



GT200W POWER

PROFESSIONAL WELDER GENERATOR

200A WELDER / 5500W GENERATOR



Please ensure that you read this manual in full before using your machine and follow the maintenance and operation instructions carefully.

OPERATING INSTRUCTIONS



Congratulations on your new GT Power product!

The GT Power range from Euroquip uses latest technology design and engineering to produce generator products that combine market leading value and features with durability. Designed for discerning operators who seek professional results and product quality. Design emphasis is placed on simple, functional design and operation. GT Power products are subject to stringent quality control and designed and manufactured to NZ & Australian standards.

Euroquip is a market leading provider of innovative power equipment solutions to a wide range of industries across New Zealand and Australia. Key product categories are; welding equipment, air compressors, power generators and cleaning equipment.

Euroquip's slogan is 'empowering industries', find out more about the advantage Euroquip brings at www.euroquip.co.nz.

Providing exceptional product support is a key component of Euroquip's market leading customer advantage focus. As part of this program, it is required for all products to be registered with Euroquip to qualify for product support. Products not registered with Euroquip are supported by a base 12 month warranty only. Spare parts and technical support will not be available for an unregistered product outside of this base warranty period. If a Euroquip dealer has not already registered your product, please register it online at www.euroquip.co.nz. To request a physical registration form, please download one at www.euroquip.co.nz under the 'Contact Us' tab.

Contents

Specifications.....	5
General Operation	6
Features & Controls.....	9
Installation.....	10
Generator Usage.....	11
General Operation.....	11
Welder/Generator Controls.....	12
Engine Operation.....	13
Welding Operation.....	14
Auxiliary Power Operation.....	15
Electrode Selection Guide.....	16
Power Applications.....	17
Basic MMA Welding Guide.....	18
MMA Welding Techniques.....	19
Other Knowledge and Resources.....	22
MMA Troubleshooting.....	23
Accessories.....	24
Engine Maintenance.....	25
Troubleshooting.....	27
Wiring Diagram.....	30
Safety Instructions.....	31
Warnings.....	33
Warranty.....	37



..... **BREAK THROUGH TECHNOLOGY!**

GT200W

PROFESSIONAL WELDER GENERATOR



The heavy duty 18L fuel tank and the industrial quality of the GT200W will keep you welding all day. With all the unique GT POWER features like industrial air cleaner & muffler system - for cleaner quieter operation, superior quality alternator & automatic voltage regulator (AVR) - for more stable power and welding output. Also features low oil alert with automatic engine shutdown.

The GT200W features electric start with a recoil back-up, this makes for a super reliable workhorse. With a dual welding/generating function it will provide years of exceptional performance in the field or in the workshop with a welding duty cycle of 60% @ 180 amps.

This machine is equipped standard with an industrial fully-welded tube frame and wheel kit, making it robust and portable - ready for any task.

- 200A, 75V Welding power
5000W (rated), 5500W (max) Generator power
- Powerdyne 4 stroke, 14HP, 420CC, air cooled, OHV industrial engine
- Electric start with recoil backup
- 1 x 32A Monster single phase outlet with adapter cord
- 18L fuel tank for up to 8 hours run time
- Arc and earth leads included (3 & 4m)
- Will run 1.6 - 5.0mm electrodes
- 97dB
- 96kg



WELDING		GENERATING		ENGINE TYPE	FULL LOAD dBA RATING	STARTING SYSTEM	FUEL TANK CAPACITY	RUN TIME	LOW OIL ALERT	POWER OUTLETS	L x W x H (mm)	WEIGHT
OPEN CIRCUIT VOLTAGE	AMPS (Max)	OUTPUT (Max)	OUTPUT (Rated)									
75V	200A	5500W	5000W	4StrokeOHV	97	Electric	18L	8hrs	✓	1	780 x 545 x 632	96kg

Specifications

INPUT - GASOLINE ENGINE	
Make/Model:	Powerdyne 14HP
Description:	1 Cylinder, 4 Cycle, Air-Cooled Gasoline 14HP @ 3600RPM, Aluminium Block
Speed: (RPM)	3000RPM
Displacement:	420CC
Ignition System:	Recoil Start, Electric Start, Manual Choke, Electronic Ignition
Capacities:	Fuel: 18L, Oil: 1.1L
RATED OUTPUT - WELDER	
Amps @ DC Constant Current:	200A
Duty Cycle:	60% @ 180A
Volts@ Rated Amperes:	26V Max. Output
OUTPUT - WELDER & GENERATOR	
Welding Ranges:	50 - 200A DC
Welding Open Circuit Voltage:	75 V DC Max.
AC Auxiliary Power:	5500W Max., 5000W Continuous, 230V Single Phase
OTHER	
Dimensions:	780 x 545 x 632mm
Weight:	96kg
Operating Temperature Range:	-18° to 40°C
Storage Temperature Range:	-40° to 55°C



General Operation

The GT200W is designed for commercial use welder/generator applications. As a welder it provides 200A of DC constant current for welding with DC stick electrodes. A single dial lets you select a full range of welding output from 50 to 200A.

As a generator it can supply up to 5500 surge watts or 5000 continuous watts of 230 volt, single-phase AC power. The machine is portable.

Recommended Applications

WELDER: The GT200W provides excellent constant current DC welding output for stick (SMAW) welding.

GENERATOR: The GT200W gives smooth AC generator output for continuous auxiliary power usage within the engine manufacturer's required maintenance recommendations.

Operational Features & Controls

The GT200W was designed for simplicity. Therefore, it has very few operating controls. The welder/generator automatically senses whether generator or welding function is required. No manual change is needed.

The gasoline engine controls include a recoil starter, choke and stop switch. See the ENGINE OPERATION section of this manual for details about starting, running, stopping, and breaking in the gasoline engine.

Design Features & Advantages

- 200A DC constant current welding for stick electrodes.

- Lightweight / portable.
- Full range, continuous welding output control with a single knob.
- Five function hour meter.
- 5500 Surge Watts or 5000 Watts of continuous 230V single phase AC auxiliary power.
- Powerdyne 14HP overhead valve air-cooled gasoline engine. Smooth running, long life.

Welding Capability

The GT200W is rated at 180A, 26VDC at 60% duty cycle on a ten-minute basis. This means that you can load the welder to 180A for six-minutes out of every ten-minute period. The machine is capable of higher duty cycles at lower output currents.

The current is continuously variable from 50 to 200A DC. The GT200W can, therefore, weld with 1.6, 2.5, 3.2, 4.0 and 5.0mm diameter electrodes.

Limitations

- The GT200W is not recommended for any processes besides those that are normally performed using stick welding (SMAW) procedures.
- The GT200W is not recommended for pipe thawing.
- The generating function is never to be used while welding is in process.

Safety

Read this entire installation section before you start installation. More information on safety procedures at the rear of this manual.



WARNING: *Do not attempt to use this equipment until you have thoroughly read all operating and maintenance manuals supplied with your machine. They include important safety precautions, detailed engine starting, operating and maintenance instructions, and parts lists.*

Hazards of Electric Shock, Engine Exhaust & Moving Parts

ELECTRIC SHOCK can kill.

- DO NOT touch electrically live parts or electrode with skin or wet clothing.
- Insulate yourself from work and ground.
- Always wear dry insulating gloves.

ENGINE EXHAUST can kill.

- Use in open, well ventilated areas or vent exhaust outside.
- Do not stack anything on or near the engine.

MOVING PARTS can injure.

- Do not operate with doors open or guards off.
- Stop engine before servicing.
- Keep away from moving parts.

Only qualified personnel should install, use, or service this equipment.

Location & Ventilation

Whenever you use the GT200W, be sure that clean cooling air can flow around the machine's gasoline engine and the generator. Avoid dusty, dirty areas. Also, keep the machine away from heat sources. Do not place the back end of the generator anywhere near hot engine exhaust from another

machine. And of course, make sure that engine exhaust is ventilated to an open, outside area.

The GT200W must be used outdoors. Do not set the machine in puddles or otherwise submerge it in water. Such practices pose safety hazards and cause improper operation and corrosion of parts.

Always operate the GT200W with the case roof on and all machine components completely assembled. This will help to protect you from the dangers of moving parts, hot metal surfaces, and live electrical devices.



CAUTION:

GASOLINE FUEL ONLY - Use in well ventilated areas or vent exhaust outside

Storage

1. Store the machine in a cool, dry place when it is not in use. Protect it from dust and dirt. Keep it where it can not be accidentally damaged from construction activities, moving vehicles and other hazards.
2. If you will be storing the machine for over 30 days, you should drain the fuel to protect fuel system and carburetor parts from gum deposits. Empty all fuel from the tank and run the engine until it stops from lack of fuel.
3. You can store the machine for up to 24 months if you use a stabilising additive in the fuel system. GT Power endorses Fuel Set™ as the recommended brand of fuel stabiliser to use and it is available from your local GT Power Dealer. Mix the additive with the fuel in the tank and run the engine for a short time to circulate the additive through the carburetor.

4. While the engine is still warm, drain the oil and refill with fresh 10W30 oil.
5. Remove the spark plug and pour approx. 1/2 ounce (15ml) of engine oil into the cylinder. Replace the spark plug and crank the engine slowly to distribute the oil.
6. Clean any dirt and debris from the cylinder and cylinder head fins and housing, rotating screen, and muffler areas.
7. Store in a clean, dry area.
8. GT200W machines CANNOT be stacked.

