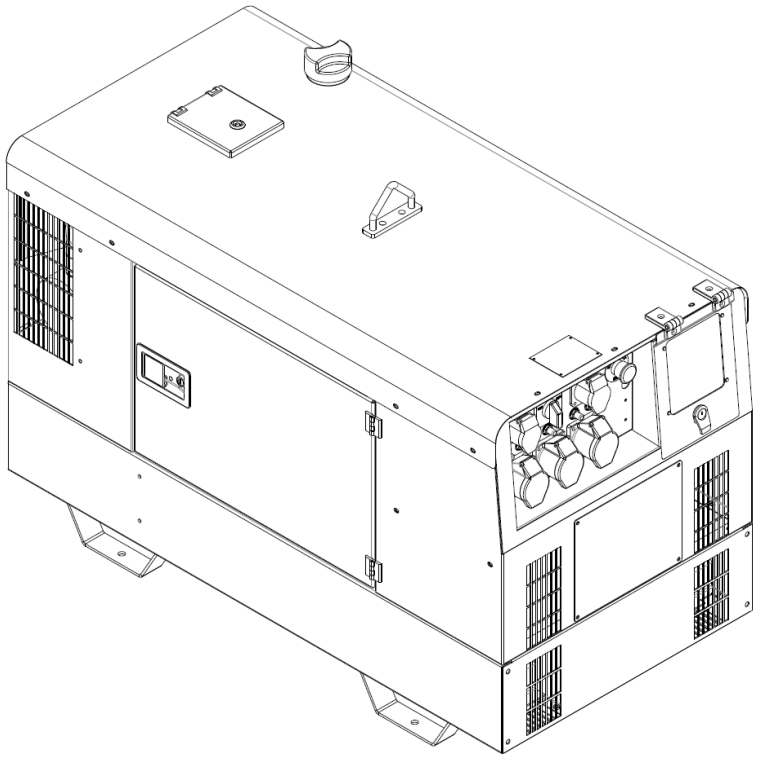
SSD8500 - SSD10000 - SSD10000S - SSD10000W
Handbook Deep Sea 3110



Stephill Generators Ltd
Wallis close
Park Farm South
Wellingborough
Northants
NN8 6AG

Tel : +44 (0)1933 677911
Fax : +44 (0)1933 677916

E-mail : info@stephill-generators.co.uk
Web : www.stephill-generators.co.uk

DO NOT OPERATE THE GENERATOR BEFORE READING THIS MANUAL AND ENGINE MANUFACTURER'S OWNER'S MANUAL AND WARNINGS.

THIS STEPHILL GENERATOR HAS BEEN DESIGNED TO PROVIDE SAFE AND EFFICIENT SERVICE IF OPERATED AND MAINTAINED CORRECTLY.

MANY ACCIDENTS OCCUR THROUGH FAILURE TO ADHERE TO FUNDAMENTAL SAFETY PROCEDURES.

Issue 3 17/06/2015

Contents

1 Specification

Standard Set Voltage: 230v Neutral bonded to earth & 115v Neutral bonded to earth.

	SSD10000S			SSD8500S			SSD10000		
kVA	10			8			10		
kW	8			6.4			8		
HZ	50			50			50		
LWA	94			95			94		
Dba@7M	69			69			69		
Engine	Kubota D722			Kubota Z602			Kubota D722		
Alternator	NSM M 112 SB/2			NSM M 112 SB/2			NSM M 112 SB/2 (c/w RCM2 AVR)		
Wet Weight Skid	330Kg			324Kg			330Kg		
Wet Weight Trolley	363Kg			357Kg			363Kg		
Wet Weight Road Trailer	405Kg			399Kg			405Kg		
	Length	Width	Height	Length	Width	Height	Length	Width	Height
Dimensions Skid	1285	655	900	1285	655	900	1285	655	900
Dimensions Trolley	1750	900	1080	1750	900	1080	1750	900	1080
Dimensions Road Trailer	2360	1300	1220	2360	1300	1220	2360	1300	1220
Fuel Tank Capacity	37L			37L			37L		
Hours run 100%	11			12			11		
Hours run 75%	13			16			13		

	SSD10000W		
kVA	10		
kW	8		
HZ	50		
LWA	94		
Dba@7M	69		
Engine	Kubota D722		
Alternator	Sincro SK160 CA21		
Wet Weight Skid	370Kg		
Wet Weight Trolley	391Kg		
Wet Weight Road Trailer	492Kg		
	Length	Width	Height
Dimensions	1360	655	760
Dimensions Trolley	n/a	n/a	n/a
Dimensions Road Trailer	n/a	n/a	n/a
Fuel Tank Capacity	37L		
Hours run 100%	11		
Hours run 75%	13		

2 General Safety

2.1 Warning signs

Warnings shown on the machine should be observed at all times. The warning signs should be checked for legibility and any that have become damaged should be replaced. The following are shown on the generator:

WARNING

BEFORE STARTING.

