



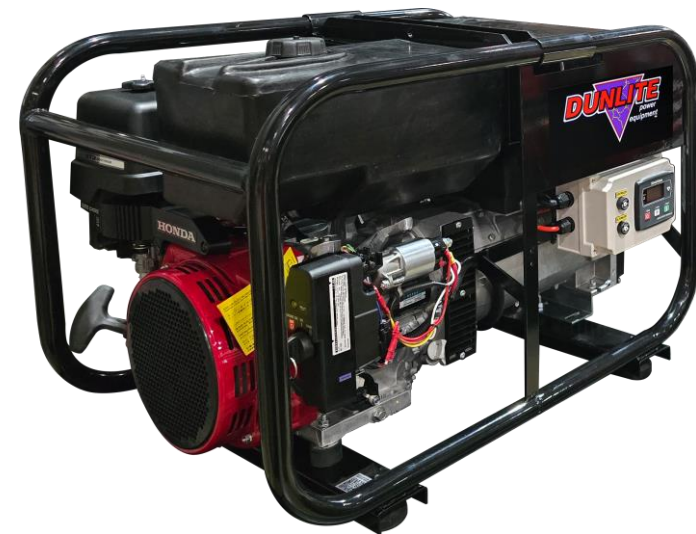
59 EXPORT DRIVE  
BROOKLYN  
VIC, 3012

**PHONE: 1300 555 253**

A.B.N 48 000 119 380



**DGUH7ES-2-R/S2**



**REMOTE START GENERATOR  
OWNER'S MANUAL**

## IMPORTANT INFORMATION FOR ALL GENERATING SET OWNERS

Thank you 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 check the engine crankcase has oil and the fuel tank is full with unleaded petrol (capacity 25 litres). 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 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

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 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, and lack of maintenance or damage due to unauthorised servicing. For warranty service, the equipment must be returned, freight pre-paid to our authorised service agents.

The benefits conferred by this Dunlite 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 Dunlite 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 Dunlite 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 tighten 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)

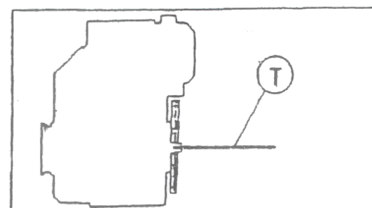


Fig. 1

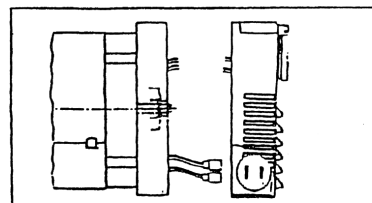


Fig. 3

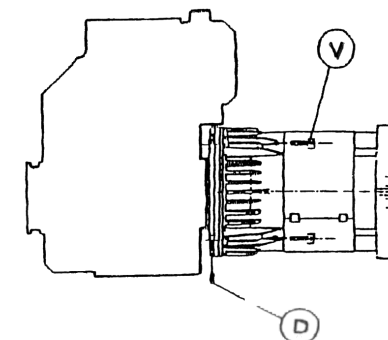
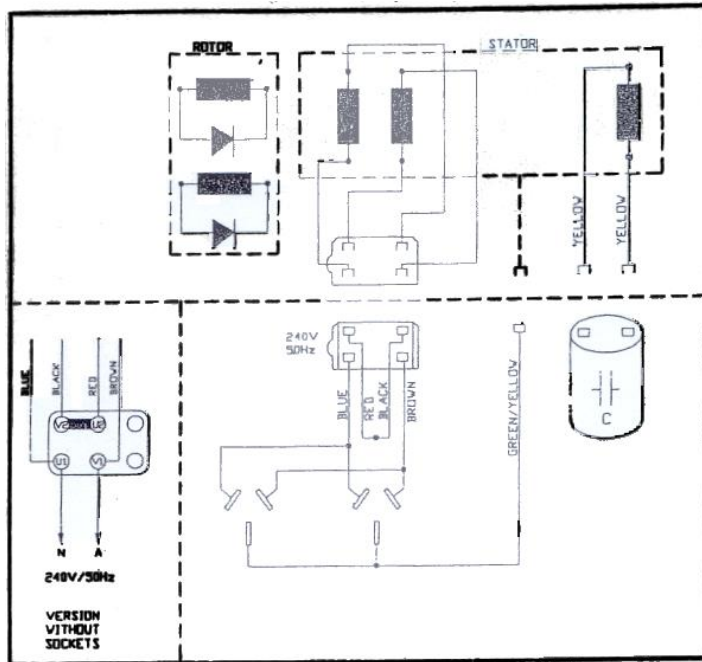