Tilting

Place the machine on a secure, level surface whenever you use it or store it. Any surfaces you place it on other than the ground must be firm, non-skid, and structurally sound. The gasoline engine is designed to run in a level position for best performance. It can operate at an angle, but this should never be more than 15 degrees in any direction. If you do operate it at a slight angle, be sure to check the oil regularly and keep the oil level full. Also, fuel capacity will be a little less at an angle.

Lifting

The GT200W should be lifted by two people.

Pre-Operation Engine Service

Read and understand the engine operating and maintenance instructions supplied with this machine before you operate the GT200W

Oil

The GT200W is shipped without engine oil. ADD OIL BEFORE YOU START THE ENGINE (Approx. 1100ml). Do not screw in dipstick when checking oil level. DO NOT OVERFILL. Be sure the fill plug is tight after servicing.

Fuel

Fill the fuel tank with clean, fresh, regular grade (minimum 91) octane lead free gasoline. DO NOT MIX OIL WITH GAS. The GT200W capacity is approximately 18L. DO NOT OVERFILL, allow room in the fuel tank for fuel expansion.

WARNING:



- *Keep hands away from muffler or HOT engine parts.*
- *Stop the engine when fueling.*
- *Do not leave unattended while fueling*
- *Do not smoke when fueling.*
- *Remove fuel cap slowly to release pressure.*
- *Do not overfill tank.*
- *Wipe up spilled fuel and allow fumes to clear before starting engine.*
- *Keep sparks and flame away from tank.*
- *Close fuel shut-off valve when transporting or not operating machine.*

Spark Arrester

Some state or local laws may require gasoline engines to be equipped with exhaust spark arresters when they are operated in certain locations where unarrested sparks may present a fire hazard.

The standard muffler included with this machine comes equipped with a spark arrester.

CAUTION:



An incorrect additional arrester may lead to damage to the engine or adversely affect performance.

Features & Controls

Read this Operating Manual and the Safety Rules section before operating. Compare the illustrations with your machine, to familiarise yourself with the locations of various controls and adjustments. Save this manual for future reference.



- | | |
|-------------------------------|--|
| 1. Fuel Tank | 11. 32A Single Phase Receptacle
with 15A Adapter Cord |
| 2. Fuel Tank Cap | 12. Anti-Vibration Rubber Feet |
| 3. Wheel | 13. Welding Current Control 50 - 200A |
| 4. Lead Acid Battery | 14. Welding Output Terminals |
| 5. Oil Filler Plug (Obscured) | 15. Ground Terminals (Obscured) |
| 6. Oil Drain Plug | 16. Low Oil Warning Light |
| 7. Handle | 17. Fuel Tap |
| 8. 24A Circuit Breaker | 18. Air Filter (Obscured) |
| 9. Engine Ignition Switch | 19. RCD (Residual Current Device) |
| 10. 5 Function Hour Meter | |

Installation

Cable Installation

Install the welding cables to your GT200W as follows. See the previous page for the location of parts.

1. The gasoline engine must be OFF to install welding cables.
2. Connect the electrode holder and work cables to the weld output terminals. Normally, the electrode cable is connected to the positive (+) output stud.
4. Push in and turn to secure welding cables to welding sockets
5. Be certain that the metal piece you are welding (the "work") is securely connected to the work clamp and cable.
6. Check the connections periodically.



CAUTION:

- *Loose connections will cause the output studs to overheat and the studs may eventually melt.*
- *Do not cross welding cables at output stud connection. Keep isolated and separate from one another.*

For more information on welding, see WELDING OPERATION in the OPERATION section of this manual.

Machine Grounding

Because this portable engine driven welder or generator creates its own power, it is not necessary to connect its frame to an earth ground, unless the machine is connected to premises wiring (your home, shop, etc.).

To prevent dangerous electric shock, other equipment to which this engine driven welder supplies power, must:

- a) be grounded to the frame of the welder using a grounded type plug, or
- b) be double insulated.

When this welder is mounted on a truck or trailer, the machine grounding stud must be securely connected to the metal frame of the vehicle.

In general if the machine is to be grounded, it should be connected with a #8 or larger copper wire to a solid earth ground such as a metal water pipe going into the ground for at least ten feet and having no insulated joints, or to the metal framework of a building which has been effectively grounded.

A machine grounding stud marked with the symbol is provided on the front of the welder.



WARNING:

Do not ground machine to a pipe which carries explosive or combustible material.

Plugs and Hand Held Equipment

For further protection against electric shock, any electrical equipment connected to the generator receptacles must use a three-blade, grounded type plug or an approved double insulated tool with a two blade plug.



WARNING:

Never operate this machine with damaged or defective cords. All electrical equipment must be in safe operating condition.

Auxiliary Power Receptacles

The control panel of the GT200W features a single "Monster" 32A single phase auxiliary power outlet with a 15A adapter cord. This allows maximum generator output (24A max.) through a single plug and the ability to run large powertools without tripping the circuit

breaker. Items could include a large angle grinder or welding machine up to 180A. The machine output voltages meet UL standards and fall within $\pm 10\%$ of the rated voltage.

Premises Wiring

The GT200W can be used for fixed installation or premises wiring. Please consult a registered electrician for advice and refer to RCD in the Welder/Generator Controls section in this manual for more information.

Circuit Breakers

Auxiliary power is protected by circuit breakers. When the machine is operated in high temperature environments, the breakers may tend to trip at lower loads than normally.



CAUTION:

Never bypass the circuit breakers. Without overload protection, the unit could overheat and/or cause damage to the equipment being used.

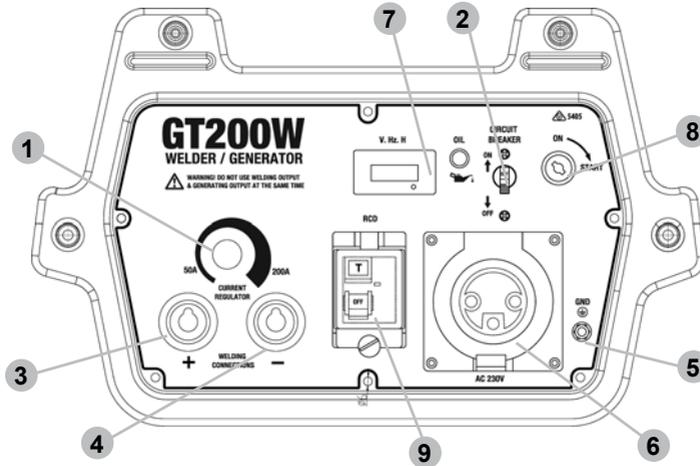
Generator Usage

TYPE:	COMMON ELECTRICAL DEVICES:	POSSIBLE CONCERNS:
Resistive	Heaters, toasters, incandescent light bulbs, electric range, hot pan, skillet, coffee maker.	NONE
Capacitive	TV sets, radios, microwaves, appliances with electrical control.	Voltage spikes or high voltage regulation can cause the capacitive elements to fail. Surge protection, transient protection, and additional loading is recommended for 100% fail-safe operation. DO NOT RUN THESE DEVICES WITHOUT ADDITIONAL RESISTIVE TYPE LOADS.
Inductive	Single-phase induction motors, drills, well pumps, grinders, small refrigerators, weed and hedge trimmers.	These devices require a large current when starting. (See GENERATOR POWER APPLICATIONS in this Operation section of this manual for required starting wattages.) Some synchronous motors may be frequency sensitive to attain maximum output torque, but they SHOULD BE SAFE from any frequency induced failures.
Capacitive / Inductive	Computers, high resolution TV sets, complicated electrical equipment.	An inductive type line conditioner along with transient and surge protection is required, and liabilities still exist. DO NOT USE THESE DEVICES WITH THIS PRODUCT.

Euroquip is not responsible for any damage to electrical components improperly connected to this product.

Welder / Generator Controls

All welder/generator controls are located on the Output Control Panel.



1. CURRENT CONTROL DIAL:

Adjusts continuous current output. The amps on the dial correspond to the approximate amps needed for welding electrodes.

2. 24A CIRCUIT BREAKER:

Provides overload current protection for the 230V Receptacles

3. WELD POSITIVE OUTPUT TERMINAL:

Provides the connection point for either the electrode holder or the work cable. (Because the GT200W is a DC output machine, either output terminal can be used for either cable.)

4. WELD NEGATIVE OUTPUT TERMINAL:

Provides the connection point for either the electrode holder or the work cable. (Because the GT200W is a DC output machine, either output terminal can be used for either cable.)

5. GROUND STUD:

Provides a connection point for connecting the machine case to earth ground for the safest grounding procedure.

6. 32A SINGLE PHASE RECEPTACLE WITH 15A ADAPTER CORD:

Connection point for supplying 230 volt power to operate one electrical device.

7. 5 FUNCTION DIGITAL OUTPUT METER:

Displays important information when operating generator. Press mode change button to display different functions:

- Output voltage in volts (V)
- Output current in amps (A)
- Output power in watts (W)
- Output frequency in hertz (Hz)
- Total operating hours (H)

8. IGNITION SWITCH & KEY

9. RCD (RESIDUAL CURRENT DEVICE):

Disconnects power output when the RCD detects leakage current in the load greater than 30mA. 30mA is considered the 'safe' current level the human body can conduct without serious injury if in contact with a live conductor due to an electrical fault in an appliance. If the RCD trips during operation,

remove the appliance(s) from the generator, reset the RCD switch and turn the appliance on again. If this problem persists, please have an electrician check the appliance.

