

Jefferson®

PROFESSIONAL TOOLS & EQUIPMENT

OLYMPUS

3.8kVA

PETROL GENERATOR

Key Start With Electronic Ignition & AVR • 7HP OHV Petrol Engine (Stage V)



JEFGENPET30EL

User Manual

v.2.1



CONTENTS

Contents	3
About This Document	3
Specifications	4
Equipment Identification	4
Safety Guidelines	5
Checking the Generator Prior to Use	7
Starting the Generator	7
Connecting Equipment to the Generator	7
Stopping the Generator	8
Transportation and Storage	8
Operating Environment	8
Maintenance	9
Troubleshooting	10
Circuit / Wiring Diagram	11
Parts List - Generator	12
Parts Diagram - Generator	13
Parts List - Engine	14
Parts Diagram - Engine	15
Limited Warranty Statement	16
EC Declaration of Conformity	18

ABOUT THIS DOCUMENT

This manual has been compiled by Jefferson Tools and is an integrated part of the product with which it's enclosed and should be kept with it for future reference. Please read all of the information supplied in this User Manual before operating this product.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that you read the information supplied before carrying out any maintenance or repair. By following all the general safety instructions contained in this manual you will help to ensure operator safety and extend the potential life span of the equipment.

All photographs and drawings in this manual are supplied by Jefferson Tools to help illustrate the operation of the product. Whilst every effort has been made to ensure accuracy of information contained in this manual our policy of continuous improvement determines the right to make modifications without prior warning.

The information contained in this Instruction Manual is designed to assist you in the safe operation and maintenance of the generator. Some illustrations in this Instruction Manual may show details or attachments that differ from those on your own generator. Contact your nearest Jefferson Dealer if you are unsure about any information included in this manual or require any additional information about the safe use, operation maintenance, or repair of this equipment.

SPECIFICATIONS

Max Output:	3.8kVA / 3.0kW
Rated Output:	3.3kVA / 2.6kW
Power Factor:	0.8
Ac Output:	1 X 230V 16A / 1 X 110V 16A
Dc Output:	12V / 8.3A
Engine Model:	Macgen 7HP Stage V / 3600rpm
Engine Type:	OHV Petrol • Air-Cooled • 4 Stroke
Starting System:	Key Start With Electronic Ignition & AVR
Guaranteed Sound Power Level: *	96 dB Lwa
Fuel Tank:	15L
Running Time:	11Hrs
Displacement Capacity:	208cc
Lubrication Oil Volume:	0.6L
Low Oil Shutdown:	YES

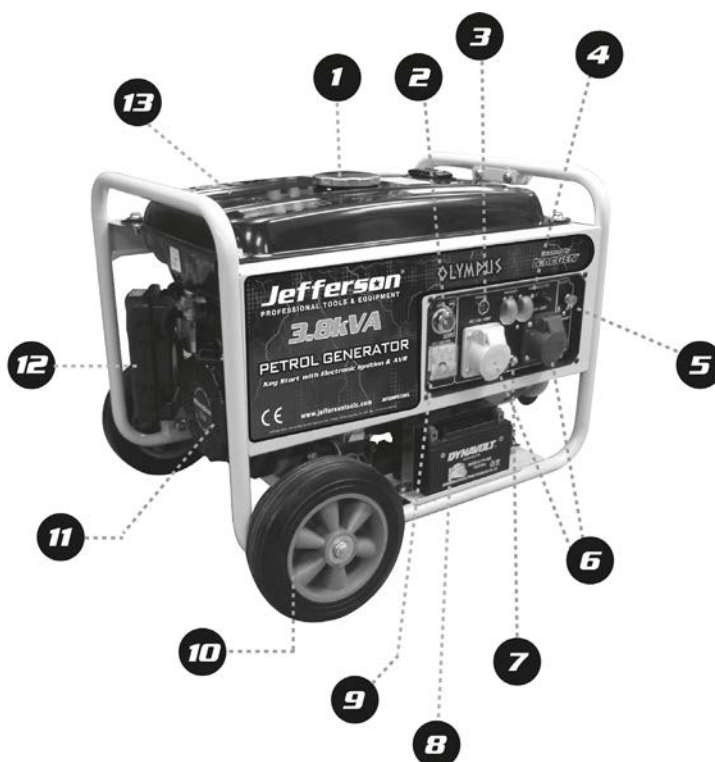
* Sound Power Level:

The figures quoted in this table are emission (sound power) levels and are not necessarily safe working levels. Whilst there is a correlation between the emission and exposure levels, this can not be used reliably to determine whether or not further precautions are required.

Factors that influence the actual level of exposure to the work-force include the characteristics of the work room, the other sources of noise, the number of machines and other adjacent processes, and the length of time for which an operator is exposed to the noise. Also the permissible exposure level can vary between regions. This information, however, will allow the user of the machine to make a better evaluation of the hazard and risk.

