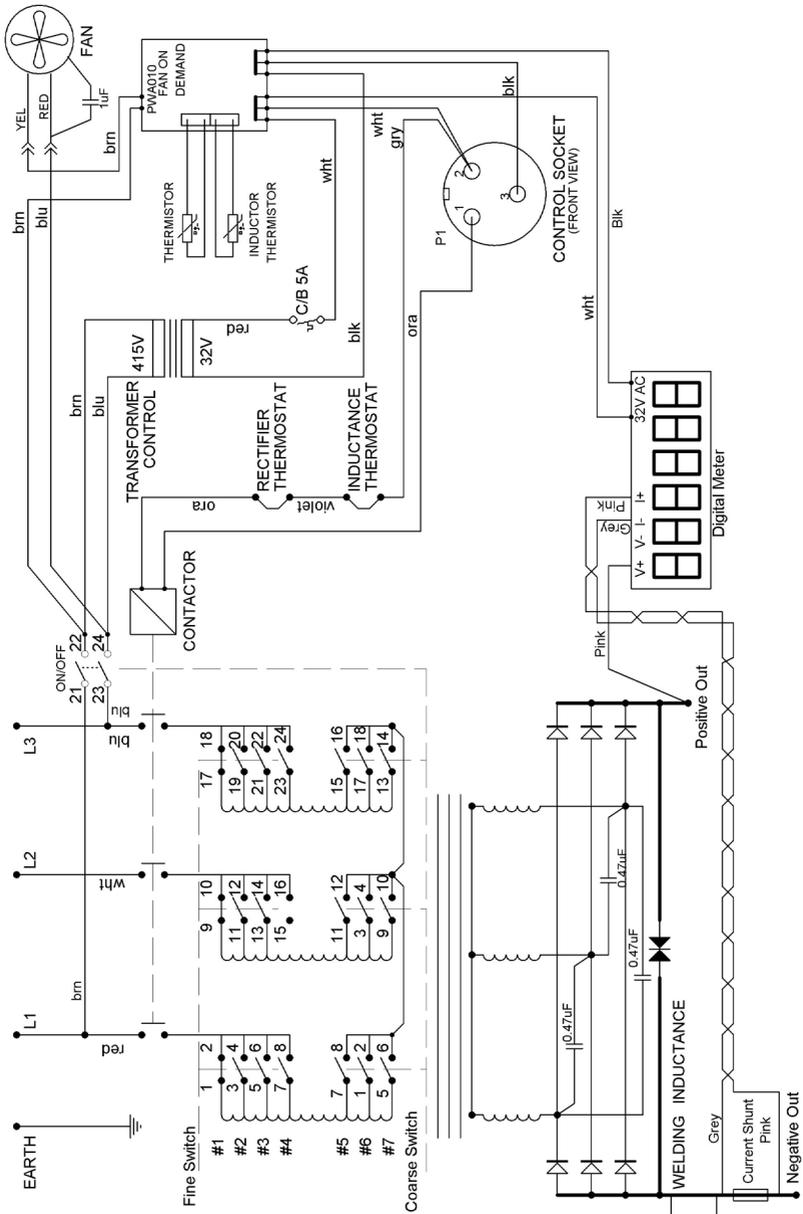
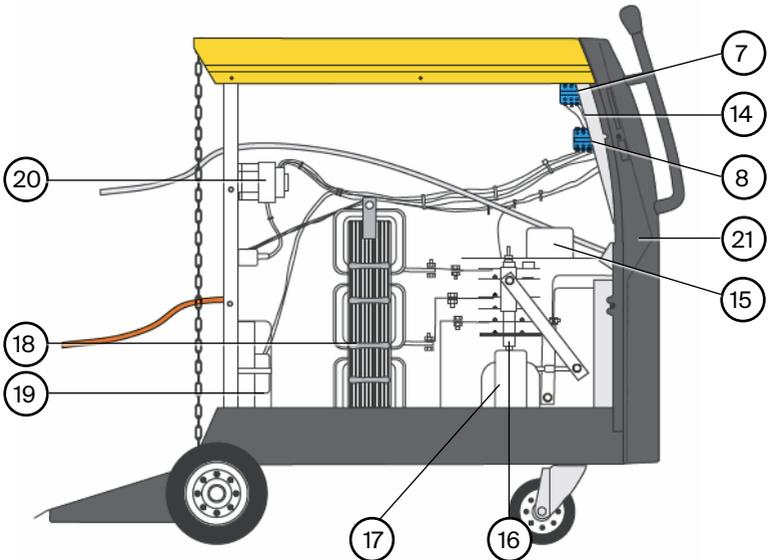
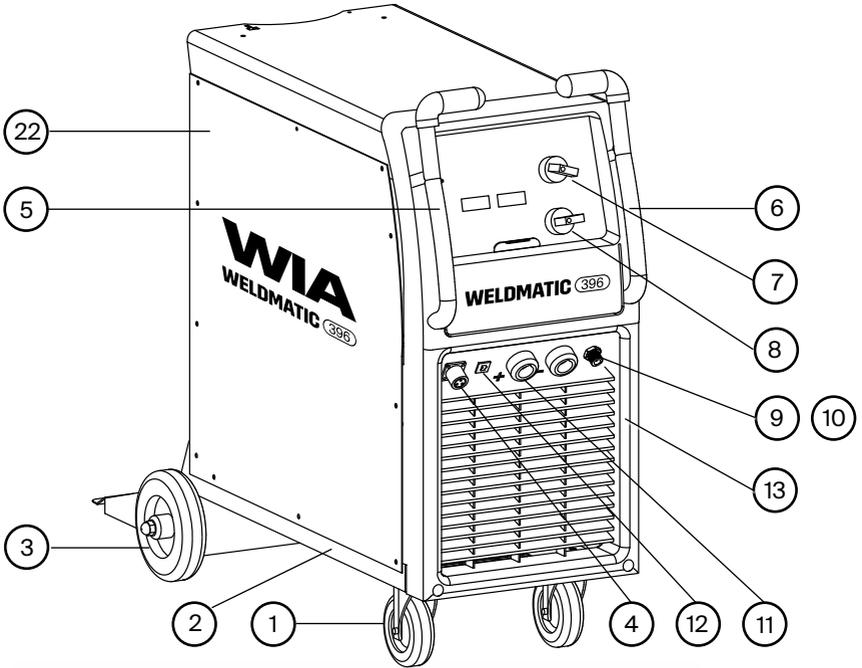