NOTE: When connecting the generator to a fixed installation or a large number of loads through a multi box or similar, the total current leakage across multiple loads and the power distribution system may exceed 30AmA, which creates nuisance tripping of the RCD.

For this reason, in most power distribution systems, each power connection point is usually protected by its own RCD, rather than a single RCD for the complete system. To address this issue, it will be required to bypass the RCD protector in the generator control panel. Please have an electrician check there is no earth leakage problem with the connected load before bypassing the RCD protection.

Engine Operation

Starting the Engine

Be sure all Pre-Operation Engine Service has been performed. Also, Read owners manual before starting for the first time. (See INSTALLATION section)

NOTE: Remove all loads connected to the AC power receptacles before starting the gasoline engine.

FOR A "COLD" ENGINE:

1. Put the "ON/OFF" Switch in the "ON"(I) position. 
2. Open the fuel shutoff valve.
3. Place the choke lever in the "CHOKE" position.
4. Turn key around until engine fires. Or for manual starting pull the cord rapidly then release tension until the engine fires.



CAUTION:

DO NOT hold key in start position for more than 5 seconds.

If the engine does not start, open the choke slightly and repeat the starting process.

5. When the engine starts, gradually open the choke to the "RUN" position.

To open the choke fully requires an engine warm-up period of several seconds to several minutes, depending on the temperature. After starting the engine, first open the choke (toward RUN) until the engine just begins to run smoothly. Then open the choke in small steps, allowing the engine to accept small changes in speed and load, until the choke is fully open (in RUN). During engine warm-up the equipment can be operated.

FOR A "HOT" ENGINE:

1. Open the fuel shutoff valve.
2. Place the choke lever in the "RUN" position.



CAUTION:

Closing the choke of a hot engine will flood the carburetor and prevent starting.

3. Turn the key around to the start position until engine starts. Or for manual starting pull the cord rapidly then release tension until the engine fires.

If engine fails to start, use the choke momentarily when starting generator.

FOR BEST ENGINE STARTING:

- Always use fresh gasoline and be sure the filter is clean and properly maintained.
- If you use an alternate fuel tank or supply, be sure to install an in-line fuel filter.
- Do not pull the recoil starter with the choke in the “CHOKE” position more than one time. Repeated attempts to start will flood the engine. Do not turn the key for more than 5 seconds.
- If the engine will not start, see the Troubleshooting section in this manual.

Stopping the Engine

1. Remove all welding and auxiliary power loads and allow engine to run for a few minutes to cool the engine.
2. Stop the engine by placing the “ON/OFF” switch in the “OFF”(O) position.

**CAUTION:**

Close the fuel valve when the machine is transported to prevent fuel leakage from the carburetor.



The Fuel Valve is located under the fuel tank and above the recoil starter.

Break-in Period

It is normal for any engine to use larger quantities of oil until break-in is accomplished. Check the oil level twice a day during the break-in period (about 50 running hours). Change the oil after the first 5 hours of operation.

**CAUTION:**

In order to accomplish this break-in, the Unit should be subjected to moderate Loads, within the rating of the machine. Avoid long idle running periods. Remove Loads and allow engine to cool several Minutes at low idle before shutdown.

Low Oil Sensing

This engine has a built in sensor which responds to low oil level (not pressure). When activated, the system will shut the engine down. The engine will not restart until sufficient oil is added. Check oil level frequently and add oil as required to the full mark on the dipstick. DO NOT OVERFILL.

Welding Operation**WARNING:****ELECTRIC SHOCK can kill.**

- Do not touch electrically live parts or electrode with skin or wet clothing.
- Insulate yourself from work and ground.
- Always wear dry insulating gloves.

**ENGINE EXHAUST can kill.**

- Use in open, well ventilated areas or vent exhaust outside.
- Do not stack anything on or near the engine.

**MOVING PARTS can injure.**

- Do not operate with doors open or guards off.
- Stop engine before servicing.
- Keep away from moving parts.



Only qualified personnel should install, use, or service this equipment.

The GT200W can deliver from 50 to 200A of welding output current. Output can be adjusted by setting the current control dial on the output control panel.

You can get maximum welding output by setting the dial to 200A. At high current settings like this, some output may decrease as the machine is used. If you are welding for a long time, you may need to turn the dial slightly upward to maintain the same results.

The numbers on the dial correspond to the approximate amps needed to weld using generic welding rods. The Electrode Selection Guide in this manual gives the recommended dial settings based on the thickness of the work and the size and type of rod used.

To Use the GT200W for Welding

1. Insert, push and turn connectors on welding cables into the respective sockets on the welding machine. Make sure they are firmly locked in place. (There is no need to switch the machine to “welding mode” as the machine automatically detects which process is being used.)



CAUTION:

DO NOT attempt to use welding process and power generation process at the same time.

2. Select the appropriate electrode. (See Electrode Selection Guide Table in this manual).
3. Attach the work clamp securely to the work you are welding.
4. Insert the electrode into the electrode holder.
5. Set the current control dial to the desired output current.
6. Start the gasoline engine.
7. Strike an arc and begin welding.

After Finishing the Weld

1. Stop the gasoline engine.
(See Engine Operation in this manual)
2. Allow the electrode and work to cool completely.
3. Remove the work clamp from the work.
4. Remove any remaining piece of electrode from the electrode holder.
5. If you have finished using the GT200W for welding, disconnect the welding cables from the weld output terminals.

For DC+ welding, the electrode cable is to be connected to the “+” output socket and work cable to the “-” output socket. (For DC- welding, reverse these connections.)

Auxiliary Power Operation



WARNING:

Be sure that any electrical equipment plugged into the generator AC power receptacles can withstand a $\pm 10\%$ voltage and a $\pm 5\%$ frequency variation. Some electronic devices cannot be powered by the GT200W. (Refer to the Generator Usage Table in this manual)

General Information

The GT200W is rated at 5500 peak watts or 5000 continuous watts. It provides 230V of single phase power, up to 23.91A from the single outlet/adaptor cord. Rated continuous amperage use is 21.7A.

Electrical loads in watts are calculated by multiplying the voltage rating of the load by the number of amps it draws. (This information is given on the load device name plate.)

For example, a device rated 230V, 10A will need 2300W of power (230 x 10 = 2300).

You can use the Power Applications table on the following page, to determine the wattage requirements of the most common types of loads you can power with the GT200W. Be sure to read the notes at the bottom of the table.



CAUTION:

Welder and Generator MUST NOT be in use simultaneously.

NOTE: You can supply multiple loads as long as the total load does not exceed 5500 peak watts or 5000 continuous watts. Be sure to start the largest loads first.

Using the GT200W as an Auxiliary Power Supply

1. Start the gasoline engine. (See Engine Operation earlier in this manual)
2. Set the Welder / Generator mode to Generator
3. Plug load(s) into the 230V power receptacle.

There is no need to switch the machine to “welding mode” as the machine automatically detects which process is being used.

Electrode Selection Guide

AWS CLASSIFICATION:	ELECTRODE POLARITY:	CURRENT RANGE (AMPS):		
		2.5mm	3.2mm	4.0mm
E6010	DC+	50 - 75	75 - 135	-
E6011	DC+	50 - 75	70 - 110	80 - 125
E6011	DC+	50 - 80	55 - 110	105 - 125
E6013	DC±	70 - 95	100 - 135	-
E7018	DC+	70 - 100	90 - 125	125 - 145
E7018	DC+	65 - 85	90 - 125	-
E7018-17 & E308L-17	DC+	50 - 80	75 - 110	80 - 125
ENi-CL	DC+	50 - 80	80 - 110	-
SHEET THICKNESS:		3.2mm and thinner	3.2mm and thicker	

Power Applications

SUGGESTED POWER APPLICATIONS	RUNNING WATTS (Continuous)	*START-UP WATTS (Peak)
*Air Compressor - 2.5 HP	2000	4000 - 8000
*Air Compressor - 3/4 HP	1250	3100 - 5000
*Airless Sprayer - 1/3 HP	600	1500 - 2400
Chain Saw	1200	
Circular Saw	1200	
Coffee Maker	1000	
*Deep Freezer	500	750 - 2000
*Electric Motor - 1 HP	1000	2500 - 4000
Electric Range (1 element)	1500	
Electric Skillet	1250	
*Furnace Fan - 1/3 HP	1200	3000 - 4800
Portable Grinder (4 1/2")	600	
Portable Grinder (7")	2000	4500
Halogen Work Light	500	
Hand Drill - 1/4"	500	
Hand Drill - 3/8"	700	
1500 Watt Heater	1500	
Hedge Trimmer	450	
Light Bulb	100	
Reciprocating Saw	900	
Radial Arm Saw	2600	
Radio	50	
*Refrigerator/Freezer (small)	600	1500 - 2400
Slow Cooker	200	
*Submersible Pump - 1 HP	1000	2500 - 4000
*Sump Pump	600	1500 - 2400
Toaster	1100	
Weed Trimmer	500	

NOTES: Wattages listed are approximate. Check your equipment for actual wattage. Equipment with unusually high *START-UP WATTS are listed. For start-up of other equipment that uses a motor, listed in the table, multiply RUNNING WATTS by 2. Multiple loads can be used as long as the total load does not exceed 5500 peak watts. Be sure to start the largest loads first.