EQUIPMENT IDENTIFICATION

1. Fuel Cap
2. Key Ignition
3. Power Light
4. Circuit Breaker
5. Dc Reset
6. Ac Output
7. Earth Connection
8. Battery
9. Voltage Meter
10. Wheel
11. Engine
12. Air Filter
13. Fuel Tank



SAFETY GUIDELINES



Please read and ensure that you understand all of the operating instructions, safety precautions and warnings in this Instruction Manual before operating or maintaining this equipment. An accident can often be avoided by recognizing a potentially hazardous situation before it occurs, and by observing the appropriate safety procedures. Hazards that must be avoided to prevent bodily injury or machine damage are identified by warnings on the equipment and in this Instruction Manual. Never use this equipment or modify it in any way that has not been specifically recommended by the manufacturer. Contact a qualified electrician for advice on any issues relating to electrical safety in your working environment.

ELECTRICAL SAFETY



Ensure that you check the equipment thoroughly to ensure it is safe and fit for purpose before each use. It is important that you inspect all plugs, sockets, power cables and electrical fittings for wear and damage and repair or replace any defective components. The risk of electric shock can be minimised by the correct use of the appropriate electrical safety devices.

- The **Electricity at Work Act 1989** includes legislation that places legal implications on employers to ensure the safety of electrical devices in the workplace. The regulations dictate that all portable equipment must be inspected regularly and tested to ensure that it is safe for use. 'Portable equipment' means any electrical item that can be moved and this is often referred to as **Portable Appliance Testing (PAT)**. PAT testing should be carried out regularly on this equipment by trained, authorised personnel, as required by the legislation.
- The **Health and Safety at Work Act 1974** states that it is the responsibility of the owner of electrical appliances to ensure that both the equipment and working environments are maintained to ensure safe operation at all times.
- Check that all equipment cables are secure, correctly insulated, free from damage, and protected against short circuit and overload before connecting to the power supply. Do not use worn or damaged cables, plugs, sockets or other fittings.
- Do not use the generator in damp / wet conditions.

EQUIPMENT SAFETY

- The exhaust gas is poisonous, never use a generator indoors or in an attached garage. Always run your generator outdoors in a well-ventilated area. Keep the generator at least 1 meter (3 feet) away from buildings and other equipment during operation.
- Place generator on level ground to operate.
- The load must be kept within rating stated on generator rating plate, overloading will damage the unit or shorten its life.
- Running the engine at excessive speeds is dangerous and will damage the engine.

EQUIPMENT SAFETY (continued)

- Do not tamper with parts, which may increase or decrease the governed speed.
- When using extension cords, please make sure they are grounded with sufficient wire gauge for the application. Heavy-duty outdoor rated cords will handle household appliance loads.
- The exhaust system gets hot enough to ignite some materials. Do not operate the engine near combustible materials.
- Do not store fuel indoors or try to refuel a generator while it is still running. Clean up any spilled fuel before restarting the engine.
- The muffler becomes very hot during operation and remains hot for a while after stopping the engine. Be careful not to touch the muffler while it is hot. Let the engine cool before storing the generator indoors.
- Turn off all equipment powered by the generator before shutting down your generator.
- To prevent electric shock or fire, never use the machine in rain or snow or connect the generator to a live circuit.
- Do not connect the generator to another power supply outlet.
- Protection against electrical shock depends on circuit breakers specifically matched to the generating set. If the circuit breakers require replacement they must be replaced with a circuit breaker having identical ratings and performance characteristics.
- Ensure the generator does not have any damaged hoses, loose or missing clamps, damaged tank or cap before use. All defects should be corrected before use.
- To prevent surging that may possibly damage equipment, do not allow the engine to run out of fuel when electrical loads are applied.
- Before transporting the generator ensure that all the fuel is drained to prevent leakage.
- Unit must meet operating speed before electrical loads are connected. Always disconnect any loads before turning off the generator.
- Keep children and pets away from the generator at all times.
- The installation and major repair of the generator should only be carried out by trained and fully qualified engineers.
- Ensure appropriate ear protection is worn when working in close proximity to the generator.
- When using extension cables or mobile electric net use the following guidelines:

Cable Diameter	Maximum Length
1.5	60m
2.5	100m



WARNING:

- Do not cover the unit when in use.
- The unit should be earthed using 4mm diameter grounding wire.
- Do not use the generator in wet or damp conditions.
- Store the generator in well-ventilated area with an empty fuel tank.

CHECKING THE GENERATOR PRIOR TO USE

- Check the fuel level and top up with unleaded petrol if necessary. Do not overfill the fuel tank (there should be no fuel in the filler neck).
- After refuelling make sure the tank cap is closed properly and securely. Be careful not to spill fuel when refuelling and **clean up any spilled or excess fuel**. Spilled fuel or fuel vapour can ignite when the engine is started.
- The generator has a **maximum fuel capacity of 15 Litres**
- Do not fill above the fuel filter top.
- Check the engine oil level and top up if necessary as shown in **Fig.1**.

STARTING THE GENERATOR

Note: To make it easier to start the generator in cold temperatures remove the oil plug and add 2cc of engine oil before starting.