- **READ HANDBOOK AND SAFETY ADVICE**
- **CHECK OIL LEVEL**
- **DO NOT ADJUST ENGINE SPEED WITHOUT SUITABLE TEST EQUIPMENT**

RISK OF ELECTRIC SHOCK ALWAYS TURN OFF GENERATOR BEFORE OPENING. KEEP CLOSED AT ALL OTHER TIMES

CAUTION HOT EXHAUST

2.2 Safety hazards

Do not climb on the generator, as dents may cause overheating of the acoustic lining. It is important to keep the generator clean and well serviced, in particular keep all air vents / louvers clear of debris to prevent poor performance or possible overheating and permanent damage to the generator.

Keep well clear of moving parts on the generator at all times.

Children and pets must be kept clear of the operating area.

3 Potential Hazards

3.1 Auxiliary power

The electricity produced by an engine driven generator is very similar to mains electricity and should be treated accordingly.

Do not remove covers and attempt to work on the generator while the engine is running.

Check the rating and electrical safety of the load before connecting the generator.

Equipment should never be connected that in total exceeds the specified rating of the generator.

Installation of the generator as a standby or secondary power source should only be undertaken by a fully qualified electrician using the appropriate means of isolation from the mains supply. Installation must comply with all applicable laws and electrical codes.

3.2 Operating Environment

The generator should always be operated on level ground.

3.3 Temperature Range

A temperature range between -15˚C and +45˚C are the normal limits of operation.

Operating outside the range will require additional modifications.

3.4 Reference Relative Humidity

The standard reference condition for relative humidity is 30%. Above this value the rated power must be reduced.

3.5 Reference Barometric Pressure

The standard reference condition for total barometric pressure is 1 bar.
This corresponds to an altitude of approximately 100m. Above 100m the rated power must be reduced.

3.6 Flammable Environment

Stephill generators must not be used in a flammable environment.

3.7 Saline Environment

Operation of the machine in a saline environment will require additional corrosion protection.

4 Safety Considerations

4.1 General

All Stephill Generators comply with all the current EEC directives including:
2006/42/EC Machinery Directive
2000/14/EC Noise Emission in the Environment by Equipment for use outdoors
2004/108/EC EMC Directive
2006/95/EC Low Voltage Directive

4.2 Fuel

Fuels and lubricants are a potential source of fire. Lubricants in particular used engine oil, are potentially carcinogenic. Direct contact should always be avoided by wearing suitable rubber gloves when handling them. Be careful not to spill fuel, clean up any spillages. Inhalation or swallowing of diesel should be avoided. If in doubt seek medical advice. All other forms of contact are irritant and therefore should also be avoided. If skin contact is made wash with soap and water.

4.3 Lubricating Oil

New oil presents no hazard following short term exposure.
Used oil should not be allowed to contact the skin. If this does occur, wash off quickly with a proprietary hand cleanser.

4.4 Safe Lifting

Where mechanical assistance is used in lifting machines, ensure the lifting eye is used, and that all components used to lift the machine are within their Safe Working Load (SWL).
The integral lifting beam and associated lifting eye on the generator should be regularly checked for signs of damage or gross corrosion.
All nuts and bolts associated with the lifting beam should be regularly checked for tightness and corrosion.
Lifting equipment should not be attached directly to the engine/alternator except for lifting of engine/alternator only.

4.5 Earth connection

All Stephill products are fitted with an earth stud on the control panel this must be connected to an earthing system or spike. Any earth spike required is dependant on the local conditions of use. The size is determined by reference to current IEE regulations or to a competent electrician.

4.6 Fumes

Make sure that the generator is at least 2 metres away from any building during operation. Operate in a well ventilated unconfined area, so that fumes can be properly dispersed.
Silencer outlet should be facing an open area to prevent fumes being recirculated. There is the danger of asphyxiation due to exhaust gases. Inhalation of poisonous exhaust fumes can lead to serious injury or death. The generator must not be used in a poorly ventilated or enclosed area.

4.7 Noise

Ear protection may be required depending on the combined noise level of the generator, auxiliary load and the operator's distance from it and the length of exposure. (Noise at Work Regulations 1989)

4.8 Battery Acid

This is corrosive and irritant by all forms of exposure. Direct contact should always be avoided by wearing suitable rubber gloves. Some form of eye protection should also be used. If skin contact is made wash with clean water.

4.9 Fire

Ensure that suitable fire extinguishers (AFFF or CO_2) are kept within proximity to the generator. Do not cover, enclose, or obstruct the airflow to the generator during or shortly after use, due to fire hazard or damage to the generator from overheating. Allow the generator to cool after use before storing away. Keep all inflammable objects clear of the generator.

4.10 Hot parts

There is the danger of burns as parts of the generator will become very hot during use. No part of the engine, alternator or exhaust must be touched during or shortly after operation.

Do not operate the generator unless all guards are in place. There is a risk of burns or serious personal injury.