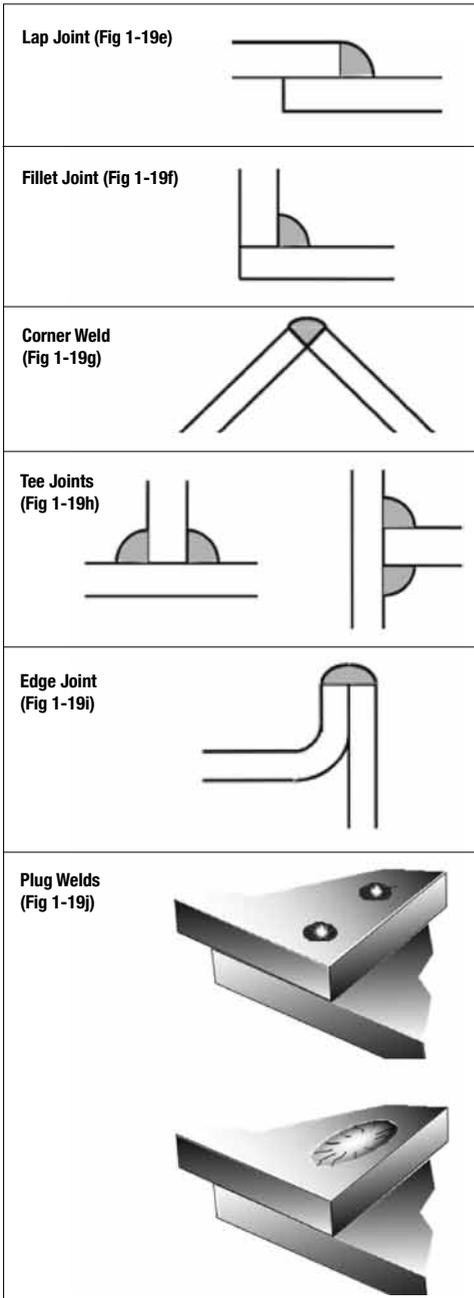
Basic MMA Welding Guide

Flat Position, Down Hand Butt Weld (Fig 1-11)	
Flat Position, Gravity Fillet Weld (Fig 1-12)	
Horizontal Position, Butt Weld (Fig 1-13)	
Horizontal-Vertical (HV) Position (Fig 1-14)	
Vertical Position, Butt Weld (Fig 1-15)	
Vertical Position, Fillet Weld (Fig 1-16)	
Overhead Position, Butt Weld (Fig 1-17)	
Overhead Position, Fillet Weld (Fig 1-18)	

Joint Preparations

In many cases, it will be possible to weld steel sections without any special preparation. For heavier sections and for repair work on castings, etc., it will be necessary to cut or grind an angle between the pieces being joined to ensure proper penetration of the weld metal and to produce sound joints. In general, surfaces being welded should be clean and free of rust, scale, dirt, grease, etc. Slag should be removed from oxy-cut surfaces. Typical joint designs are shown in Figure 1-19.

Open Square Butt Joint (Fig 1-19a)	<p>Gap varies from 1.6mm (1/16") to 4.8mm (3/16") depending on plate thickness</p>
Single Vee Butt Joint (Fig 1-19b)	<p>Not less than 45°</p>
Single Vee Butt Joint (Fig 1-19c)	<p>Not less than 70°</p> <p>1.6mm (1/16")</p> <p>1.6mm (1/16") max.</p>
Double Vee Butt Joint (Fig 1-19d)	<p>Not less than 70°</p> <p>1.6mm (1/16")</p> <p>1.6mm (1/16") max.</p>



MMA Welding Techniques

A Word for Beginners

For those who have not yet done any welding, the simplest way to commence is to run beads on a piece of scrap plate. Use mild steel plate about 6.0mm thick and a 3.2mm electrode.

Clean any paint, loose scale or grease off the plate and set it firmly on the work bench so that welding can be carried out in the down hand position. Make sure that the Work Lead/Clamp is making good electrical contact with the work, either directly or through the work table. For light gauge material, always clamp the work lead directly to the job, otherwise a poor circuit will probably result.

The Welder

Place yourself in a comfortable position before beginning to weld. Get a seat of suitable height and do as much work as possible sitting down. Don't hold your body tense. A tense body will soon make you feel tired. Relax and you will find the job becomes much easier. Wearing a leather apron and gauntlets will stop you worrying about being burnt or sparks setting alight to your clothes.

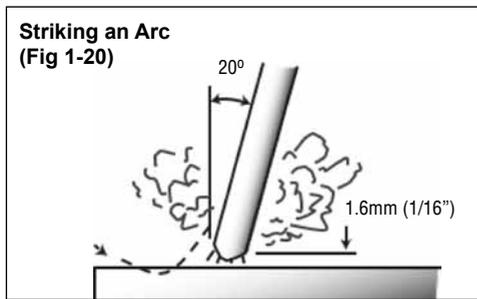
Place work so the direction of welding is across, rather than to or from, your body. The electrode holder lead should be clear of any obstruction so you can move your arm freely along as the electrode burns down. If the lead is slung over your shoulder, it allows greater freedom of movement and takes a lot of weight off your hand. Be sure insulation on your cable and electrode holder is not faulty; as you may risk electric shock.

Striking the Arc

Practice this on a piece of scrap plate before going on to more exacting work. You may at first experience difficulty due to the tip of the electrode "sticking" to the work piece. This is caused by making too heavy a contact with the work and failing to withdraw the electrode quickly enough. A low amperage will accentuate it. This freezing-on of the tip may be overcome

by scratching the electrode along the plate surface in the same way as a match is struck. As soon as the arc is established, maintain a 1.6mm to 3.2mm gap between the burning electrode end and the parent metal. Draw the electrode slowly along as it melts down.

Another difficulty you may meet is the tendency, after the arc is struck, to withdraw the electrode so far that the arc is broken again. A little practice will soon remedy both of these faults.



Arc Length

The securing of an arc length necessary to produce a neat weld soon becomes almost automatic. You will find that a long arc produces more heat.

A very long arc produces a crackling or spluttering noise and the weld metal comes across in large, irregular blobs. The weld bead is flattened and spatter increases. A short arc is essential if a high quality weld is to be obtained although if it is too short there is the danger of it being blanketed by slag and the electrode tip being solidified in. If this should happen, give the electrode a quick twist back over the weld to detach it. Contact or "touch-weld" electrodes such as E7014 Stick electrodes do not stick in this way, and make welding much easier.

Rate of Travel

After the arc is struck, your next concern is to maintain it, and this requires moving the electrode tip towards the molten pool at the same rate as it is melting away. At the same time, the electrode has to move along the plate to form a bead.

The electrode is directed at the weld pool at about 20° from the vertical. The rate of travel has to be adjusted so that a well-formed bead is produced.

If the travel is too fast, the bead will be narrow and strung out and may even be broken up into individual globules. If the travel is too slow, the weld metal piles up and the bead will be too large.

Making Welded Joints

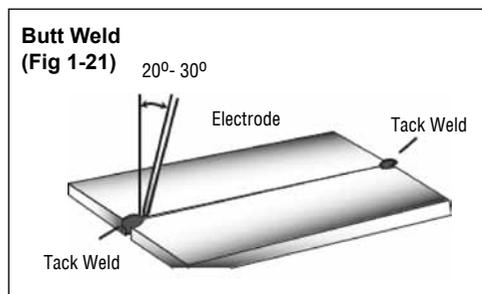
Having attained some skill in the handling of an electrode, you will be ready to go on to make up welded joints.

A. Butt Welds

Set up two plates with their edges parallel, as shown in Figure 1-21, allowing 1.6mm to 2.4mm gap between them and tack weld at both ends. This is to prevent contraction stresses from the cooling weld metal pulling the plates out of alignment.

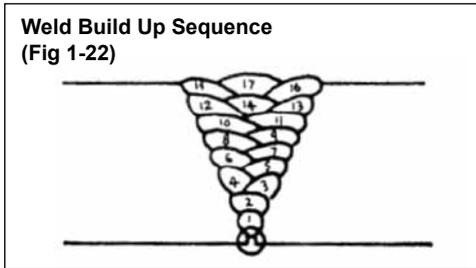
Plates thicker than 6.0mm should have their mating edges bevelled to form a 70° to 90° included angle. This allows full penetration of the weld metal to the root. Using a 3.2mm E7014 Stick electrode at 100 amps, deposit a run of weld metal on the bottom of the joint.

Do not weave the electrode, but maintain a steady rate of travel along the joint sufficient to produce a well-formed bead. At first you may notice a tendency for undercut to form, but keeping the arc length short, the angle of the electrode at about 20° from vertical, and the rate of travel not too fast, will help eliminate this.



The electrode needs to be moved along fast enough to prevent the slag pool from getting ahead of the arc. To complete the joint in thin plate, turn the job over, clean the slag out of the back and deposit a similar weld.

A piece of angle iron is a suitable specimen with which to begin, or two lengths of strip steel may be tacked together at right angles. Using a 3.2mm E7014 Stick electrode at 100 amps, position angle iron with one leg horizontal and the other vertical. This is known as a horizontal-vertical (HV) fillet.

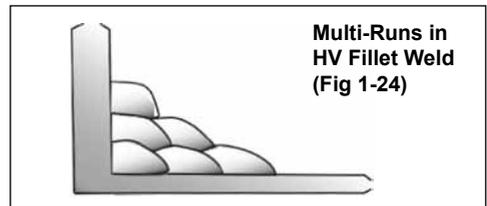


Heavy plate will require several runs to complete the joint. After completing the first run, chip the slag out and clean the weld with a wire brush. It is important to do this to prevent slag being trapped by the second run. Subsequent runs are then deposited using either a weave technique or single beads laid down in the sequence shown in Figure 1-22. The width of weave should not be more than three times the core wire diameter of the electrode.