Fig 7 Power Source Circuit Diagram

**12 ASSEMBLY AND PARTS LIST -  
WELDMATIC 356 & 396 POWER SOURCE**

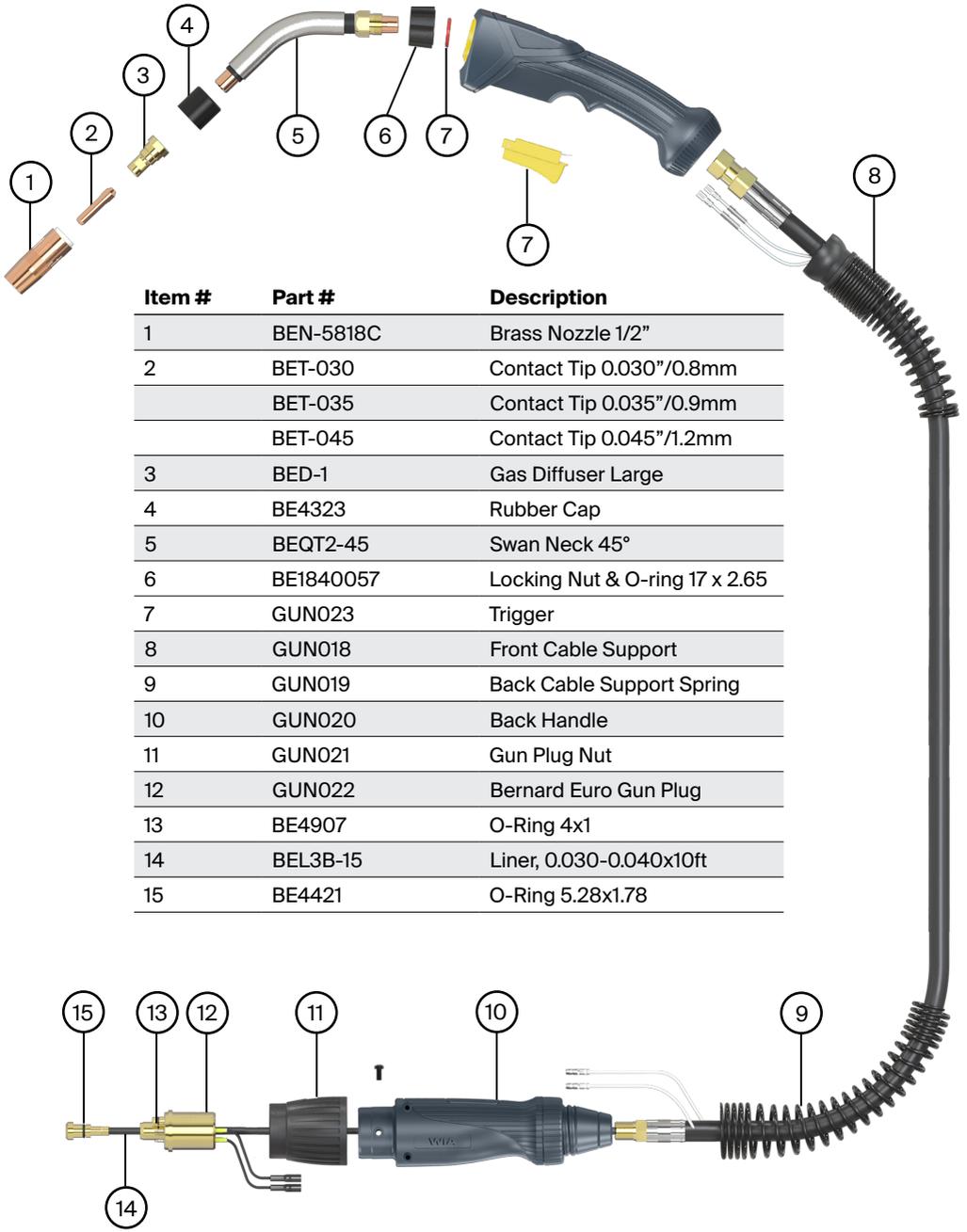


**Fig 8 Weldmatic 356 & 396 Power Source Assembly**

**WELDMATIC 356 & 396 PARTS LIST**

<b>Item #</b>	<b>Part #</b>	<b>Description</b>	<b>Qty</b>
1	WHL002	Wheel, Rubber, Castor	2
2	PAN094	Base Panel	1
3	WHL003	Wheel, Rubber, Fixed	2
4	E0053	Control Socket	1
5	MZ231554	Handle Left	1
6	MZ231553	Handle Right	1
7	E0077	Switch, Coarse, Off/1/2/3	1
8	CP43-0/3	Switch, Fine, 10 Position	1
9	TC265	5/8" UNF Nipple	1
10	TC266	5/8" UNF Nut	1
11	CX58	Socket, Dinse	2
12	E0024	Circuit Breaker, 5 Amp	1
13	MZ230304	Plastic Front	1
14	PWA010	Fan on Demand PCB	1
15	L0023	Control Transformer	1
16	D0032	Rectifier	1
	E0056	Thermostat	1
17	IND030	Inductance Assembly	1
	E0057	Thermal Overload	1
18	TFM062	Welding Transformer Assembly, Wired 356	1
	TFM063	Welding Transformer Assembly, Wired 396	1
19	FAN009	Fan Assembly	1
20	E0060	Contactora	1
21	PWA100	Digital Meter Assembly (Weldmatic 396 Only)	1
22	PAN097	Side Panel CP147	1
	PAN101	Side Panel CP148	1
Not Shown	R0028	Fan on Demand Thermistor	2

## 12.1 ASSEMBLY AND PARTS LIST - SNQ-300 12E TORCH



Item #	Part #	Description
1	BEN-5818C	Brass Nozzle 1/2"
2	BET-030	Contact Tip 0.030"/0.8mm