1. Warm up the engine without the load for about 3 minutes.
2. Open the Fuel Cock.
3. Put the starting switch into the "RUN" position.
4. Hold the starting/recoil handle loosely and pull the cord out it until you feel resistance - then return it slowly.

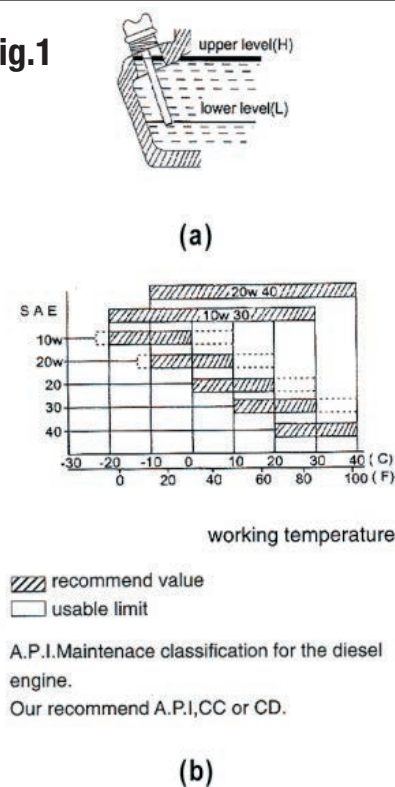
CONNECTING EQUIPMENT TO THE GENERATOR

1. Connect the equipment you want to use to the AC socket.

Note: Do not exceed the load limit of the specified maximum AC output.

2. Do not connect the generator to the household network as this may result in damage to the generator itself or to other electrical appliances in your home.

Fig.1



WARNING:

- Make sure there is no air in the fuel pipe when using the unit for the first time, starting the unit or refuelling an empty tank. You can drain away air by loosening the connection between the injection pump and pipeline then drain the air until the fuel comes out.
- Do not loosen or adjust either the engine speed limit bolt or fuel injection limit bolt. These have been set to their optimum settings before leaving the factory.
- Never pull out the start handle when the engine is running. This is dangerous and can damage the engine.

STOPPING THE GENERATOR

1. Before stopping the generator, allow it to run for approximately **3 minutes** with no consumers so that it can "cool down".
2. Turn off the circuit breaker.
3. Turn the key/ignition switch to the "**OFF**" position.
4. Turn the fuel cock lever to the "**CLOSED**" position.

TRANSPORTATION AND STORAGE

- When transporting the generator, ensure the starting switch is set to the "**OFF**" position and that the fuel valve is set to the "**CLOSED**" position.
- Keep the generator level to prevent fuel spillage. Fuel vapour or spilled fuel may ignite. Touching a hot engine can cause serious burns or fires.
- Let the engine cool before transporting or storing the generator.
- Make sure not to drop or strike the generator when transporting. Do not place heavy objects on top of the generator during transit, storage or operation.

OPERATING ENVIRONMENT

This unit can generate rated output under the following conditions:

Altitude	Ambient Temperature	Relative Humidity
0m	+20°	60%

The Generator should work in low output under the following conditions:

Altitude	Ambient Temperature	Relative Humidity
>1000m	>40°	90%

MAINTENANCE

The chart below indicates the maintenance checks you should make on your generator parts and the frequency that these checks should generally be carried out. **Note:** You can contact your nearest Jefferson dealer for help and advice and a full list of replacement parts.

	Daily	20 Hours Usage	50 Hours Usage	100 Hours Usage	300 Hours Usage
Engine oil check	○				
Replace engine oil		○		○	
Check air cleaner	○				
Wash the air cleaner			○		
Oil filter cup				○	
Oil filter				○	
Spark plug				○	
Valve clearance					○
Clean cylinder cover wash					
Fuel tank wash	Wash regularly replace every three years				
Check the battery and electrolyte levels	Before use				

Notes:

- **Checking and the engine oil:** With generator on level ground: remove the oil filler cap and dipstick clean with a clean cloth. Insert the dipstick back into the oil filter hole without turning - remove and check that the oil level is between the minimum and maximum indicators. If level is low refill to the maximum level mark.
- **Checking the fuel level:** With generator on level ground: open the fuel tank cap. Check the fuel level. If level is low refuel up to the red marker on the fuel filter. Put the fuel cap back on.



WARNING:

- Ensure that any electrical equipment is disconnected from the generator before carrying out any maintenance work on the generator.
- The circuit breaker should be in the "OFF" position before maintenance.
- The unit should be earthed at all times.