Fig. 2

## ALTERNATOR WIRING DIAGRAM



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

kVA	STATOR OHMS	AUX OHMS	ROTOR OHMS
2.8	2.43	16.0	2.58
3.3	0.99	7.01	3.25
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
15	0.12	0.36	3.70
20	0.12	0.36	3.70

### WELDING DETAILS

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

## PRELIMINARY CHECKS

Before operating 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 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.

## CHECKING VOLTAGE

All the machines are regulated during factory testing. If you have voltage issues, please refer to the Troubleshooting page of this manual.

## BATTERY MAINTENANCE

Battery must be on constant external charge due to the continual draw of current from the remote start unit. External charge can be via a solar panel or battery trickle charger unit

### Suggested Options:

- 1) Solar powered (battery back-up) panel with regulator to charge/maintain battery voltage at a sufficient level to enable remote start up.  
**Part No: SOLAR PANEL KIT (W&C Supply).**
- 2) Battery Trickle Charger unit (Other/External Supply).

## SAFETY INFORMATION

### EXHAUST FUMES ARE POISONOUS

- Never operate the engine in a closed area or it may cause unconsciousness and death within a short time. Operate the engine in a well-ventilated area.
- Exhaust contains poisonous carbon monoxide gas that can build up to dangerous levels in closed areas.
- Never run the generator in a closed or even partly closed area where people may be present.

### FUEL IS HIGHLY FLAMMABLE AND POISONOUS

- Always turn off the engine when refuelling.
- Never refuel while smoking or in the vicinity of an open flame.
- Take care not to spill any fuel on the engine, battery or control panel when refuelling.
- Clean all spilt fuel before restarting the generator.
- If you swallow any fuel, inhale fuel vapour, or allow any to get in your eyes, see your doctor immediately. If any fuel spills on your skin or clothing, immediately wash with soap and water and change your clothes.
- When operating or transporting the machine, be sure it is kept upright. If it tilts, fuel may leak from the carburettor or fuel tank.

### PLACEMENT OF UNIT

- Place the machine in a place where pedestrians or children are not likely to touch the machine.
- Avoid placing any flammable materials near the exhaust outlet during operation.
- Keep the machine at least 1 metre from any obstructions to allow adequate airflow and prevent overheating. Refer to engine manual.

### ELECTRIC SHOCK PREVENTION

- Never conduct maintenance on generator in the rain or snow.
- Never touch the machine with wet hands.
- Always use a qualified electrician to perform all wiring.
- Never conduct maintenance while the generator is running.
- The generator is a potential source of electrical shock if misused. Do not expose the generator to moisture, rain or snow. Do not let the generator get wet.

### GENERATOR CONNECTION

- Your generator comes with outlets providing a source of power and must be used appropriately.

### ENGINE MAINTENANCE INSTRUCTIONS

- You will need to read the Honda Owner's Manual for full details and specifications for maintaining your engine and changing the oil, filters etc.