5 Operating instructions

5.1 Pre-start checks

Before starting the generator please read the Kubota engine owners manual.

Check **Fuel**, **Water** & **Oil** level before attempting to start.

This engine is equipped with an oil pressure and water temperature switch and will shutdown for low oil pressure and high water temperature.

If engine runs out of fuel do not attempt to start until fuel bowl is full of diesel this can be achieved by pressing **Fuel Pump Prime** button until bowl is full of diesel. The engine should then self bleed and start when you go through the starting procedure.

5.2 Warning

Do not operate the changeover switch with load connected.

Always switch load off before disconnecting plugs.

To switch power off at generator always use circuit breaker.

5.3 Control panel

The control panel has an "Emergency Stop" button which is **ONLY** for emergency use.

This generator is equipped with an RCD on the 230 Volt supply only.

Before connecting plugs into generator ensure the load is turned off.

If this is not possible turn the circuit breaker to the off position.

Turn the voltage selector switch to the required voltage.

Connect the plug/plugs into the generator.

Switch on the load / circuit breaker.

Always turn load off before stopping generator.

5.4 Long term storage

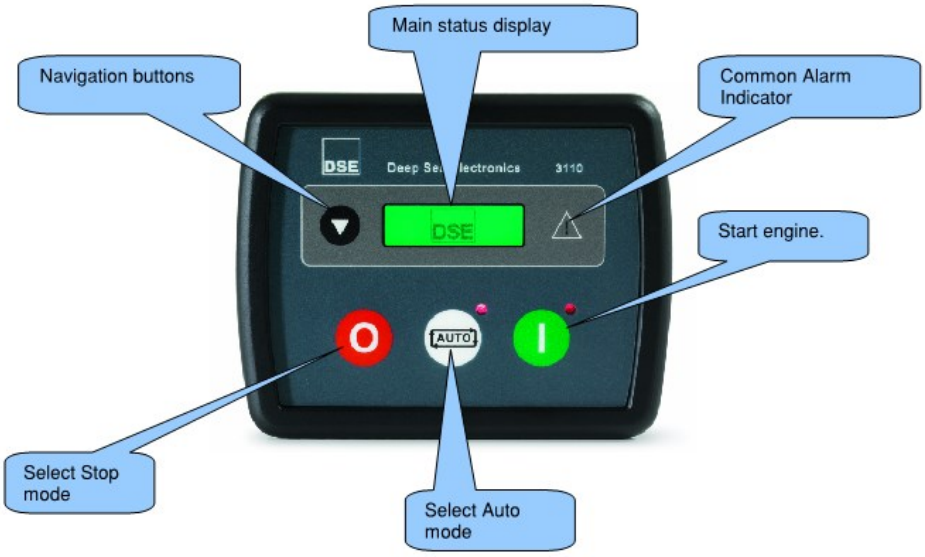
For storage or long periods of inactivity, Stephill Generators recommend the following: Generators should be stored with oil filled to the correct capacity; Storage periods of 18 months and over may require special lubricants and treatments. If so please seek further advice from the engine manufacturer.

Before the generator is used after long term storage, all fuels and oils should be replaced. Generator mounts, pipes and hoses should be checked to ensure that they are un-perished following extended periods of storage.

The generator should be stored in a clean dry area, ideally having a reasonable constant ambient temperature, and ideally not below freezing.

6 DEEP SEA 3110 OPERATING INSTRUCTIONS

6.1 Description of controls



6.2 Starting the engine

To begin the starting sequence, press the button.

The icon is displayed to indicate Manual mode and the manual LED flashes.

The button must be pressed once more to begin the start sequence.

6.3 Starting sequence

If a start request is present, the fuel relay is energised and the engine will be cranked. If the engine fails to fire during this cranking attempt then the starter motor is disengaged for the *crank rest* duration after which the next start attempt is made. Should this sequence continue beyond 3 attempts, the start sequence will be terminated and the display shows ***Fail to Start.***

When the engine fires, the starter motor is disengaged. Speed detection is factory configured to be derived from the main alternator output frequency.

After the starter motor has disengaged, the *Safety On* timer activates (10 Sec), allowing Oil Pressure, High Engine Temperature, Under-speed, Charge Fail and any delayed Auxiliary fault inputs to stabilise without triggering the fault.

6.4 Engine running

Once the engine is running and all starting timers have expired, the animated icon is displayed.

If all start requests are removed, the *stopping sequence* will begin.

6.5 Stopping the engine

In manual mode the set will continue to run until either:

The *stop button* is pressed – The set will immediately stop

The *auto button* is pressed. The set will observe all auto mode start requests and stopping timers before beginning the *Auto mode stopping sequence*.

6.6 Automatic operation

Activate auto mode by pressing the pushbutton. The icon is displayed to indicate Auto Mode operation if no alarms are present.

Auto mode will allow the generator to operate fully automatically, starting and stopping as required with no user intervention.