Strike the arc and immediately bring the electrode to a position perpendicular to the line of the fillet and about 45° from the vertical. Some electrodes require being sloped about 20° away from the perpendicular position to prevent slag from running ahead of the weld. Refer to Figure 1-23.

Do not attempt to build up much larger than 6.4mm width with a 3.2mm electrode, otherwise the weld metal tends to sag towards the base, and undercut forms on the vertical leg. Multi-runs can be made as shown in Figure 1-24. Weaving in HV fillet welds is undesirable.

When the joint is completely filled, the back is either machined, ground or gouged out to remove slag which may be trapped in the root, and to prepare a suitable joint for depositing the backing run. If a backing bar is used, it is not usually necessary to remove this, since it serves a similar purpose to the backing run in securing proper fusion at the root of the weld.



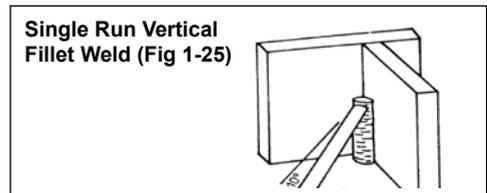
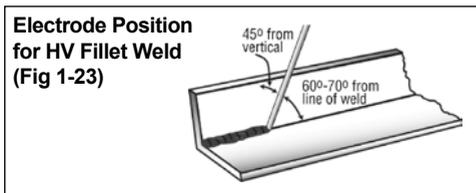
B. Fillet Welds

These are welds of approximately triangular cross-section made by depositing metal in the corner of two faces meeting at right angles. Refer to Figure 1-14, 1-23 and 1-24.

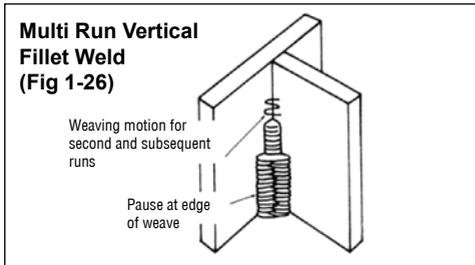
C. Vertical Welds

1. Vertical Up

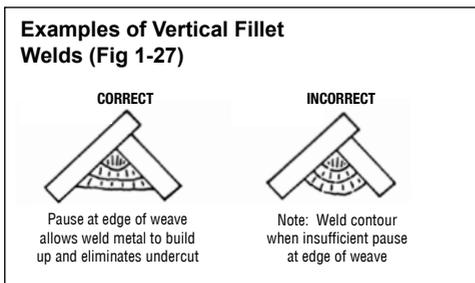
Tack weld a three feet length of angle iron to your work bench in an upright position. Use a 3.2mm E7014 Stick electrode and set the current at 100 amps. Make yourself comfortable on a seat in front of the job and strike the arc in the corner of the fillet. The electrode needs to be about 10° from the horizontal to enable a good bead to be deposited. Refer Fig. 1-25.



Use a short arc, and do not attempt to weave on the first run. When the first run has been completed de-slag the weld deposit and begin the second run at the bottom. This time a slight weaving motion is necessary to cover the first run and obtain good fusion at the edges.



At the completion of each side motion, pause for a moment to allow weld metal to build up at the edges, otherwise undercut will form and too much metal will accumulate in the centre of the weld. Figure 1-26 illustrates multi-run technique and Figure 1-27 shows the effects of pausing at the edge of weave and of weaving too rapidly.



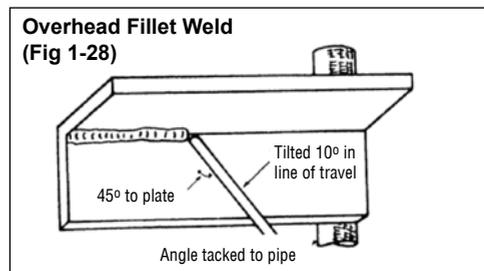
2. Vertical Down

The E7014 Stick electrode makes welding in this position particularly easy. Use a 3.2mm electrode at 100 amps. The tip of the electrode is held in light contact with the work and the speed of downward travel is regulated so that the tip of the electrode just keeps ahead of the slag. The electrode should point upwards at an angle of about 45°.

3. Overhead Welds

Apart from the rather awkward position necessary, overhead welding is not much more difficult than down hand welding.

Set up a specimen for overhead welding by first tacking a length of angle iron at right angles to another piece of angle iron or a length of waste pipe. Then tack this to the work bench or hold in a vice so that the specimen is positioned in the overhead position as shown in the sketch.



The electrode is held at 45° to the horizontal and tilted 10° in the line of travel (Figure 1-28). The tip of the electrode may be touched lightly on the metal, which helps to give a steady run. A weave technique is not advisable for overhead fillet welds.

Use a 3.2mm E6013 Stick electrode at 100 amps, and deposit the first run by simply drawing the electrode along at a steady rate. You will notice that the weld deposit is rather convex, due to the effect of gravity before the metal freezes.

Other Knowledge & Resources

Please refer to Euroquip website www.euroquip.co.nz/Downloads.html for knowledgebase articles & operation videos.

MMA Troubleshooting

Fault	Cause	Remedy
A gap is left by failure of the weld metal to fill the root of the weld.	Welding current too low.	Increase welding current.
	Electrode too large for joint.	Use smaller diameter electrode.
	Insufficient gap.	Allow wider gap.
Non-metallic particles are trapped in the weld metal.	Non-metallic particles may be trapped in undercut from previous run.	If a bad undercut is present clean slag bout and cover with a run from a smaller gauge electrode.
	Joint preparation too restricted.	Allow for adequate penetration and room for cleaning out the slag.
	Irregular deposits allow slag to be trapped.	If very bad, chip or grind out irregularities.
	Lack of penetration with slag trapped beneath weld bead.	Use smaller electrode with sufficient current to give adequate penetration. Use suitable tools to remove all slag from corners.
	Rust or mill scale is preventing full fusion.	Clean joint before welding.
	Wrong electrode for position in which welding is done.	Use electrodes designed for position in which welding is done, otherwise proper control of slag is difficult.
<p>Figure 1: Example of insufficient gap or incorrect sequence</p> <p>Incorrect Sequence</p> <p>Insufficient Gap</p>		
A groove has been formed in the base metal adjacent to the toe of a weld and has not been filled by the weld metal (undercut).	Welding current is too high.	Reduce welding current.
	Welding arc is too long.	Reduce the length of the welding arc.
	Angle of the electrode is incorrect.	Electrode should not be inclined less than 45° to the vertical face.
	Joint preparation does not allow correct electrode angle.	Allow more room in joint for manipulation of the electrode.
	Electrode too large for joint.	Use smaller gauge electrode.
	Insufficient deposit time at edge of weave.	Pause for a moment at edge of weave to allow weld metal build-up.
	Power source is set for MIG (GMAW) welding.	Set power source to STICK (MMA) mode.
Portions of the weld run do not fuse to the surface of the metal or edge of the joint.	Small electrodes used on heavy cold plate.	Use larger electrodes and preheat the plate.
	Welding current is too low.	Increase welding current.
	Wrong electrode angle.	Adjust angle so the welding arc is directed more into the base metal.
	Travel speed of electrode is too high.	Reduce travel speed of electrode.
	Scale or dirt on joint surface.	Clean surface before welding.
<p>Figure 2: Example of Lack of Fusion</p> <p>Lack of fusion caused by dirt, electrode angle incorrect, rate of travel too high</p> <p>Lack of side fusion, scale dirt, small electrode, amperage too low</p> <p>Lack of inter-run fusion</p> <p>Lack of root fusion</p>		
Gas pockets or voids in weld metal (porosity)	High levels of sulphur in steel.	Use an electrode that is designed for high sulphur steels.
	Electrodes are damp.	Dry electrodes before use.
	Welding current is too high.	Reduce welding current.
	Surface impurities such as oil, grease, paint, etc.	Clean joint before welding.
	Welding in a windy environment.	Shield the weld area from the wind.
	Electrode damaged i.e. flux coating incomplete.	Discard damaged electrodes and only use electrodes with a complete flux coating.
Crack occurring in weld metal soon after solidification commences	Rigidity of joint.	Redesign to relieve weld joint of severe stresses or use crack resistance electrodes.
	Insufficient throat thickness.	Travel slightly slower to allow greater build up in throat.
	Weld current is too high.	Decrease welding current.
<p>Figure 3: Example of Slag Inclusion</p> <p>Not cleaned, or incorrect electrode</p> <p>Slag trapped in undercut</p> <p>Slag trapped in root</p>		

Accessories

PART NO:	DESCRIPTION:
WC25	Welding Cable - 25mm ³ /m
WC35	Welding Cable - 35mm ³ /m
WC50	Welding Cable - 50mm ³ /m
WC70	Welding Cable - 70mm ³ /m
S600EH	600A Electrode Holder
S500EC	500A Earth Clamp
CP3550	Cable Plug - 35-50mm
AWG01	Welding Gloves
DW3000	Auto Welding Helmet
AG500EC	"G" Style Earth Clamp
*ETCPH6832	GP Rods - 3.2mm
*ETCPH6840	GP Rods - 4.0mm
*ETCPH7732	Low Hydrogen Rods - 3.2mm
*ETCPH7740	Low Hydrogen Rods - 4.0mm
AEL3550	Earth Lead 16mm ² cable, 35-70mm plug, 3m
AAL3550	Arc Lead 16mm ² cable, 35-70mm plug, 4m
S2600-133	Generator Fuel Tap Assembly Female Thread
17364	Wheel
17365	Stator assembly
R5500-G1-10	Electric Start Ignition Switch
17735	AVR
17734	Dashboard Assembly
17736	Diode Block (Incl. Alternator Back-End Alternator Cover and Stator Cover)
17737	Fuel Tank
17738	Rotor

These accessories listed are available from your GT Power Distributor. See your GT Power Distributor or look online at www.gtpower.co.nz for other accessories and consumables available.