TROUBLESHOOTING

Symptom	Possible Cause	Action
Engine won't start	Not enough fuel oil	Add fuel - see section "4. Checking Generator Prior to Use"
	Fuel nozzle cannot inject fuel or there is not enough fuel	Repair the fuel injector
	The speed control lever is not in the "Run" position	Move the lever to the "Run" position
	Lubricant oil level is too low	Check that the oil level is topped up and sits between the upper and lower level markers
	Not enough speed or force used on the starter/recoil handle	See section "5. Starting the Generator"
	The fuel nozzle is blocked or dirty	Clean the fuel nozzle
Generator fault	Circuit breaker is not closed	Turn the circuit breaker to the "On" position
	Poor or faulty socket connection	Adjust the socket feet
	The rated generator speed cannot be obtained	Adjust to rated speed
	Carbon brush is faulty or worn	Replace the carbon brush
	AVR is depreciated	Replace the AVR

Jefferson®
PROFESSIONAL TOOLS & EQUIPMENT

Parts & Servicing

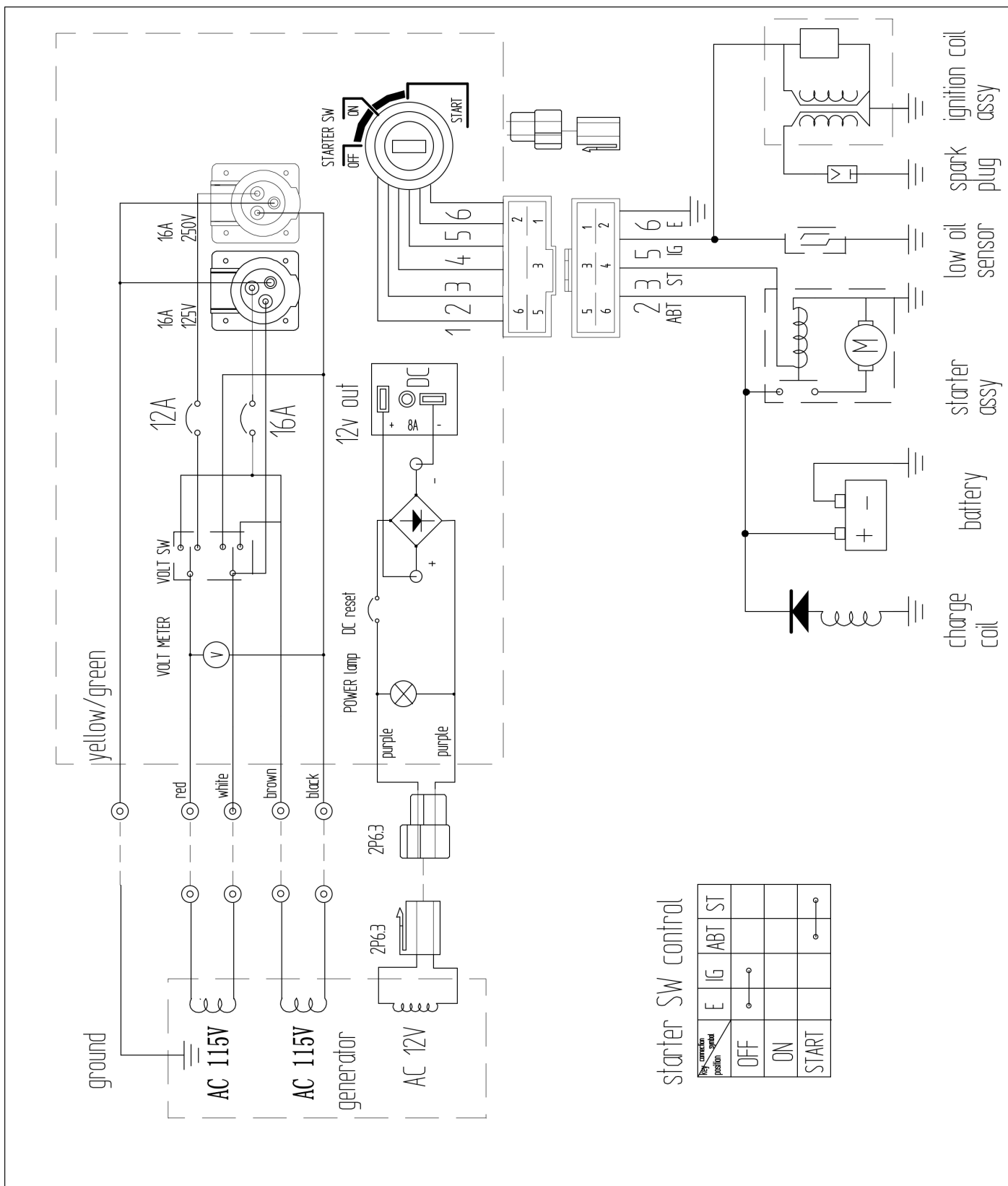
For Jefferson approved replacement parts contact your nearest dealer or contact Jefferson tools