6.7 Waiting in auto mode

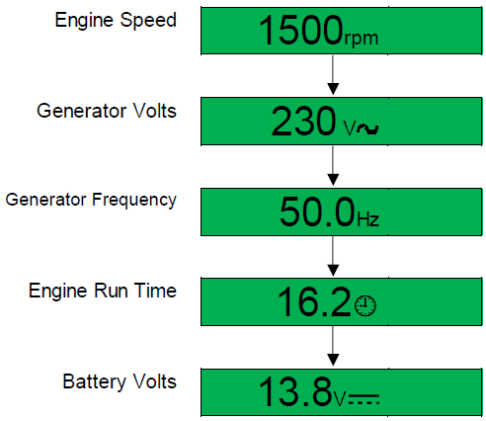
If a starting request is made, the starting sequence will begin.
Starting requests can be from the following sources:
Activation of an auxiliary input that has been configured to *remote start.*

6.8 Viewing the instruments

It is possible to scroll to display the different pages of information by repeatedly operating the scroll button

Once selected the page will remain on the LCD display until the user selects a different page or after an extended period of inactivity, the module will revert to the status display. When scrolling manually, the display will automatically return to the Status page if no buttons are pressed for the duration of the configurable *LCD Page Timer*.
If an alarm becomes active while viewing the status page, the display shows the Alarms page to draw the operator's attention to the alarm condition.

Page order:-



6.9 Fault icons

	**AUXILIARY INPUTS**	Auxiliary inputs can be user configured and will display the message as written by the user.
	**FAIL TO START**	The engine has not fired after the pre-set number of start attempts.
	**FAIL TO STOP**	The module has detected a condition that indicates that the engine is running when it has been instructed to stop. **NOTE:- 'Fail to Stop' could indicate a faulty oil pressure sensor - If engine is at rest check oil sensor wiring and configuration.**
	**LOW OIL PRESSURE**	The module detects that the engine oil pressure has fallen below the low oil pressure pre-alarm setting level after the *Safety On* timer has expired.
	**ENGINE HIGH TEMPERATURE**	The module detects that the engine coolant temperature has exceeded the high engine temperature pre-alarm setting level after the *Safety On* timer has expired.
	**UNDERSPEED**	The engine speed has fallen below the underspeed pre alarm setting.
	**OVERSPEED**	The engine speed has risen above the overspeed pre alarm setting.
	**CHARGE FAILURE**	The auxiliary charge alternator voltage is low as measured from the W/L terminal.
	**LOW FUEL LEVEL**	The level detected by the fuel level sensor is below the low fuel level setting. (Optional)
	**BATTERY UNDER VOLTAGE / BATTERY OVER VOLTAGE**	The DC supply has fallen below or risen above the low/high volts setting level.

V↓	**GENERATOR UNDER VOLTAGE**	The generator output voltage has fallen below the pre-set pre-alarm setting after the *Safety On* timer has expired.
V↑	**GENERATOR OVER VOLTAGE**	The generator output voltage has risen above the pre-set pre-alarm setting.
Hz↓	**GENERATOR UNDER FREQUENCY**	The generator output frequency has fallen below the pre-set pre-alarm setting after the *Safety On* timer has expired.
Hz↑	**GENERATOR OVER FREQUENCY**	The generator output frequency has risen above the pre-set pre-alarm setting.
	**EMERGENCY STOP**	The emergency stop button has been depressed. This is a failsafe (normally closed to battery positive) input and will immediately stop the set should the signal be removed. Removal of the battery positive supply from the emergency stop input will also remove DC supply from the Fuel and Start outputs of the controller. **NOTE:- The Emergency Stop Positive signal must be present otherwise the unit will shutdown.**
	**INTERNAL MEMORY ERROR**	The configuration file is corrupted. Contact your supplier for assistance.

6.10 Fault finding 3110

Unit is inoperative Read/Write configuration does not operate	Check the battery and wiring to the unit. Check the DC supply. Check the DC fuse.
Unit shuts down	Check DC supply voltage is not above 16 Volts or below 9 Volts Check the operating temperature is not above 70°C. Check the DC fuse.
Unit locks out on Emergency Stop	Check emergency stop switch is functioning correctly. Check wiring is not open circuit.
Low oil Pressure fault operates after engine has fired	Check engine oil pressure. Check oil pressure switch/sensor and wiring, switch is Normally closed and opens with pressure.
High engine temperature fault operates after engine has fired.	Check engine temperature. Check switch/sensor and wiring. Check switch polarity is correct Normally open or Normally closed.
Shutdown fault operates	Check relevant switch and wiring of fault indicated on LCD display. Check configuration of input.
Warning fault operates	Check relevant switch and wiring of fault indicated on LCD display. Check configuration of input.
Fail to Start is activated after pre-set number of attempts to start	Check wiring of fuel solenoid. Check fuel lift pump operational & fuel supply to engine. Check battery supply. Check battery supply is present on the Fuel output of the module.
Continuous starting of generator when in **AUTO**	Check that there is no signal present on the “Remote Start” input. Check configured polarity is correct.
Generator fails to start on receipt of Remote Start signal.	Check Start Delay timer has timed out. (Not configured on standard builds) Check signal is on “Remote Start” input. Confirm correct configuration of input is configured to be used as “Remote Start”. Check that the oil pressure switch or sensor is indicating low oil pressure to the controller. The set will not start if oil pressure is not low.
Pre-heat inoperative	Check wiring to engine heater plugs. Check battery supply. Check battery supply is present on the Pre-heat output of module.