Engine Maintenance

Safety Precautions



WARNING:

- Have qualified personnel do all maintenance and troubleshooting work.
- Turn the engine off before working inside the machine.
- Remove guards only when necessary to perform maintenance and replace them when the maintenance requiring their removal is complete.
- If guards are missing from the machine, get replacements from a GT Power Dealer.

Read the Safety Precautions at the end of this manual before working on the GT200W. Keep all equipment safety guards, covers, and devices in position and in good repair. Keep your hands, hair, clothing, and tools away from the recoil housing, fans, and all other moving parts when starting, operating, or repairing this machine.



WARNING:

To prevent the engine from accidentally starting, disconnect the spark plug lead before servicing the engine.

Oil

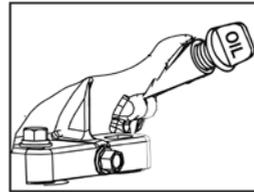


Check the oil level after every 5 hours of operation or daily. BE SURE TO MAINTAIN THE OIL LEVEL. Change the oil the first time after 20 hours of operation. Then, under normal operating conditions, change the oil after every 100 hours or once a year, whichever occurs first. If the engine is operated under heavy load or in high ambient temperatures,

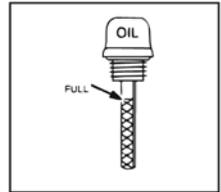
change the oil every 50 hours.

Drain the oil from the drain plug located on either side of the engine bottom, as shown in diagram below. Refill through the oil fill plug until the oil reaches the full mark on the dipstick. GT Power recommends SAE30 or 10W 30 Multi Grade Oil. The sump capacity is approximately 1.1L.

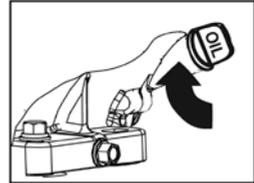
Oil Drain and Refill Location



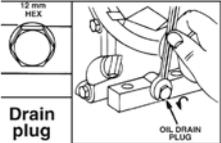
Do not screw in dipstick to check oil



FILL TO FULL mark on dipstick - recheck



Tighten dipstick firmly before starting



Oil drain

Fuel

At the end of each day's use, refill the fuel tank to minimise moisture condensation and dirt contamination in the fuel line. 

Air Cleaner

With normal operating conditions, the maintenance schedule for cleaning and re-oiling the foam pre-filter is every 50 hours and replacement of the air cleaner filter element every 100 hours. 

More frequent servicing is required with dusty operating conditions. Refer to the maintenance section of the Engine Owner's Manual for more information.

To Service the Pre-Cleaner

Remove the cover. Carefully remove the foam pre-cleaner from the filter element.

1. Wash in liquid detergent and water.
2. Squeeze dry in a clean cloth.
3. Saturate in clean engine oil.
4. Squeeze in a clean, absorbent cloth to remove all excess oil.

Carefully place the pre-cleaner back over the filter element and reinstall the air cleaner cover and wing nuts.

Clean Engine

Remove dirt and debris with a cloth or a brush. Do not clean with a forceful spray of water. Water might contaminate the fuel system. Use low pressure air to blow out the machine periodically. In particularly dirty locations this may be required once a week.

Spark Plug Service

RECOMMENDED SPARK PLUG: NGK.

To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

Access spark plug by reaching underneath the fuel tank near the muffler

1. Remove the ignition coil rubber boot / spark plug cap.
2. Clean any dirt from around the spark plug base.
3. Insert the screwdriver into the hole of the spark plug. Wrench and unscrew the spark plug by turning anti clockwise.
4. Use the wrench to remove the spark plug.
5. Visually inspect the spark plug.

6. Clean off any carbon build up on plug and electrode (If there is excessive carbon build up, carburettor fuel mixtures need revising.)
7. A correctly tuned engine will have a light brown residue and very little carbon build up on the plug.
8. Measure the plug gap with a feeler gauge. The gap should be 0.60-0.70mm (0.024-0.028"). Correct as necessary by carefully bending the side electrode.
9. Install the spark plug carefully, by hand, to avoid cross-threading.
10. Tighten gently with the wrench and screwdriver combination until firm.
11. Reinstall the ignition coil rubber boot on the spark plug securely.



CAUTION:

- *Be sure not to cross thread sparkplug when reinstalling.*
- *This area is HOT if engine has been running. Allow engine to cool before servicing.*

Engine Adjustments



WARNING:

OVERSPEED IS HAZARDOUS - *The maximum allowable high idle speed for this machine is 3000RPM, no load. Do NOT tamper with the governor components or setting or make any other adjustments to increase the maximum speed.*

Severe personal injury and damage to the machine can result if operated at speeds above maximum.

Adjustments to the engine are to be made only by a GT Power Authorised Service Facility.

Alternator & Slip Rings

A slight amount of darkening and wear of the alternator, slip rings and brushes is normal. Brushes should be inspected when a general overhaul is necessary. If brushes are to be replaced, clean slip rings with a fine emery paper.



CAUTION:

Do not attempt to polish slip rings while engine is running.

Hardware

Metric fasteners are used in this welder.

Engine Maintenance Parts

The following options / accessories are available for your GT200W from your local Distributor:

POWERDYNE 14HP

Air Filter Element	S7000-K5
Spark Plug	BP6ES NGK
(Resistor Type)	(Gap .030" [.76mm])

Optional Clearance



CAUTION:

Approximately 20cm of clearance should be around this unit during operation for air flow.

Reducing this clearance will reduce air flow to the machine causing operational temperatures to increase. Possible damage to the machine can result if too much air flow is restricted.

Troubleshooting



WARNING:

Service and Repair should only be performed by Euroquip / GT Power Trained Service Agent or Personnel. Unauthorised repairs performed on this equipment may result in danger to the technician and machine operator and will invalidate your factory warranty. For your safety and to avoid electrical shock, please observe all safety notes and precautions detailed throughout this manual.

This Troubleshooting Guide is provided to help you locate and repair possible machine malfunctions.

Simply follow the three-step procedure listed below.

1. LOCATE PROBLEM (SYMPTOM).

Look under the column labeled "PROBLEM (SYMPTOMS)". This column describes possible symptoms that the machine may exhibit. Find the listing that best describes the symptom that the machine is exhibiting.

2. POSSIBLE CAUSE.

The second column labeled "POSSIBLE CAUSE" lists the obvious external possibilities that may contribute to the machine symptom.

3. RECOMMENDED COURSE OF ACTION

This column provides a course of action for the Possible Cause, generally it states to contact your local GT Power Authorised Service Facility.

If you do not understand or are unable to perform the Recommended Course of Action safely, contact your local GT Power Authorised Service Facility.