Telephone: +44 (0)1244 646 048

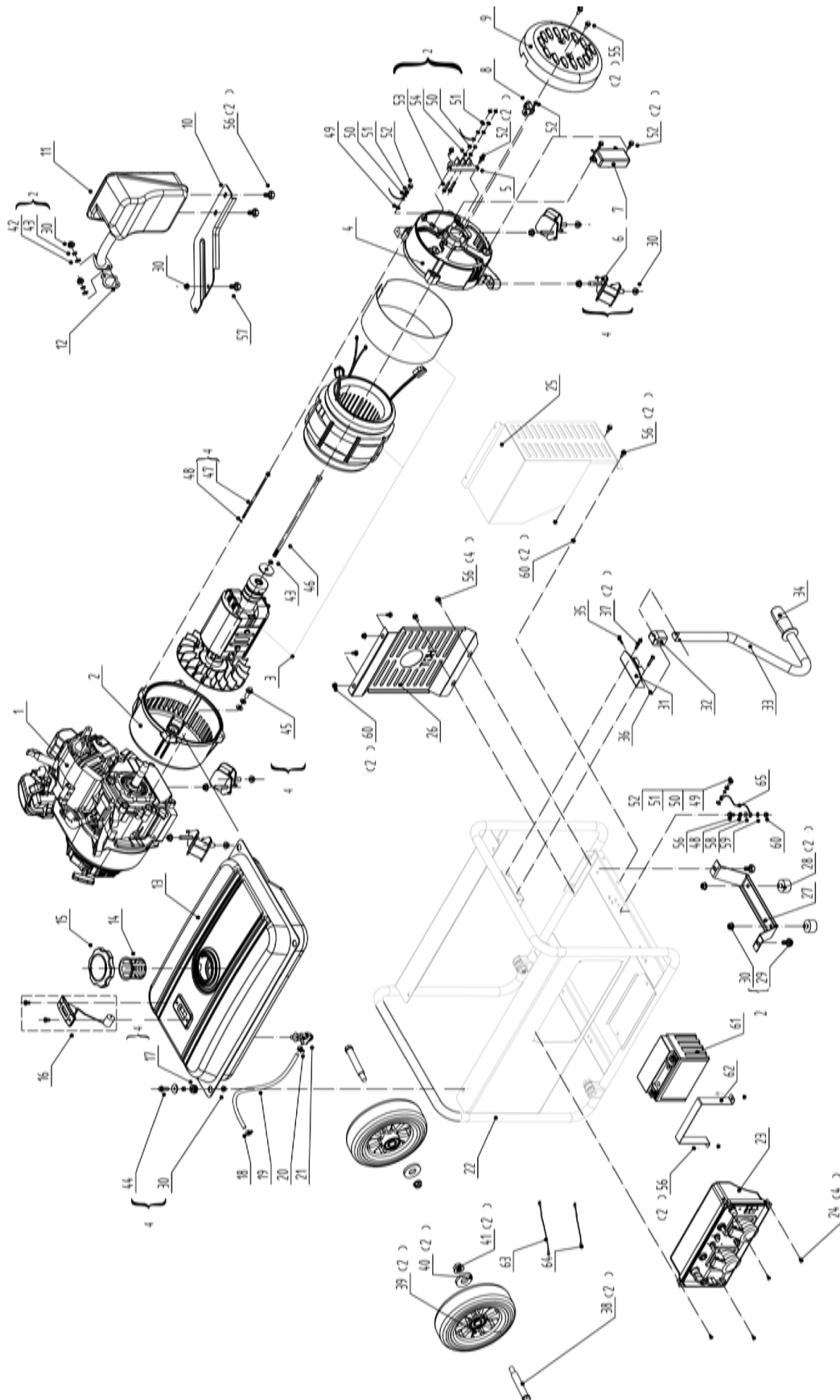
Fax: +44 (0)1244 241 191

Email: warranty@jeffersonstools.com

CIRCUIT / WIRING DIAGRAM



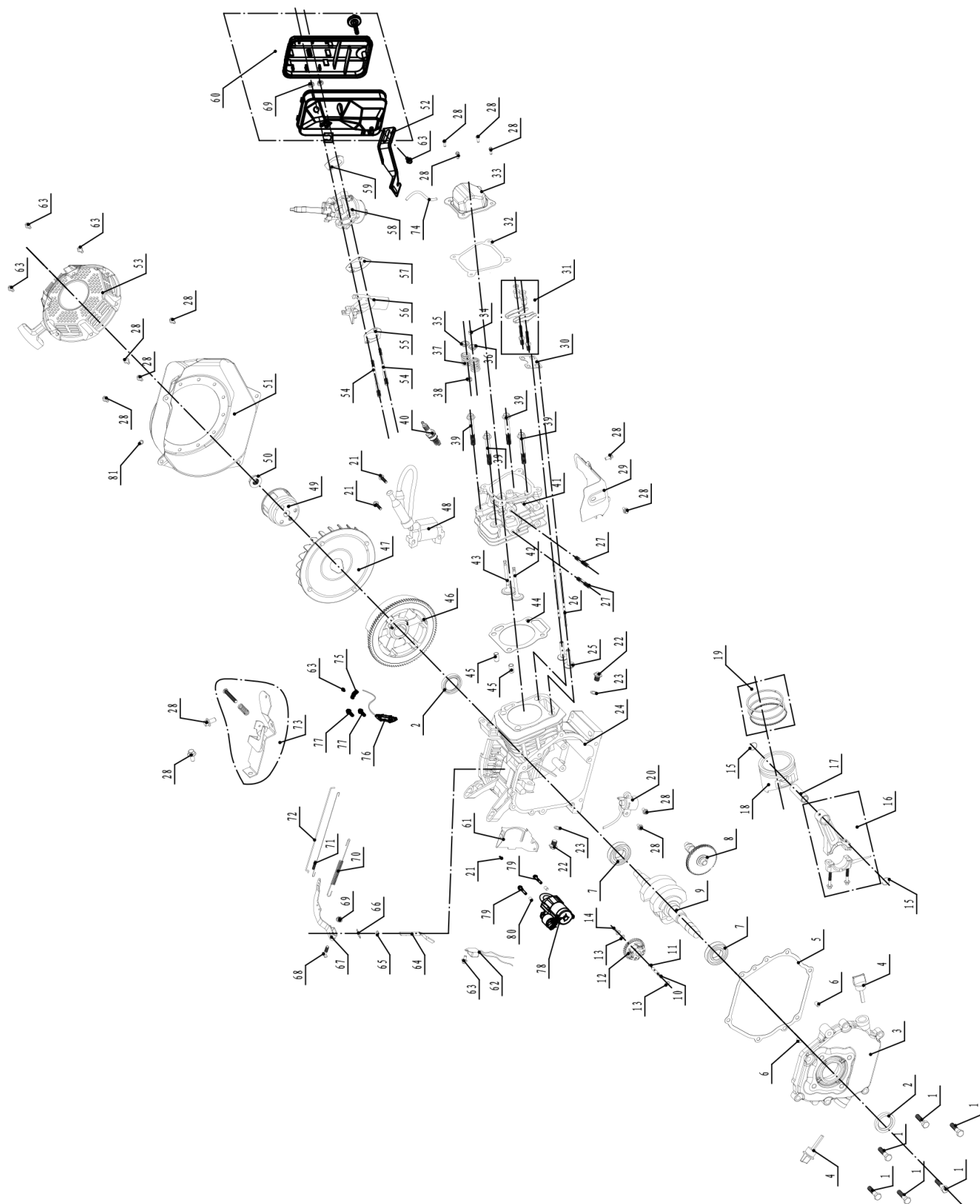
PARTS DIAGRAM - GENERATOR



PARTS LIST - GENERATOR

#	Description	Quantity	#	Description	Quantity
1	Petrol Engine	1	34	Spring Washer Ø8	1
2	Alternator Front Cover	1	35	Flange Bolt M8x25 (With Flat Washer)	1
3	Motor	1	36	Flange Bolt M8x25 (With Flat Washer And Spring Washer)	1
4	Alternator End Cover	1	37	Bolt (With Flat Washer And Spring Washer)	2
5	Connection Pole	1	38	Bolt M6x130(With Spring Washer)	2
6	Shock Absorber	4	39	Spring Washer Ø6	2
7	3Kw Avr	1	40	Gasket Ø5	2
8	Carbon Brush	1	41	Flat Washer Ø5	2
9	160 Rear End Cover Guard	1	42	Spring Washer Ø5	2
10	Mufler Gasket	1	43	Flange Bolt M5x16	2
11	Muffler	1	44	Bolt M5x20	4