Starter motor inoperative	Check wiring to starter solenoid. Check battery supply. Check battery supply is present on the Starter output of module. Ensure oil pressure switch or sensor is indicating the “low oil pressure” state to the 6000 series controller.
Engine runs but generator will not take load	Check MCB is switched on. Check change over switch if fitted is switched to correct voltage.
Fail to stop alarm when engine is at rest	Check low oil pressure switch is operating correctly. Check engine is operating correctly.
Module appears to ‘revert’ to an earlier configuration	When editing a configuration using the PC software it is vital that the configuration is first ‘read’ from the controller before editing it. This edited configuration must then be “written” back to the controller for the changes to take effect. When editing a configuration using the Front Panel Editor, be sure to press the Save button to save the change before moving to another item or exiting the Front Panel Editor.
Inaccurate generator measurements on controller display	The 3110 controller is true RMS measuring so gives more accurate display when compared with an ‘average’ meter such as an analogue panel meter or some lower specified digital multimeters. Accuracy of the controller is better than 1% of full scale. Ie Gen volts full scale is 333V ph-n so accuracy is ±3.33V (1% of 333V).

⚠ **NOTE:- The above fault finding is provided as a guide check-list only.** For further information http://www.deepseaplc.com/

6.11 Fault finding general

High engine temperature	Check Water/Antifreeze level in the radiator. Check for loose wires on the temperature switch & DC loom connector block. Check the continuity of the earth wire. (Refer to wiring diagram) Check radiator surface (both sides) and fins are not obstructed. Check operation of the Temperature switch. Check that the generator air inlets and outlets are not obstructed. Check the fan belt is not damaged, broken or loose. (Refer to handbook) **Note** you may experience low charge if fan belt is loose.
Low oil pressure	Check Oil level and fill to correct level if necessary Check for loose wires on the Oil switch & DC loom connector block. Check the continuity of the earth wire. (Refer to wiring diagram) Check operation of Oil switch.
HZ / Frequency shutdown & Voltage shutdown	Check engine has been regularly or due a service. (fuel filters especially, poor engine performance effects the overall output voltage) Check reset button has not tripped and reset if required. Check AC Input at module. 115V or 230V (Dependant on type of generator) Check engine speed is set to 52.5Hz at no load. Check AC supply from alternator. (If no output refer to alternator handbook) Check capacitor and replace if necessary. Check fuse on AVR, check AVR. (if fitted and replace if necessary)
No power to control module	Check reset button has not tripped and reset if required. Check 12V DC supply to module. If supply present but not operational try new unit. Check battery voltage. (should be around 12.6 V DC) Check battery isolator switch is on. Check for loose wires on battery isolator. Check for loose wires on the DC connector plug and socket. Check continuity on +VE and -VE wires to battery.

Battery not charging	Check the fan belt is not damaged, broken or loose. (Refer to handbook) Note you may experience low charge if fan belt is loose. Check for loose wires on charge alternator. Check for loose wires on the DC connector plug and socket. Check continuity of all wires from charge alternator. (Refer to wiring diagram) Check voltage at the battery while the generator is running, voltage should be 13.4V - 14.4V DC.
Engine not starting	Check battery voltage is above 12.5V. Check Oil level and fill to correct level if necessary. Check Fuel level and fuel condition. Check 3 way valves are in correct position. (If fitted) Check operation of fuel lift pump. Check fuel filter. Check fuel is reaching the injectors. When running correctly fuel should be running freely from the injector return pipe. If no fuel running from return check the fuel filters & check condition of fuel. Check no air in system. Keep fuel pump running using prime button for 60 seconds. Check all pipe clips and fuel pipe condition.
Glow plugs not operating	Check Emergency stop. Check the fuses. Check battery voltage is above 12.5V. Check for loose wires on the Glow plug, relays, fuses, module terminals, plug and socket. Check -VE supply. Check +VE on Glow plug & trace back to battery via relay. Check +VE on Glow plug & trace back to module via relay, plug & socket.
Starter Motor not operating	Check Emergency stop. Check the fuses. Check battery voltage is above 12.5V. Check for loose wires on the solenoid, relays, fuses, module terminals, plug and socket. Check +VE supply from battery to starter motor via isolator switch. Check -VE supply. Check start terminal on Starter motor & trace back to battery via relay. Check start terminal on Starter motor & trace back to module via relay, plug & socket.
Fuel solenoid not operating	Does the Fuel solenoid energise when the starter motor turns over. Check Emergency stop. Check the fuses. Check battery voltage is above 12.5V. Check for loose wires on the solenoid, relays, fuses, module terminals, plug and socket. Check -VE supply. Check +VE on Fuel solenoid & trace back to battery via relay. Check +VE on Fuel solenoid & trace back to module via relay, plug & socket.