	BET-035	Contact Tip 0.035"/0.9mm
	BET-045	Contact Tip 0.045"/1.2mm
3	BED-1	Gas Diffuser Large
4	BE4323	Rubber Cap
5	BEQT2-45	Swan Neck 45°
6	BE1840057	Locking Nut & O-ring 17 x 2.65
7	GUN023	Trigger
8	GUN018	Front Cable Support
9	GUN019	Back Cable Support Spring
10	GUN020	Back Handle
11	GUN021	Gun Plug Nut
12	GUN022	Bernard Euro Gun Plug
13	BE4907	O-Ring 4x1
14	BEL3B-15	Liner, 0.030-0.040x10ft
15	BE4421	O-Ring 5.28x1.78

Fig 9 P/N GUN014 350 Amp Gun and Cable Assembly

## Nozzles

Part #	Description
BEN-3400C	Nozzle, copper, 3/4" I.D, flush
BEN-3414B	Nozzle, brass, 1/4" I.D, recess
BEN-3414C	Nozzle, copper, 3/4" I.D, 1/4", recess
BEN-3418B	Nozzle, brass 3/4" I.D, 1/8", recess
BEN-5800C	Nozzle, copper, 5/8" I.D, flush
BEN-5814B	Nozzle, brass, 5/8" I.D, 1/4" recess
BEN-5814C	Nozzle, copper, 5/8" I.D, 1/4" recess
BEN-5818B	Nozzle, brass, 5/8" I.D, 1/8" recess
BEN-5818C	Nozzle, copper, 5/8" I.D, 1/8" recess

## Tips

Wire diameter	Part #
0.8mm	BET-030
0.9mm	BET-035
1.0mm	BET-039
1.2mm	BET-045
1.4mm	BET-052
1.6mm	BET-062
2.0mm	BET-078

To replace liner: Disconnect gun/cable assembly at the Euro adaptor. Remove nozzle (1) gas diffuser (3) and insulator (4). Withdraw old liner from the wirefeeder end. Insert new liner and refit gun/cable assembly to the wirefeeder.