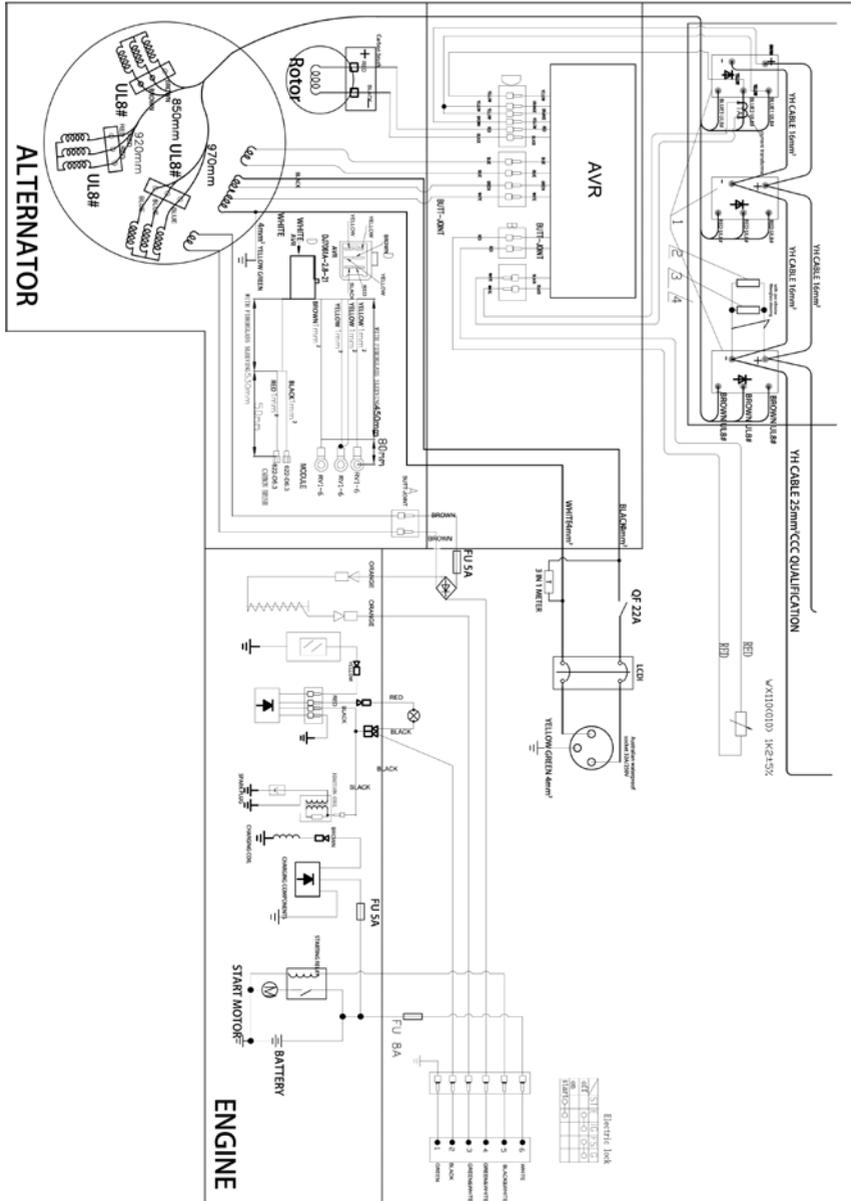
Output Problems

PROBLEM (SYMPTOMS)	POSSIBLE CAUSE	RECOMMENDED COURSE OF ACTION
Major physical or electrical damage is evident.	1. Contact your local GT Power Authorised Service Facility.	If all recommended possible areas of misadjustment have been checked and the problem persists, contact your local GT Power Authorised Service Facility
No generator power or welding output	1. Check brushes for wear. See Maintenance section. 2. Check for loose or faulty connections at brush holders. 3. Open lead in flashing or field circuit. 4. Rheostat lead broken. 5. Dirty slip rings. 6. Faulty rheostat. 7. Faulty field bridge rectifier. 8. Faulty field capacitor. 9. Faulty stator field winding. 10. Faulty rotor.	
Generator power is available but unit will not weld.	1. Loose connector to output stud. 2. Work not connected. 3. Electrode holder loose. 4. No open circuit voltage at output studs. Open lead in weld circuit. 5. Faulty output bridge rectifier. 6. Faulty choke.	
Unit will weld but low or no generator power is available.	1. Circuit breaker is open. 2. Loose or open connection with electrical plug-in component. 3. Current control dial not at "MAX" 4. No open circuit voltage at receptacle.	
No auxillary power but machine has weld output.	1. Check Circuit Breakers 1 and 2 - Reset if tripped.	

Engine Problems

PROBLEM (SYMPTOMS)	POSSIBLE CAUSE	RECOMMENDED COURSE OF ACTION
Recoil starter is hard to pull.	1. Crankcase may be over-filled with oil. - Check oil level.	If all recommended possible areas of misadjustment have been checked and the problem persists, contact your local GT Power Authorised Service Facility
Engine will not start or starts but runs rough with low power.	1. Water in engine from rain and / or condensation. - Remove spark plug and dry it if wet. Blow low pressure compressed air in spark plug port while pulling recoil starter. Re-install spark plug. 2. Spark plug may be faulty. 3. Air filter element saturated with water and / or oil - Replace.	
Engine runs erratically or stops running.	1. Engine is not fully warmed-up and engine choke is in the fully open (RUN) position. 2. Engine requires service to head, carburetor, filters, oil spark plug and / or gas. 3. Oil level to low.	
Engine sputters but will not start.	1. Bad gas, bad filter, air cleaner, spark plug, and / or breather.	
Arc is erratic and "pops out".	1. Check Work and Electrode cables for loose or faulty connection. 2. Electrode may be wet.	

Wiring Diagram



Safety Instructions

⚠ WARNING:

ELECTRIC SHOCK can kill.

- Do not touch electrically live parts or electrode with skin or wet clothing.
- Insulate yourself from work and ground.
- Always wear dry insulating gloves.



ARC RAYS can burn.

- Wear eye, ear and body protection



ENGINE EXHAUST can kill.

- Use in open, well ventilated areas or vent exhaust outside.
- Do not stack anything on or near the engine.



FUMES AND GASES can be dangerous.

- Keep your head out of fumes.
- Use ventilation or exhaust to remove fumes from breathing zone.



MOVING PARTS can injure.

- Do not operate with doors open or guards off.
- Stop engine before servicing.
- Keep away from moving parts.



WELDING SPARKS can cause fire or explosion

- Keep flammable material away.
- Do not weld on containers that have held combustibles.



Only qualified personnel should install, use, or service this equipment.

Observe additional Safety Guidelines detailed throughout this manual.

Symbols

GRAPHIC SYMBOLS USED ON THIS EQUIPMENT OR IN THIS MANUAL



WARNING / CAUTION



AIR CLEANER



OIL



CIRCUIT BREAKER



FUEL



GROUND (AUXILIARY POWER)



WORK CLAMP



ELECTRODE WELDING ARC



CHOKE

Safety Depends On You

GT POWER welding and cutting equipment is designed and built with safety in mind. However, your overall safety can be increased by proper installation ... and thoughtful operation on your part.

DO NOT INSTALL, OPERATE OR REPAIR THIS EQUIPMENT WITHOUT READING THIS MANUAL AND THE SAFETY PRECAUTIONS CONTAINED THROUGHOUT. And, most importantly, think before you act and be careful.

WARNING!

This statement appears where the information must be followed exactly to avoid serious personal injury or loss of life.

CAUTION!

This statement appears where the information must be followed to avoid minor personal injury or damage to this equipment.

Keep your head out of the fumes.

DON'T get too close to the arc. Use corrective lenses if necessary to stay a reasonable distance away from the arc.

READ and obey the Material Safety Data Sheet (MSDS) and the warning label that appears on all containers of welding materials.



USE ENOUGH VENTILATION or exhaust at the arc, or both, to keep the fumes and gases from your breathing zone and the general area.

IN A LARGE ROOM OR OUTDOORS, natural ventilation may be adequate if you keep your head out of the fumes (See below).

USE NATURAL DRAFTS or fans to keep the fumes away from your face. If you develop unusual symptoms, see your supervisor. Perhaps the welding atmosphere and ventilation system should be checked.

Wear Correct Eye, Ear & Body Protection

PROTECT your eyes and face with welding helmet properly fitted and with proper grade of filter plate (See ANSI Z49.1).

PROTECT your body from welding spatter and arc flash with protective clothing including woollen clothing, flame-proof apron and gloves, leather leggings, and high boots



PROTECT others from splatter, flash, and glare with protective screens or barriers.

IN SOME AREAS, protection from noise may be appropriate.

BE SURE protective equipment is in good condition.

Also, wear safety glasses in work area **AT ALL TIMES**

Special Situations

DO NOT WELD OR CUT containers or materials which previously had been in contact with hazardous substances unless they are properly cleaned. This is extremely dangerous.

DO NOT WELD OR CUT painted or plated parts unless special precautions with ventilation have been taken. They can release highly toxic fumes or gases.

PROTECT compressed gas cylinders from excessive heat, mechanical shocks, and arcs; fasten cylinders so they cannot fall.

BE SURE cylinders are never grounded or part of an electrical circuit.

REMOVE all potential fire hazards from welding area.

ALWAYS HAVE FIRE FIGHTING EQUIPMENT READY FOR IMMEDIATE USE AND KNOW HOW TO USE IT.



Warnings

For Engine Powered Equipment

- 1.a. Turn the engine off before troubleshooting and maintenance work unless the maintenance work requires it to be running.
- 1.b. Operate engines in open, well-ventilated areas or vent the engine exhaust fumes outdoors.
- 1.c. Do not add the fuel near an open flame welding arc or when the engine is running. Stop the engine and allow it to cool before refueling to prevent spilled fuel from vaporizing on contact with hot engine parts and igniting. Do not spill fuel when filling tank. If fuel is spilled, wipe it up and do not start engine until fumes have been eliminated.
- 1.d. Keep all equipment safety guards, covers and devices in position and in good repair. Keep hands, hair, clothing and tools away from V-belts, gears, fans and all other

moving parts when starting, operating or repairing equipment.

- 1.e. In some cases it may be necessary to remove safety guards to perform required maintenance. Remove guards only when necessary and replace them when the maintenance requiring their removal is complete. Always use the greatest care when working near moving parts.
- 1.f. Do not put your hands near the engine fan. Do not attempt to override the governor or idler by pushing on the throttle control rods while the engine is running.
- 1.g. To prevent accidentally starting gasoline engines while turning the engine or welding generator during maintenance work, disconnect the spark plug wires, distributor cap or magneto wire as appropriate.
- 1.h. To avoid scalding, do not remove radiator pressure cap when the engine is hot.

Electric and Magnetic Fields May Be Dangerous

- 2.a. Electric current flowing through any conductor causes localised Electric and Magnetic Fields (EMF). Welding current creates EMF fields around welding cables and welding machines
- 2.b. EMF fields may interfere with some pacemakers, and welders having a pacemaker should consult their physician before welding.
- 2.c. Exposure to EMF fields in welding may have other health effects which are now not known.
- 2.d. All welders should use the following procedures in order to minimise exposure to EMF fields from the welding circuit:

- Route the electrode and work cables together. Secure them with tape when possible.
- Never coil the electrode lead around your body.
- Do not place your body between the electrode and work cables. If electrode cable is on your right side, work cable should also be on your right side.
- Connect work cable to workpiece as close as possible to area being welded.
- Do not work next to welding power source.