7 Service and maintenance

IMPORTANT WARNING:

After any service on the generator, ensure that all piping and electrical cables are correctly routed and secured away from hot parts. Failure to observe this warning may result in damage to the piping and cables which could result in a fire.

Do not service or work on generator whilst the engine is running, and ensure the Red Battery Isolator Key is removed.

7.1 Engine service

Service the engine strictly in accordance with the instructions given in the relevant operator manual / handbook. An approved specialist must carry out any maintenance. Any spare parts required should be of genuine manufacturer's origin. Note: failure to adhere to manufacturer's recommended service schedules may invalidate the warranty. Please consult engine operator's manual for full service intervals. For further information please consult engine manufacturer's website. www.kubota.co.uk

7.2 Alternator service

Brushless alternators employed on Stephill Generators are maintenance free. Service must be carried out by competent qualified personnel strictly in accordance with the instructions given in the handbook. Any spare parts required should be of genuine manufacturer's origin. For further information please consult alternator manufacturer's website. www.nsmgenerators.com and www.sogagroup.com

8 Kubota consumable spares

Description	D722	Z602
Oil filter	015-0004	015-0004
Fuel filter	015-0005	015-0005
In line fuel filter	015-0030	015-0030
Air filter	015-0003	015-0003
Fan belt	015-0007	015-0007

9 General spares

Part Number	Description	Qty
015-0001	Kubota D722 Engine	1
015-0150	Kubota Z602 Engine	1
015-0078	Kubota D722/Z602 Charge regulator	1
018-0054	50mm Grommet	1
028-0048	Alternator NSM M 112 SB/2 (SSD10000/S & SSD8500)	1
032-0016	Alternator SINCRO SK160 CA21 (SSD10000W)	1
032-0007	AVR Sincro BL4-U (SSD10000W)	1
018-0064	AVR RCM-2 (SSD10000)	1
037-0023	55mf Capacitor	1
037-0017	30mf Capacitor (SSD10000)	1
037-0020	40mf Capacitor (SSD10000)	1
024-0108	SSD10000 Silencer	1
024-0110	SSD10000 Kubota D722 Manifold pipe	1
024-0197	SSD8000 Kubota Z602 Manifold pipe	1
024-0111	SSD10000 Kubota D722 Down pipe	1
024-0118	Perspex cover (Perspex only)	1
024-0129	SSD10000 Fuel tank	1
024-0145	Kubota D722 Radiator	1
024-0173	Kubota D722 Radiator cowl	1
024-0146	Kubota D722 Radiator top hose	1
024-0147	Kubota D722 Radiator bottom hose	1
024-0154	SSD10000 Fuel tank filler hose	1
048-0008	Fuel cap	1
024-1007	Air hose	0.5M
024-1004	Fuel drain hose	1
024-1005	Oil drain hose	1
024-1018	Hinge CFG 30/60 Control panel	2
024-1002	Control panel lock	1
024-1001	D/C Paddle black (Slam)	2

9 General spares

Part Number	Description	Qty
024-1003	Finger pull	1
024-1006	Fuel sender	1
027-0016	Mount Engine/Alternator M10	4
027-1017	Mount Radiator Bottom M10	2
027-0048	Mount Radiator M6 Top (SSD8500)	2
027-0003	Mount Radiator M8	1
027-0047	Mount Engine/Alternator M10 (SSD8500)	4
027-0048	Mount Radiator Bottom M10 (SSD8500)	2
023-1029	Hinge radiator flap	2
023-1019	Cam 28mm Radiator lock	1
023-1020	Insert slot 2 x 4 Radiator lock	1
023-1021	Housing Radiator lock	1
023-1023	Door seal	4M
014-1000	Door hinge M5	4
024-0154	SSD10000 Fuel tank filler hose	1
024-0152	SSD10000 Fuel tank feed pipe	1
024-0153	SSD10000 Door spacer	8

9.1 Control panel spares

Part Number	Description	Qty
045-0061	DEEP SEA 3110	1
036-0018	40A Circuit breaker	1
036-0028	40Amp RCD 30mA	1
036-0049	16A Re-set	2
036-0052	32A Re-set	3
036-0039	MCB Cover	1
036-0043	Reset button 1A TR11	1
036-0055	Reset button 2A TR11	1
056-0002	12V 4 Pin relay	3
053-0003	70A Pre-heat Relay	1
044-0001	110V 16A Socket	1
044-0002	220V 16A Socket	1
044-0003	110V 32A Socket	2
044-0004	220V 32A Socket	1
043-0007	4 Pole change over switch	1
045-0006	Starter button (Fuel pump prime)	1
055-0010	Fuel gauge 10-180 ohm	1
045-0018	Emergency stop button	1
045-0032	Contact block normally closed	1

