



Power you can trust

A.B.N 61 005 690 273



Power you can trust

59 EXPORT DRIVE
BROOKLYN
VIC, 3012

OWNER'S MANUAL

PHONE : 1800 248 699

IMPORTANT INFORMATION FOR ALL GENERATING SET OWNERS

Thank you for purchasing a Gentech generating set. We have prepared this helpful handbook to make it easier and safer for you to use and care for your generator. Please read this handbook carefully as it contains important information which may prevent serious damage, personal injury or equipment damage. Additional engine maintenance information can be found in the accompanying engine owner's manual.

Your generator has been run, tested and tuned for optimum performance at the factory prior to despatch.

Do not start your generator until you correctly fill the engine crankcase with oil. Do not adjust the engine speed.

Please enter the date of purchase and the serial number of the generator and engine in the space provided below. This will assist you if you are ordering spare parts, require service or if the set is lost or stolen. Retain your proof of purchase and store in a safe place. The generator serial number will be found on the nameplate.

RECORD YOUR GENERATOR DETAILS:

When ordering spare parts or requesting service, please quote the following information

Gentech Model No: Model Serial No:

Date of Purchase: Invoice Number:

Purchased From:

WARRANTY

We are pleased to advise that your set is covered by warranty for a period of twenty four (24) months from the date of its original purchase. Refer to the enclosed engine operation manual for additional engine warranty details. This warranty is subject to the terms and conditions of the respective manufacturers and covers defects occurring under normal operating conditions caused by fault materials or workmanship.

Excluded from this warranty are normal maintenance items consumable parts and equipment subjected to misuse, abuse, lack of maintenance or damage due to unauthorised servicing. For warranty service, the equipment must be returned, freight pre-paid to our Gentech store.

The benefits conferred by this Gentech warranty are in addition to all other rights and remedies in respect of the product (or service) which the consumer has under the Australian Consumer Law and any other law in relation to the goods and services to which this Gentech warranty relates.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Should you require warranty service or maintenance, please telephone your nearest Gentech Dealer for advice. For engine service your nearest engine dealer should be happy to assist you with their respective brands.

ASSEMBLING INSTRUCTION

SINGLE BEARING

CAUTION: Before assembling, verify that the conical coupling parts are in order and clean.

1. Clamp the flange on the drive motor (fig.1)
2. Apply the rod-T for the axial clamping of the rotor and screw it tight on the engine shaft (fig. 1)
3. Secure the complete alternator to its flange using the 4 screws – V – inserting into the appropriate housing to the nuts – D – (fig. 2)
4. Lock axially the rotor by placing the washer and tight the self locking nut on the – T – using a torque spanner (driving torque 35Nm)

CAUTION: Before applying the nut, make sure that the threaded part of the rod enters the rotor in order to obtain a tight lock.

5. Connect the capacitor and the connectors (sockets version) as the wiring diagram (fig. 3)
6. Clamp the rear inlet grill (the clamp screws are self threaded)

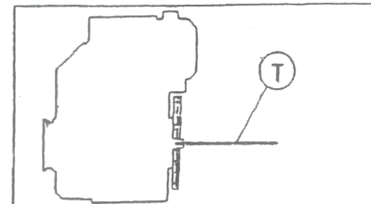


Fig.1

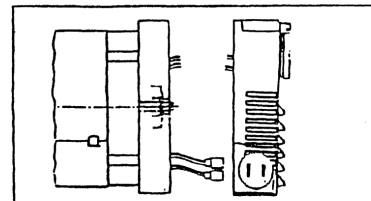


Fig.3

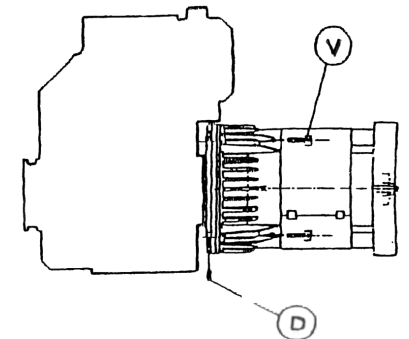
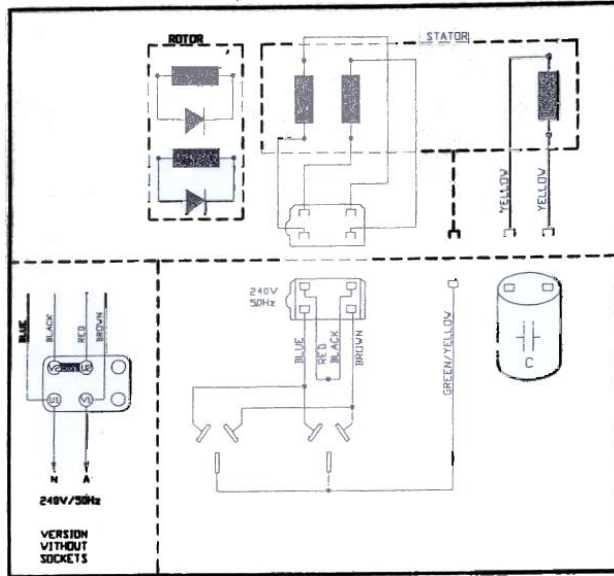


Fig.2

ALTERNATOR WIRING DIAGRAM



WINDING RESISTANCE (20°C)
50Hz – 3000rpm

KVA	STATOR OHMS	AUX OHMS	ROTOR OHMS
2.5	2.43	16.0	2.58
3.4	0.99	7.01	3.25
4.4	0.69	4.80	3.86
5.9	0.43	3.10	4.33
7	0.32	2.40	4.86
8	0.23	1.80	5.64
9.5	0.23	1.80	5.64
11	0.20	1.46	6.33