Electric Shock Can Kill

- 3.a. The electrode and work (or ground) circuits are electrically “hot” when welder is on. Do not touch these “hot” parts with bare skin or wet clothing. Wear dry, hole-free gloves to insulate hands.
- 3.b. Insulate yourself from work and ground using dry insulation. Make certain insulation is large enough to cover your full area of physical contact with work and ground. In addition to the normal safety precautions, if welding must be performed under electrically hazardous conditions (in damp locations or while wearing wet clothing; on metal structures such as floors, gratings or scaffolds; when in cramped positions such as sitting, kneeling or lying, if there is a high risk of unavoidable or accidental contact with the workpiece or ground) use the following equipment:
- Semi-automatic DC Constant Voltage (Wire) Welder.
 - DC Manual (Stick) Welder.
 - AC Welder with Reduced Voltage Control.
- 3.c. In semi-automatic or automatic wire welding, the electrode, electrode reel,

welding head, nozzle or semi-automatic welding gun are also electrically “hot”.

- 3.d. Always be sure the work cable makes a good electrical connection with the metal being welded. The connection should be as close as possible to the area being welded.
- 3.e. Ground the work or metal to be welded to a good electrical (earth) ground.
- 3.f. Maintain the electrode holder, work clamp, welding cable and welding machine in good, safe operating condition. Replace damaged insulation.
- 3.g. Never dip the electrode in water for cooling.
- 3.h. Never simultaneously touch electrically “hot” parts of electrode holders connected to two welders because voltage between the two can be the total of the open circuit voltage of both welders.
- 3.i. When working above floor level, use a safety belt to protect yourself from a fall should you get a shock.



Arc Rays Can Burn

- 4.a. Use a shield with the proper filter and cover plates to protect your eyes from sparks and the rays of the arc when welding or observing open arc welding. Headshield and filter lens should conform to ANSI Z87.1 standards.
- 4.b. Use suitable clothing made from durable flame-resistant material to protect your skin and that of your helpers from the arc rays.
- 4.c. Protect other nearby personnel with suitable, non-flammable screening and/or warn them not to watch the arc nor expose themselves to the arc rays or to hot spatter or metal.



Fumes and Gases can be Dangerous.

- 5.a. Welding may produce fumes and gases hazardous to health. Avoid breathing fumes and gases. When welding, keep your head out of the fumes. Use enough ventilation and/or exhaust at arc to keep fumes and gases away from the breathing zone. When using electrodes which require special ventilation such as stainless or hard facing (see instructions on container or MSDS) or on lead or cadmium plated steel and other metals or coatings which produce highly toxic fumes, keep exposure as low as possible and within applicable safety limits using local exhaust or mechanical ventilation. In confined spaces or in some circumstances, outdoors, a respirator may be required. Additional precautions are also required when welding on galvanized steel.
- 5.b. Operation of welding fume control equipment is affected by various factors including proper use and positioning of equipment, maintenance of equipment and specific welding procedure and application involved. Worker exposure level should be checked upon installation and periodically thereafter.
- 5.c. Do not weld in locations near chlorinated hydrocarbon vapors coming from degreasing, cleaning or spraying operations. Heat and rays of arc can react with solvent vapors to form phosgene, a highly toxic gas, and other irritating products.
- 5.d. Shielding gases used for arc welding can displace air and cause injury or death. Always use enough ventilation, especially in confined areas, to ensure breathing air is safe.
- 5.e. Read and understand the manufactur-

er's instructions for this equipment and the consumables to be used, including the material safety data sheet (MSDS) and follow your employer's safety practices. MSDS forms are available from your welding distributor or from the manufacturer.



Welding and Cutting Sparks can Cause Fire or Explosion.

- 6.a. Remove fire hazards from the welding area. If this is not possible, cover them to prevent the welding sparks from starting a fire. Remember that welding sparks and hot materials from welding can easily go through small cracks and openings to adjacent areas. Avoid welding near hydraulic lines. Have a fire extinguisher readily available.
- 6.b. Where compressed gases are to be used at the job site, special precautions should be used to prevent hazardous situations. Refer to "Safety in Welding and Cutting" (ANSI Standard Z49.1) and the operating information for the equipment being used.
- 6.c. When not welding, make certain no part of the electrode circuit is touching the work or ground. Accidental contact can cause overheating and create a fire hazard.
- 6.d. Do not heat, cut or weld tanks, drums or containers until the proper steps have been taken to insure that such procedures will not cause flammable or toxic vapors from substances inside. They can cause an explosion even though they have been "cleaned". For information, purchase "Recommended Safe Practices for the Preparation for Welding and Cutting of Containers and Piping That Have Held Hazardous Substances",

- 6.e. Vent hollow castings or containers before heating, cutting or welding. They may explode.
- 6.f. Sparks and spatter are thrown from the welding arc. Wear oil free protective garments such as leather gloves, heavy shirt, cuffless trousers, high shoes and a cap over your hair. Wear ear plugs when welding out of position or in confined places. Always wear safety glasses with side shields when in a welding area.
- 6.g. Connect the work cable to the work as close to the welding area as practical. Work cables connected to the building framework or other locations away from the welding area increase the possibility of the welding current passing through lifting chains, crane cables or other alternate circuits. This can create fire hazards or overheat lifting chains or cables until they fail.
- 6.h. Also see item 1.c.
- 6.i. Do not use a welding power source for pipe thawing.
- 7.c. Cylinders should be located:
 - Away from areas where they may be struck or subjected to physical damage.
 - A safe distance from arc welding or cutting operation and any other source of heat, sparks, or flame.
- 7.d. Never allow the electrode, electrode holder or any other electrically "hot" parts to touch a cylinder.
- 7.e. Keep your head and face away from the cylinder valve outlet when opening the cylinder valve.
- 7.f. Valve protection caps should always be in place and hand tight except when the cylinder is in use or connected for use.



Cylinder May Explode if Damaged

- 7.a. Use only compressed gas cylinders containing the correct shielding gas for the process used and properly operating regulators designed for the gas and pressure used. All hoses, fittings, etc. should be suitable for the application and maintained in good condition.
- 7.b. Always keep cylinders in an upright position securely chained to an undercarriage or fixed support.



For Electrically Powered Equipment

- 8.a. Turn off input power using the disconnect switch at the fuse box before working on the equipment.
- 8.b. Install equipment in accordance with the National Electrical Code, all local codes and the manufacturer's recommendations.
- 8.c. Ground the equipment in accordance with the National Electrical Code and the manufacturer's recommendations.

Warranty

As part of an on-going commitment to excellence in product support, Euroquip offers a comprehensive product warranty program.

In order to qualify for full warranty support, your product must be registered. Product not registered with Euroquip is supported by a base 12 month warranty only. Spare parts and technical support will not be available for an unregistered product outside of this base warranty period. If a Euroquip dealer has not already registered your product, please register it online or download a physical registration form at www.euroquip.co.nz.

Registered warranty period for the GT200W

Commercial Use: 24 Months

Domestic Use: 24 Months

Warranty covers failure caused by manufacturing and material defects in the product, during the warranty period specified. The warranty period begins when the product is purchased by the end user. Warranty is not transferrable and is only claimable by the original purchaser.

Warranty does not cover parts that are subject to wear and tear from usage.

Warranty covers failure of a product caused by defective materials and/or manufacturing for the period given and the usage specified by Euroquip. The warranty period begins when the product is purchased by the end user. Warranty is not transferrable and is only claimable by the original purchaser.

Warranty also does not cover failure caused by the untimely replacement or service of the above wearing parts. Evidence must be provided that the product has been maintained and serviced suitably for a claim to be considered under warranty.

Failure caused by incorrect operation of the product, lack of proper care and maintenance of the

product, external damage, external circumstances such as contaminated fuel or poor water supply, modifications to the product, attempted repair/service by a party other than an Approved Service Agent, is not covered under warranty.

Warranty does not cover pre delivery service and adjustment, or failure that may occur as a result of lack of/ incorrect pre delivery service and adjustment.

Warranty does not cover any incidental, indirect or consequential loss, damage or expense that may result from any defect, failure or malfunction of a product.

Should any issue be found to be a combination of a warranty failure and a non-warranty issue, the repair cost component to rectify and repair the non-warranty failure is the customers' full responsibility.

The decision that an issue with a product qualifies as a warranty claim is made at the sole jurisdiction of Euroquip.

No costs incurred will be considered under warranty if repairs are carried out by a party other than a Euroquip Approved Service Agent, unless with prior consent in writing from Euroquip.

It is the responsibility of the purchaser to deliver a product under warranty to the nearest relevant service agent or product reseller. Warranty does not cover call outs, mileage and freight costs.

If a product is repaired under warranty, parts and labour required for the repair will be supplied at no charge. Warranty assessment and repair will be scheduled and executed according to the normal work flow at the service location and depending on the availability of suitable replacement parts.

This warranty policy is an additional benefit and does not affect the legal rights of any end user, reseller or service agent.



Serial Number: _____

Model: _____

Date Purchased: _____

Retailer Purchased From: _____



Scan here to register your product

[http://www.euroquip.co.nz/Contact+Us/
Product+Registration+Form.html](http://www.euroquip.co.nz/Contact+Us/Product+Registration+Form.html)

Please attach your proof of purchase here.

[Large dashed rectangular area for attaching proof of purchase]



Congratulations on your new GT POWER 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. To locate your nearest distributor or service agency visit www.gtpower.co.nz, or email us at info@euroquip.co.nz.