9.2 Trolley Kit

Part Number	Description	Qty
024-0130	Axle	1
024-0132	Handle Trolley Frame	2
024-0133	Trolley Frame	1
024-1019	Roll Pin	2
024-1020	Compression Spring	2
027-0020	Wheel Pneumatic	2

10 WARRANTY

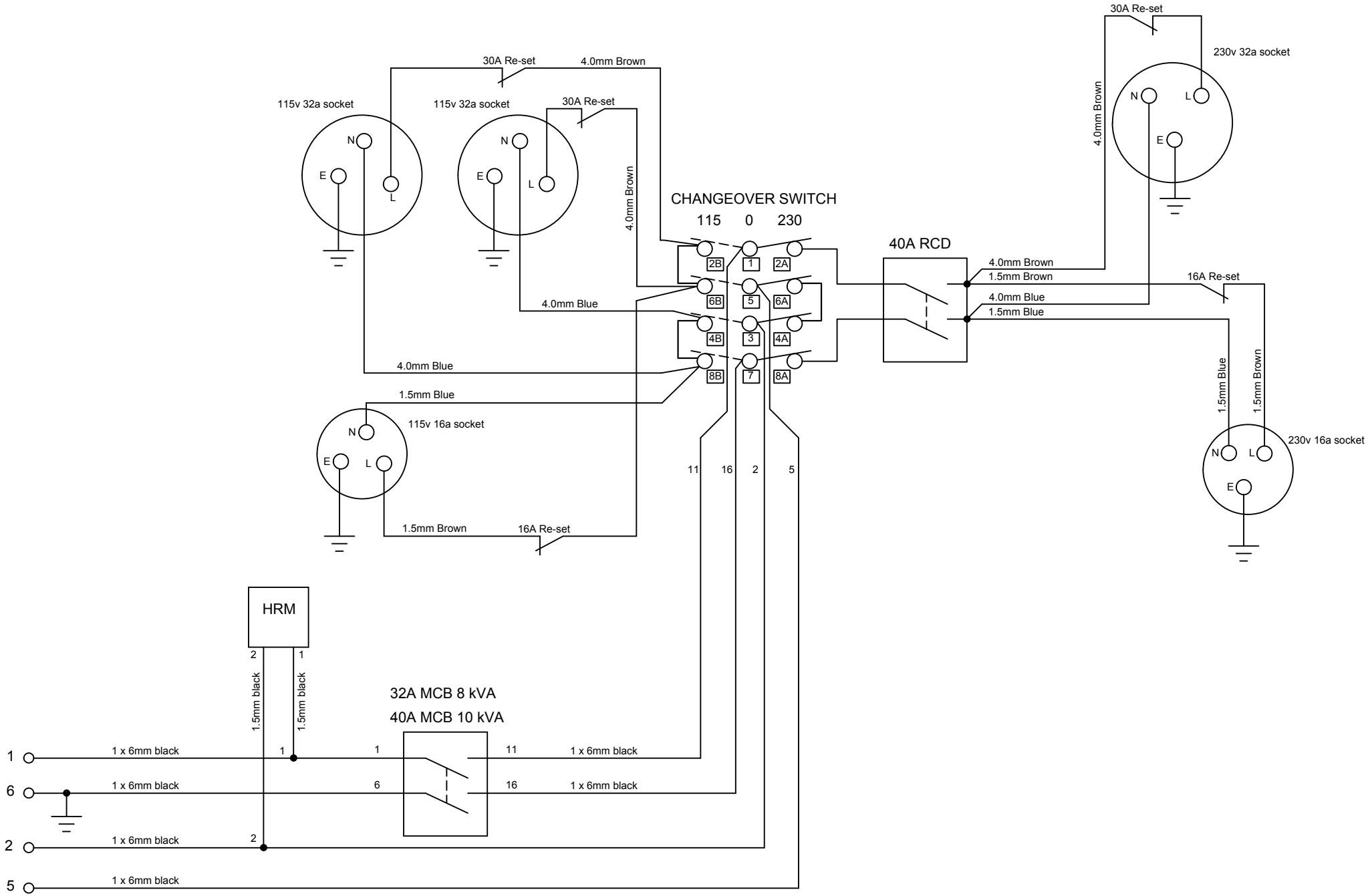
All equipment supplied by STEPHILL GENERATORS LTD carries a warranty of 12 months from date of despatch.

During the warranty period, should the plant fail due to faulty design, materials or workmanship by STEPHILL GENERATORS LTD or it's sub-contractors, we undertake to rectify the fault.