12	Muffler Bracket	1	45	Nut M5	4
13	Fuel Tank	1	46	Bolt(With Flat Washer And Spring Washer)	1
14	Fuel Tank Filter	1	47	Bolt M6x130(With Spring Washer)	4
15	Fuel Tank Cap	1	48	Spring Washer Ø6	1
16	Control Panel	1	49	Gasket Ø5	2
17	Shock Absorption	4	50	Washer Ø5	10
18	Ø7 Clamp	1	51	Spring Washer Ø5	6
19	Ø4.5mm Fuel Pipe	0.2	52	Flange Bolt M5x16	7
20	Ø8 Clamp	1	53	Bolt M5x20	4
21	Fuel Switch	1	54	Nut M5	8
22	Frame	1	55	Flange Bolt M5x10	2
23	Control Pannel	1	56	Flange Bolt M6x12	8
24	Screw St4.2x12	4	57	Flange Bolt M8x35	1
25	Muffler Protect Side Guard	1	58	Washer Ø6	1
26	Muffler Hood	1	59	Gasket Ø6	1
27	Underlay Bracket	1	60	Nut M6	5
28	Underlay	2	61	Battery	1
29	Flange Bolt M8x16	2	62	Battery Platen	1
30	Nut M8	17	63	Battery Line(Black)	1
31	Handle Bracket	1	64	Battery Line(Red)	1
32	Handle Gasket	1	65	Grounding Wire	1
33	Handle Assy	1			