## TROUBLESHOOTING GUIDE

FAULT	CAUSES - REPAIRS
No Voltage with no Load	<ul style="list-style-type: none"> <li>a) Loss of residual magnetism</li> <li>b) Fault capacitor – change it</li> <li>c) Rotor diodes failure or short circuit – change them</li> <li>d) Winding short circuit or insulation fault or loose connections. Check the winding resistance (as table) &amp; the insulation</li> </ul>
Low voltage with no load	<ul style="list-style-type: none"> <li>a) Speed of engine too low – set speed of engine to 3100rpm (52.2Hz) with no load</li> <li>b) Rotor diodes failure or short circuit – change them</li> <li>c) Short circuit in winding – check the winding resistance (as table)</li> </ul>
High voltage without load	<ul style="list-style-type: none"> <li>a) Wrong capacitor - change it</li> <li>b) Speed of engine too high – set speed of engine at 3100rpm (52.2Hz) with no load</li> </ul>
Correct voltage with no load, low voltage load	<ul style="list-style-type: none"> <li>a) Rotor diodes failure or short circuit – change them</li> <li>b) Possible overload – check value of current load</li> <li>c) The engine speed falls off – contact the engine specialist – too low engine power</li> </ul>
Excessive Heat (over heating)	<ul style="list-style-type: none"> <li>a) Ventilation aperture partially blocked – disassemble &amp; clean the inlet casing or front cover if necessary</li> <li>b) Possible overload – check value of current load</li> </ul>
Unstable voltage	<ul style="list-style-type: none"> <li>a) Loose contact check connections</li> <li>b) Uneven rotation – check the uniform rotation speed (contact the engine specialist)</li> </ul>
Noisy generator	<ul style="list-style-type: none"> <li>a) Worn/Broken bearing – replace</li> <li>b) Poor coupling – check &amp; repair</li> <li>c) Scraping between stator and rotor, check alignment</li> </ul>
Low Battery Voltage	<ul style="list-style-type: none"> <li>a) Battery not maintaining charge, check regulator connections and battery condition</li> </ul>
Machine stops due to low fuel	<ul style="list-style-type: none"> <li>a) Allow generator to cool, refill tank</li> <li>b) Disconnect solar inverter from generator</li> <li>c) Press manual start, allow engine to crank until it starts</li> <li>d) Allow engine to run until generator is stable (approx. 2 mins)</li> <li>e) Stop generator &amp; reconnect solar inverter to generator</li> <li>f) Restart generator &amp; resume normal operation</li> </ul>

## **GUIDELINES FOR SAFE OPERATION AND BEST PERFORMANCE**

### **FILL CRANKCASE WITH OIL**

- Multigrade engine oil marked 10W-30SE or SF is suitable. Check the oil each time you refuel. **Do not use friction modified oils. Follow servicing requirements.**

### **USE UNLEADED PETROL, STOP ENGINE BEFORE FILLING**

- Leaded petrol will reduce engine life.

### **DO NOT ADJUST OPERATING SPEED**

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

### **DO NOT OPERATE YOUR 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.

### **DO NOT OPERATE YOUR GENERATOR WITHOUT SUFFICIENT VENTILATION**

- Poisonous carbon monoxide gasses – colourless & odourless – are contained in exhaust gases. Overheating the generator will permanently damage the unit.

### **DO NOT ALLOW YOUR GENERATOR TO RUN OUT OF FUEL (1/4 FULL MINIMUM)**

- If this occurs, immediately disconnect the appliance from the generator as damage to generator can occur even while stopped. Follow restarting instructions in Troubleshooting Guide.

### **DO NOT OPERATE YOUR GENERATOR WHILST IN TRANSIT**

- If this occurs the tank may pressurise, and fuel may escape from the breather and fuel cap.

### **ENSURE YOUR GENERATOR IS CORRECTLY SIZED FOR THE LOAD**

- **USE CORRECT SIZED FLEXIBLE POWER CABLES.** 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** 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.

### **PROTECT YOUR GENERATOR FROM WATER & RAIN.**

- Water may damage the electrical components or cause corrosion.

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## PRODUCT SPECIFICATIONS

### ENGINE

Engine Type.....	iGX390, 389CC, OHV
Net Output (3600 r/min).....	8.7 kW
Cooling System.....	Forced Air
Ignition System.....	C.D.I. magneto
Spark Plug.....	BPR6ES (NGK) or W20EPR-U (DENSO)
Oil Capacity.....	1.1 L
Recommended Oil.....	SAE 10W-30, API SJ or later

### GENERATOR

Rated AC Voltage.....	230 V
Rated AC Output.....	8 kVA
Continuous Output .....	6400 W
Max Output.....	8 kVA
Phase.....	Single
Frequency.....	50 Hz
Fuel Tank Capacity.....	25 L
Recommended Fuel.....	Unleaded (86 Octane or higher)
Battery.....	12V18Ah

