

OWNERS

MANUAL

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A.B.N 61 005 690 273

IMPORTANT INFORMATION FOR ALL GENERATING SET OWNERS

Thankyou for purchasing a Dunlite 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 and 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 purchase receipt permanently and store in a safe place. The generator serial number will be found on the nameplate.

RECORD YOU GENERATOR DETAILS:

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

Dunlite Model No: Engine Serial No:

Date of Purchase: Invoice Number:

Purchase From:

WARRANTY

We are pleased to advise that your set is covered by warranty for a period of twelve (12) 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 Dunlite store. Should you require warranty service or maintenance, please telephone your nearest Dunlite Dealer for advice. For engine service your nearest engine dealer should be happy to assist you with their respective brands.

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

1. Clamp the flange on the motor drive (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)

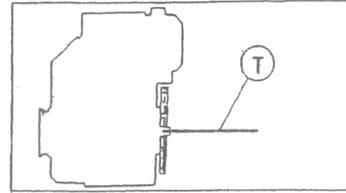


Fig.1

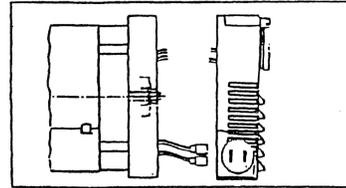


Fig.3

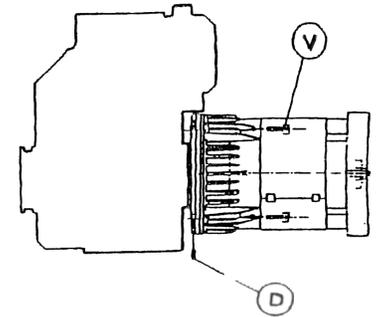
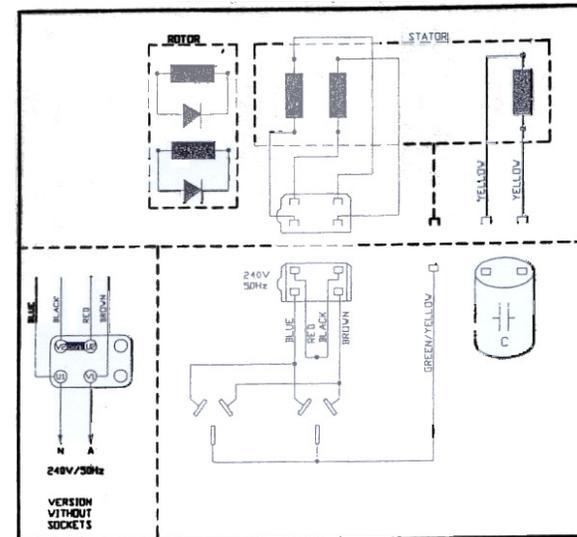


Fig.2

WIRING DIAGRAM



WINDING RESISTANCE (20°C)

50Hz – 3000rpm

KVA	ES80	STATOR 2 wire	AUX	ROTOR
2	ES80B	2,20	7,0	5,7
2.5	ES80B	2,20	7,0	5,7

kVA	SE100/M100 50 Hz	STATOR 2 wire	AUX	ROTOR
3.4	SE100C	2,59	7,59	4,6
4.4	SE100E M100SE	1,20	3,3	6,2
5.9	SE100F M100SF	0,82	3,19	6,7
7	SE100G M100SG	0,71	2,3	3,6
8	M100LH	0,53	1,96	4
9.5	M100LL	0,43	1,54	4,2
11	M100LL	0,43	1,54	4,2

WELDING DETAILS

WS AC	AUX	ROTOR
200A	1,28	4,2

	engine at 3150rpm (50Hz) with no load
Correct voltage with no load , low voltage load	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)	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	a) Loose contact check connections b) Uneven rotation – check the uniform rotation speed (contact the engine specialist)
Noisy generator	a) Broken bearing – replace b) Poor coupling – check & repair
Low voltage with no load (2-6 volts)	a) Loss of residual magnetism

TROUBLE SHOOTING

FAULT	CAUSES - REPAIRS
No Voltage with no Load	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	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	a) Wrong capacitor - change it b) Speed of engine too high – set speed of

PRELIMINARY CHECKS

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

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 constantly 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 machines 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.**
- **USE UNLEADED PETROL** whenever possible. 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 YOU PETROL DRIVEN 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** you generator **TURN OFF ALL CONNECTED APPLIANCES – ESPECIALLY INDUCTION MOTOR DRIVEN APPLIANCES** 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 PETROL.** 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 PETROL**
- **DO NOT OPERATOR YOUR GENERTATOR WITHOUR SUFFICIENT VENTILATION.** Poisonous carbon monoxide gasses – colourless & odourless – are contained in exhaust gases.
- **DO NOT OPERATE YOU GENERATOR IN A CLOSED BOX.** 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, immediately disconnect the appliance from the generator as damage to generator can occur even while stopped.