PARTS DIAGRAM - ENGINE



PARTS LIST - ENGINE

#	Description	Quantity	#	Description	Quantity
1	Bolt M8x33.5	6	42	Outlet Valve	1
2	Oil Sealing B2541	2	43	Inlet Valve	1
3	Crankcase Cover	1	44	Cylinder Head Gaskets	1
4	Oil Dipstick	2	45	Pin10x16	2
5	Crankcase Gaskets	1	46	Flywheel	1
6	Pin 8X14	2	47	Flywheel Fan	1
7	Bearing 6205	2	48	Ignition Coil	1
8	Cam Shaft	1	49	Starting Flange	1
9	Crankshaft	1	50	Nut M14x1.5	1
10	Speed Governing Shaft	1	51	Valve Rocket Assy	1
11	Snap Ring	1	52	Rubber Jams	1
12	Speed Governing Gear	1	53	Recoil Starter	1
13	Speed Swinging Rod Washer	2	54	Studs M6x105	2
14	Speed Governing Push Dish	1	55	Inlet Gasket	1
15	Piston Pin Circlip	2	56	Carburator Cushion Block	1
16	Connect Rod Assy	1	57	Carburator Gasket	1
17	Piston Pin	1	58	Bolt M5x30	1
18	Piston	1	59	Air Cleaner Gasket	1
19	Piston Ring Set	1	60	Air Cleaner	1
20	Low Oil Sensor	1	61	Shroad Comp.	1
21	Bolt M6x22	3	62	Sheet Wizard Valve	1
22	Oil Drain Bolt M10*15	2	63	Bolt M6x8	4
23	Oil Drain Bolt Gaskets	2	64	Speed Swinging Rod	1
24	Cylinder Head Cover	1	65	Washer	1
25	Valve Tappet	2	66	Speed Swinging Rod Lock Clamps	1
26	Valve Lifter	2	67	Speed Governing Arm	1
27	Studs M8x34	2	68	Lock Bolt	1
28	Bolt M6x12	15	69	Nut M6	3
29	Lead Wind Cover	1	70	Speed Governing Spring	1
30	Push Guide Assy	1	71	Oil Sealing B2541	1
31	Valve Rocket Assy	2	72	Speed Governing Pull Rod	1
32	Cylinder Head Cover Gasket	1	73	Speed Governing Assy	1
33	Cylinder Head Cover	1	74	Breathing Tube	1
34	Cap	1	75	N/A	1
35	Intake Spring Seat	1	76	N/A	1
36	Exhaust Spring Seat	1	77	N/A	2
37	Valve Spring	2	78	N/A	1
38	Oil Seal, Pipe	1	79	N/A	2
39	Bolt M8x60	4	80	N/A	2
40	Spark Plug	1	81	N/A	1
41	Low Oil Sensor	1			

LIMITED WARRANTY STATEMENT

Jefferson Professional Tools & Equipment, or hereafter "Jefferson" warrants its customers that its products will be free of defects in workmanship or material. Jefferson shall, upon suitable notification, correct any defects, by repair or replacement, of any parts or components of this product that are determined by Jefferson to be faulty or defective.

This warranty is void if the equipment has been subjected to improper installation, storage, alteration, abnormal operations, improper care, service or repair.

Warranty Period

Jefferson will assume both the parts and labour expense of correcting defects during the stated warranty periods below.

All warranty periods start from the date of purchase from an authorised Jefferson dealer. If proof of purchase is unavailable from the end user, then the date of purchase will be deemed to be 3 months after the initial sale to the distributor.

1 Year

- 3.8kVA Petrol Generator - Key Start - JFGENPET30EL

90 Days

- All replacement parts purchased **outside** of the warranty period

Important: All parts used in the repair or replacement of warranty covered equipment will be subject to a minimum of 90 days cover or the remaining duration of the warranty period from the original date of purchase.

Warranty Registration / Activation

You can register and activate your warranty by visiting the Jefferson Tools website using the following address:

www.jeffersontools.com/warranty and completing the online form. Online warranty registration is recommended as it eliminates the need to provide proof of purchase should a warranty claim be necessary.

Warranty Repair

Should Jefferson confirm the existence of any defect covered by this warranty the defect will be corrected by repair or replacement at an authorized Jefferson dealer or repair centre.

Packaging & Freight Costs

The customer is responsible for the packaging of the equipment and making it ready for collection. Jefferson will arrange collection and transportation of any equipment returned under warranty. Upon inspection of the equipment, if no defect can be found or the equipment is not covered under the terms of the Jefferson warranty, the customer will be liable for any labour and return transportation costs incurred.

These costs will be agreed with the customer before the machine is returned.

** Jefferson reserve the right to void any warranty for damages identified as being caused through misuse*

Warranty Limitations

Jefferson will not accept responsibility or liability for repairs made by unauthorised technicians or engineers. Jefferson's liability under this warranty will not exceed the cost of correcting the defect of the Jefferson products.

Jefferson will not be liable for incidental or consequential damages (such as loss of business or hire of substitute equipment etc.) caused by the defect or the time involved to correct the defect. This written warranty is the only express warranty provided by Jefferson with respect to its products.