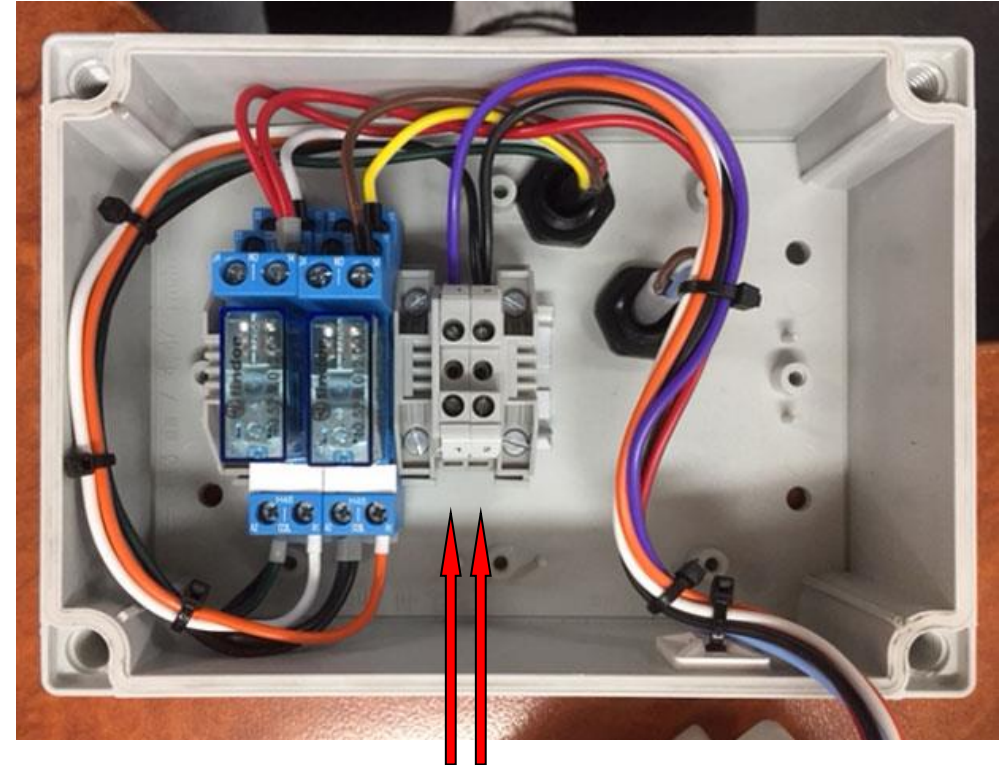
### GENERAL

Starting System.....	Recoil / Electric Key / Remote Start
Power Outlet/s.....	2 x GPO 15A
Dimensions.....	780 x 570 x 570 mm
Dry Weight (Including Accessories).....	98 kg

**\*Actual power outage for the engine installed will vary depending on numerous factors, including the operating speed of the engine in application, environmental conditions, maintenance, and other variables.**

**STEP 3)** Fit gland (if applicable) and feed wires through the drilled-out hole.

**STEP 4)** Locate and fit cables to terminate the wires into vacant side of terminals 1 & 2.



**STEP 5)** Replace cover ensuring no wires other wires are protruding. Test remote start operation (if needed).

**STEP 6)** Remote Start Up wiring is complete. The protruding *installed* wires can now be run and bridged via a switch device and/or to a preferred start-up point as needed.

*The wiring diagram shown on the previous pages shows the electrical schematic of the terminals 1 & 2 used for Remote Start.*