At the gun end, compress the liner within the gun cable, then cut it approx 20mm past the end of the body tube/neck (5).

Refit insulator and screw gas diffuser on firmly with a wrench.

Insert tip (2) into gas diffuser then thread nozzle onto gas diffuser/tip and tighten firmly by hand.

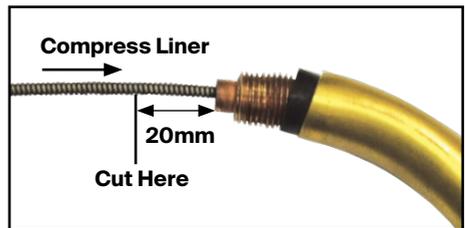


Fig 10 Replacing the Gun Cable Liner

## 13 AUSTRALIAN WARRANTY INFORMATION



### WIA Weldmatic MIG Equipment

#### 3 Year Gold Shield Warranty Statement

Effective 1st January 2022

Welding Industries of Australia (WIA) warrants to the original retail purchaser that the Weldmatic welding machine purchased (Product) will be free from defects in materials and workmanship for a period of 3 years from the date of purchase of the Product by the customer. If a defect in material or workmanship becomes evident during that period, Welding Industries of Australia will, at its option, either:

- Repair the Product (or pay for the costs of repair of the Product); or
- Replace the Product.

In the event of such a defect, the customer should return the Product to the original place of purchase, with proof of purchase, or contact Welding Industries of Australia on 1300 300 884 to locate an authorised service agent.

Products presented for repair may be replaced by refurbished products of the same type rather than being repaired. Refurbished parts may be used to repair the product. Replacement of the product or any part does not extend or restart the Warranty Term. The repair of your products may result in the loss of any user-generated data. Please ensure that you have made a copy of any data saved on your product.

Any handling and transportation costs (and other expenses) incurred in claiming under this warranty are not covered by this warranty and will not be borne by Welding Industries of Australia. Welding Industries of Australia will return the replacement product, if original found to be faulty, freight free to the customer.

This warranty covers the Weldmatic power source and wirefeeder only, and does not extend to the regulator, gun assembly or accessories included in the original purchase package.

The obligation of Welding Industries of Australia under this warranty is limited to the circumstances set out above and is subject to:

- The customer being able to provide proof of purchase of the Product and the purchase price paid for the Product;
- The relevant defect in materials or workmanship;
- The Product not having been altered, tampered with or otherwise dealt with by any person in a manner other than as intended in respect of the relevant Product; and
- The Product not having been used or applied in a manner that is contrary to customary usage or application for the relevant Product or contrary to any stated instructions or specification of Welding Industries of Australia.

For products purchased in Australia

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any 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. The benefits given by this warranty are in addition to other rights and remedies which may be available to the customer under any law in relation to goods and services to which this warranty relates.

**Warranty provided by:**  
**Welding Industries of Australia**  
(ABN 63 004 235 063)  
A Division of ITW Australia Pty Ltd

5 Allan Street, Melrose Park  
South Australia 5039

**1300 300 884**

**Email:** [info@welding.com.au](mailto:info@welding.com.au)

**Web:** [www.welding.com.au](http://www.welding.com.au)

## 14 NEW ZEALAND WARRANTY INFORMATION



### **WIA Weldmatic MIG Equipment**

#### **3 Year Gold Shield Warranty Statement**

Effective 1st January 2022

WIA Weldmatic MIG Equipment purchased in New Zealand have identical warranty conditions as Australia, with the below conditions:

In the event of defects listed in the Australian warranty conditions, the customer should return the Product to the original place of purchase, with proof of purchase, or contact Weldwell on 0800 9353 9355.

The warranty shall not apply to parts that fail due to normal wear.

For customers located in New Zealand, you can contact:

#### **Weldwell New Zealand**

Division of ITW New Zealand

64 Thames Street  
Napier 4110  
New Zealand

**0800 9353 9355**

**Email:** [info@weldwell.co.nz](mailto:info@weldwell.co.nz)

**Web:** [www.weldwell.co.nz](http://www.weldwell.co.nz)

**NOTES:**

**NOTES:**



# WIA

## **WELDING INDUSTRIES AUSTRALIA**

A Division of ITW Australia Pty Ltd

ABN: 63 004 235 063

1300 300 884

**Email:** [info@welding.com.au](mailto:info@welding.com.au)

**welding.com.au**

## **WELDWELL NEW ZEALAND**

A Division of ITW New Zealand

NZBN: 9 429 039 833 129

GST NO: 080 177 186

**0800 9353 9355**

**Email:** [info@weldwell.co.nz](mailto:info@weldwell.co.nz)

**weldwell.co.nz**

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