Any warranties of merchantability are limited to the duration of this limited warranty for the equipment involved.

Jefferson is not responsible for cable wear due to flexing and abrasion. The end user is responsible for routine inspection of cables for possible wear and to correct any issues prior to cable failure.

Claiming Warranty Coverage

The end user must contact Jefferson Professional Tools & Equipment (Tel: +44 (0) 1244 646 048) or their nearest authorised Jefferson dealer where final determination of the warranty coverage can be ascertained.

Step 1 - Reporting the Defect

Online Method:

- Visit our website www.jeffersontools.com/warranty and complete the Warranty Returns form. You can complete the form online and submit it to us directly or download the form to print out and return by post.

Telephone Method:

Contact your Jefferson dealer or sales representative with the following information:

- Model number
- Serial number (usually located on the specification plate)
- Date of purchase

A Warranty Returns form will be sent to you for completion and return by post or fax, together with details of your nearest authorised Jefferson repair centre. On receipt of this form Jefferson will arrange to collect the equipment from you at the earliest convenience.

Step 2 - Returning the Equipment

It is the customer's responsibility to ensure that the equipment is appropriately and securely packaged for collection, **together with a copy of the original proof of purchase**. Please note that Jefferson cannot assume any responsibility for any damage incurred to equipment during transit. Any claims against a third party courier will be dealt with under the terms & conditions of their road haulage association directives.

NOTE: Jefferson will be unable to collect or process any warranty requests without a copy of the original proof of purchase.

Step 3 - Assessment and Repair

On receipt, the equipment will be assessed by an authorised Jefferson engineer and it will be determined if the equipment is defective and in need of repair and any repairs needed are covered by the warranty policy. In order to qualify for warranty cover all equipment presented must have been used, serviced and maintained as instructed in the user manual.

Where repair is not covered by the warranty a quotation for repair, labour costs and return delivery will be sent to the customer (normally within 7 working days).

NOTE: If the repair quotation is not accepted Jefferson Professional Tools & Equipment will invoice **1 hour labour time at £30 per hour plus return carriage costs (plus VAT)**.

In cases where no fault can be found with the equipment, or, if incorrect operation of the equipment is identified as the cause of the problem, a minimum of 1 hour labour at **£30 per hour plus carriage costs** will be required before the equipment will be despatched back to the customer.

Any equipment repaired or replaced under warranty will normally be ready for shipment back to the customer within 7 working days upon receipt of the equipment at an authorised Jefferson Repair centre (subject to part availability). Where parts are not immediately available Jefferson will contact you with a revised date for completion of the repair.

General Warranty Enquiries

For any further information relating to Jefferson warranty cover please call **+44 (0) 1244 646 048** or send your enquiry via email to **warranty@jeffersontools.com**

Disclaimer:

The information in this document is to the best of our knowledge true and accurate, but all recommendations or suggestions are made without guarantee. Since the conditions of use are beyond their control, Jefferson Tools® disclaim any liability for loss or damage suffered from the use of this data or suggestions. Furthermore, no liability is accepted if use of any product in accordance with this data or suggestions infringes any patent. Jefferson Tools® reserve the right to change product specifications and warranty statements without further notification. All images are for illustration purposes only.

EC DECLARATION OF CONFORMITY

We, Jefferson Professional Tools & Equipment, as the authorised European Community representative of the manufacturer, declare that the following equipment conforms to the requirements of the following:

Directive / Standard / Regulation	Description:
2000/14/EC (as amended)	Noise Emission in the Environment by Equipment for Use Outdoors
2014/30/EU (as amended)	Electromagnetic Compatibility
2006/42/EC (as amended)	Machinery Directive
(EU) 2016/1628 (as amended)	Non Road Mobile Machinery Directive

Equipment Category: Power Generator (Item 45)

Product Name/Model: JFGENPET30EL - 3.8kVA / 3.0kW Petrol Generator (Key Start)

Measured Sound Power Level: 96dB

Guaranteed Sound Power Level: 96dB

The conformity assessment procedure followed was in accordance with Annex VI of the Outdoor Noise Directive

EU type-approval number: e13*2016/1628*2016/1628SRA1/P*0027*01

Signed by: Stephen McIntyre



Position in the company: Operations Director

Date: 22 October 2019

Technical file holder's address as shown below

Name and address of manufacturer or authorised representative: Jefferson Tools, Herons Way, Chester Business Park,
Chester, United Kingdom, CH4 9QR

Telephone: +44 (0)1244 646 048 **Fax:** +44 (0)1244 241 191

Email: enquiries@jeffersonstools.com

IMPORTANT! SAFETY FIRST!

Before attempting to use this product please read all the safety precautions and operating instructions outlined in this manual to reduce the risk of fire, electric shock or personal injury.

Jefferson Tools,
Herons Way,
Chester Business Park,
Chester,
United Kingdom,
CH4 9QR

Tel. +44 (0)1244 646 048
Email: sales@jeffersontools.com

www.jeffersontools.com