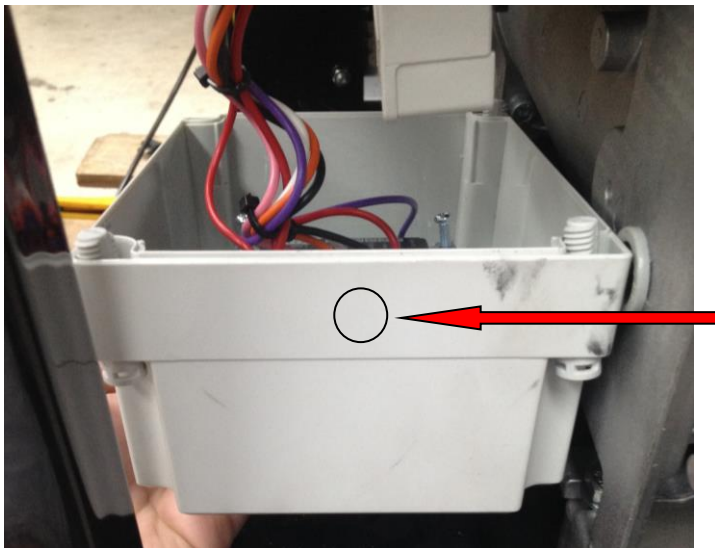
## WIRING INSTRUCTIONS FOR REMOTE START OPERATION

The generator comes with a Remote Start which enables starting of the generator remotely. The following instructions are provided for hardwiring the remote start box/panel of the generator, to an external device or location.

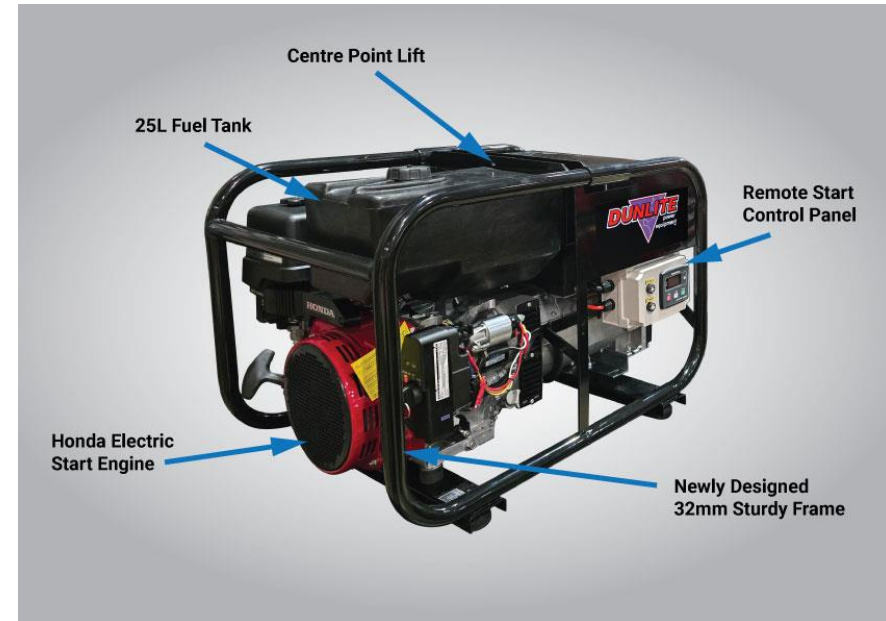
**STEP 1)** Locate Remote Start Control Box and remove the cover using a phillips head screwdriver.