WELDING DETAILS

DUTY	STATOR OHMS	AUX OHMS	ROTOR	IMPEDANCE
200	0.60	1.10	5.10	4.7 m/OHMS

TROUBLE SHOOTING

FAULT	CAUSES - REPAIRS
No Voltage with no Load	<ul style="list-style-type: none"> a) Loss of residual magnetism b) Fault capacitor – change it c) Rotor diodes failure or short circuit – change them d) Winding short circuit or insulation fault or loose connections. Check the winding resistance (as table) & the insulation
Low voltage with no load	<ul style="list-style-type: none"> a) Speed of engine too low – set speed of engine to 3150rpm (50Hz) with no load b) Rotor diodes failure or short circuit – change them c) Short circuit in winding – check the winding resistance (as table)
High voltage without load	<ul style="list-style-type: none"> a) Wrong capacitor - change it b) Speed of engine too high – set speed of engine at 3150rpm (50Hz) with no load
Correct voltage with no load, low voltage load	<ul style="list-style-type: none"> a) Rotor diodes failure or short circuit – change them b) Possible overload – check value of current load c) The engine speed falls off – contact the engine specialist – too low engine power
Excessive Heat (over heating)	<ul style="list-style-type: none"> a) Ventilation aperture partially blocked – disassemble & clean the inlet casing or front cover if necessary b) Possible overload – check value of current load
Unstable voltage or welding current	<ul style="list-style-type: none"> a) Loose contact check connections b) Uneven rotation – check the uniform rotation speed (contact the engine specialist)
Noisy generator	<ul style="list-style-type: none"> a) Broken bearing – replace b) Poor coupling – check & repair
Low voltage with no load (2-6 volts)	<ul style="list-style-type: none"> a) Loss of residual magnetism

PRELIMINARY CHECKS

Before operating the generator, perform a thorough and in-depth visual inspection, checking that the components are correctly connected and that no cables or terminals are broken or loose.

OPERATION / INTRUCTION MANUALS

Locate and read all associated manuals for a thorough understating of the functionality of this generator. This manual is provided as a guide only and each individual product manual should be referred to, not only for safety and maintenance, but for correct operation. This includes:

- Gentech Owner's Manual (Overview / Guide of Equipment)
- Engine Owner's Manual

START UP

Make sure when starting up, that cooling air intake and discharge openings are free and unblocked. We also recommend (when the machine operates in dusty environments) doing periodic checks to make sure it is properly ventilated.

THE IMPORTANCE OF SPEED

Frequency and voltage depend directly on rotation speed. This must be kept as constant as possible on its nominal value no matter what the load.

Drive motor speed control systems generally have a small drop in speed between non-load and loaded conditions. We therefore recommend setting non-load speed 3% to 4% above nominal speed.

CHECKING VOLTAGE

All the generators are regulated during factory testing. If voltage readings differ from the value indicated on the name plate, this may be caused by a mistaken reading or by different rotation speed and we recommend regulating motor speed in order to have nominal RPM under load conditions.

HINTS FOR SAFE OPERATION AND BEST PERFORMANCE

FILL CRANKCASE WITH OIL.

- Multigrade engine oil marked 10W-40SE or SF is suitable. Check the oil each time you refuel.
- **Do Not Use Friction modified oils.**

FOR PETROL DRIVEN ENGINES, USE STANDARD UNLEADED PETROL

- Leaded petrol will reduce engine life.

DAILY AIR CLEANER SERVICING IS RECOMMENDED in dusty conditions.

- Do Not neglect oil changes and engine servicing requirements.

DO NOT ADJUST OPERATING SPEED.

- This has been factory set prior to being painted & locked. Alternation will vary the output, voltage & frequency which will cause damage to your appliances and/or generator.

DO NOT OPERATE YOUR GENERATOR AT LESS THAN 1/3 FULL LOAD FOR LONG PERIODS.

- Light loading can cause glazing of the cylinder bore due to the lack of cooling air & fuel mixture and increase carbon build up in combustion chambers. After long periods of operation at less than full loading, the generator should be operated for 5 minutes at full load to disperse carbon build up in the combustion chamber.

USE CORRECT SIZED FLEXIBLE POWER CABLES.

- (Refer to the table in this booklet). Do Not Use light domestic extension leads for high power loadings or over long distances. Damage to your appliances and/or generator may result from excessive voltage drop in the cable.

WHEN STARTING & STOPPING YOUR GENERATOR TURN OFF ALL CONNECTED APPLIANCES – ESPECIALLY INDUCTION MOTOR DRIVEN APPLIANCES

- Includes items such as refrigerators, water pumps, air conditioners, workshop machinery & electronic appliances such as T.V sets. Damage may occur to these appliances due to the high/low voltage output from the generator under starting & stopping situations.

STOP ENGINE BEFORE FILLING WITH FUEL.

- You may be seriously injured by fire or explosion if petrol is spilt or ignites.

ALLOW ALL SPLIT PETROL TO EVAPORATE BEFORE RESTARTING.

DO NOT SMOKE NEAR FUEL.

DO NOT OPERATE YOUR GENERTATOR WITHOUR SUFFICIENT VENTILATION.

- Poisonous carbon monoxide gases are colourless & odourless, and are present in exhaust gases.

DO NOT OPERATE YOUR GENERATOR IN AN ENCLOSED AREA.

- Your generator requires ample circulation of cooling air.

PROTECT YOUR GENERATOR FROM WATER & RAIN.

- Water may damage the electrical components or cause corrosion.

DO NOT ALLOW YOUR GENERATOR TO RUN OUT OF FUEL.

- If this occurs, refer to restarting instructions in the engine Owner's Manual.