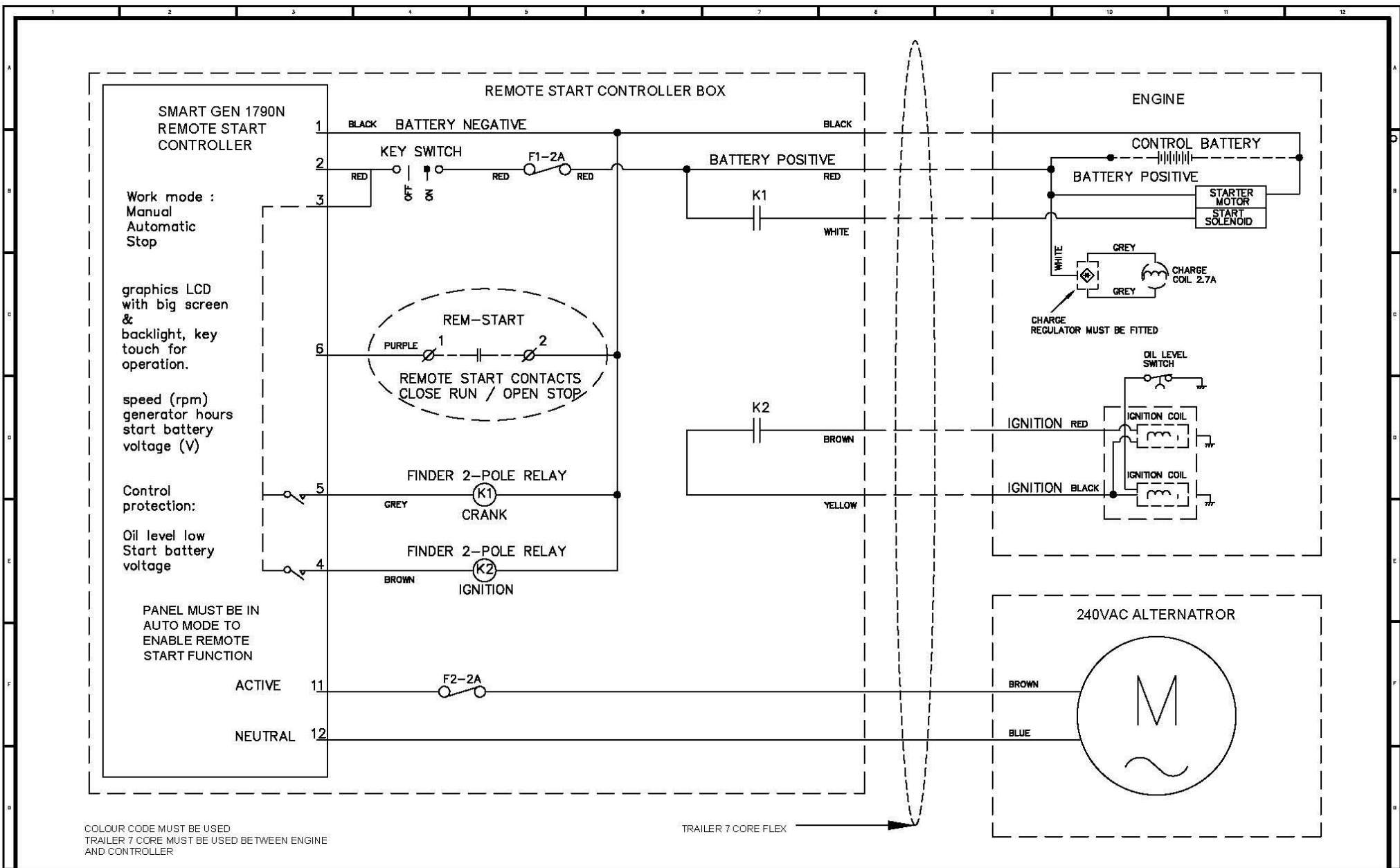


**STEP 2)** Carefully drill a suitably sized hole into the side of the removed cover (*recommended location shown only*). **Note:** Take care of existing wiring.



## KEY PARTS AND FEATURES





COLOUR CODE MUST BE USED  
TRAILER 7 CORE MUST BE USED BETWEEN ENGINE  
AND CONTROLLER

TRAILER 7 CORE FLEX

<p>W&amp;C WELLING &amp; CROSSLEY PTY LTD 59 EXPORT DRIVE BROOKLYN VIC 3012 0438 CAULFIELD RD, WYTHEVILLE VIC 3657 0164 3/55 CEDARS DRIVE STAYLTON QLD 4207 E-MAIL: w&amp;c@crossley.com.au</p>										<p>REVISIONS</p> <table border="1"> <tr><td>NO.</td><td>DATE</td><td>DESCRIPTION</td></tr> <tr><td>1</td><td>12/11/18</td><td>ISSUED</td></tr> <tr><td>2</td><td>12/11/18</td><td>ISSUED</td></tr> <tr><td>3</td><td>12/11/18</td><td>ISSUED</td></tr> <tr><td>4</td><td>12/11/18</td><td>ISSUED</td></tr> <tr><td>5</td><td>NO/NO/18</td><td>NO/NO/18</td></tr> </table>		NO.	DATE	DESCRIPTION	1	12/11/18	ISSUED	2	12/11/18	ISSUED	3	12/11/18	ISSUED	4	12/11/18	ISSUED	5	NO/NO/18	NO/NO/18	<p>DRAWING TITLE:</p> <p>REMOTE START GX390 PORTABLE LWBY UNIT ELECTRICAL SCHEMATIC ALTERNATOR SENSING</p>					
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