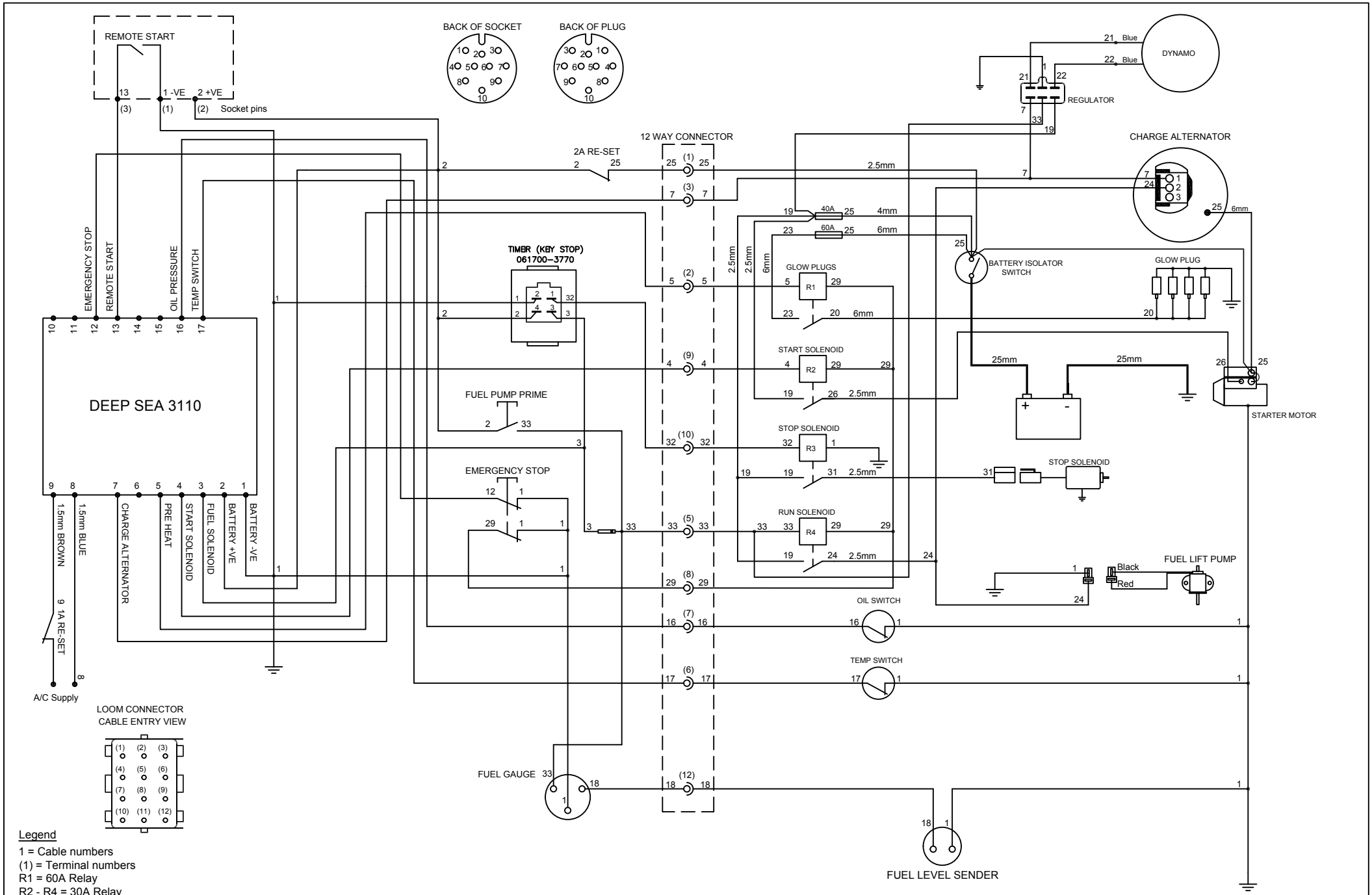
STEPHILL GENERATORS LTD will accept no responsibility whatsoever for equipment that has failed due to;

- Operation with incorrect fuel, lubricating oil or coolant.
- Improper repair or use of parts not supplied by STEPHILL GENERATORS LTD.
- Lack of or incorrect maintenance.
- Fair wear and tear, misuse, negligence, accidental damage, improper storage and incorrect starting / warm-up / run-in or shutdown.

No warranty claim will be considered by STEPHILL GENERATORS LTD unless any defective parts are available for inspection by us, or our nominees, to determine the reason or cause of failure, and STEPHILL GENERATORS LTD is given the option of repair or replacement. STEPHILL GENERATORS LTD are not responsible for incidental or consequential damages, downtime, or other costs due to warrantable failure, and unauthorised alterations made to any product supplied by STEPHILL GENERATORS LTD.



STEPHILL GENERATORS Phone 01933 677911 Fax 01933 677916	Drawing Number SW12003	Description 8-10Kva Dual voltage with 230v RCD wiring diagram	Last Number Used 16	Issue	Date	Revision
	Drawn R Golding			G	17-06-15	32A 230V Socket removed.
				F	28/02/08	8kVA Information added.
				E	10/09/07	Re-sets added.



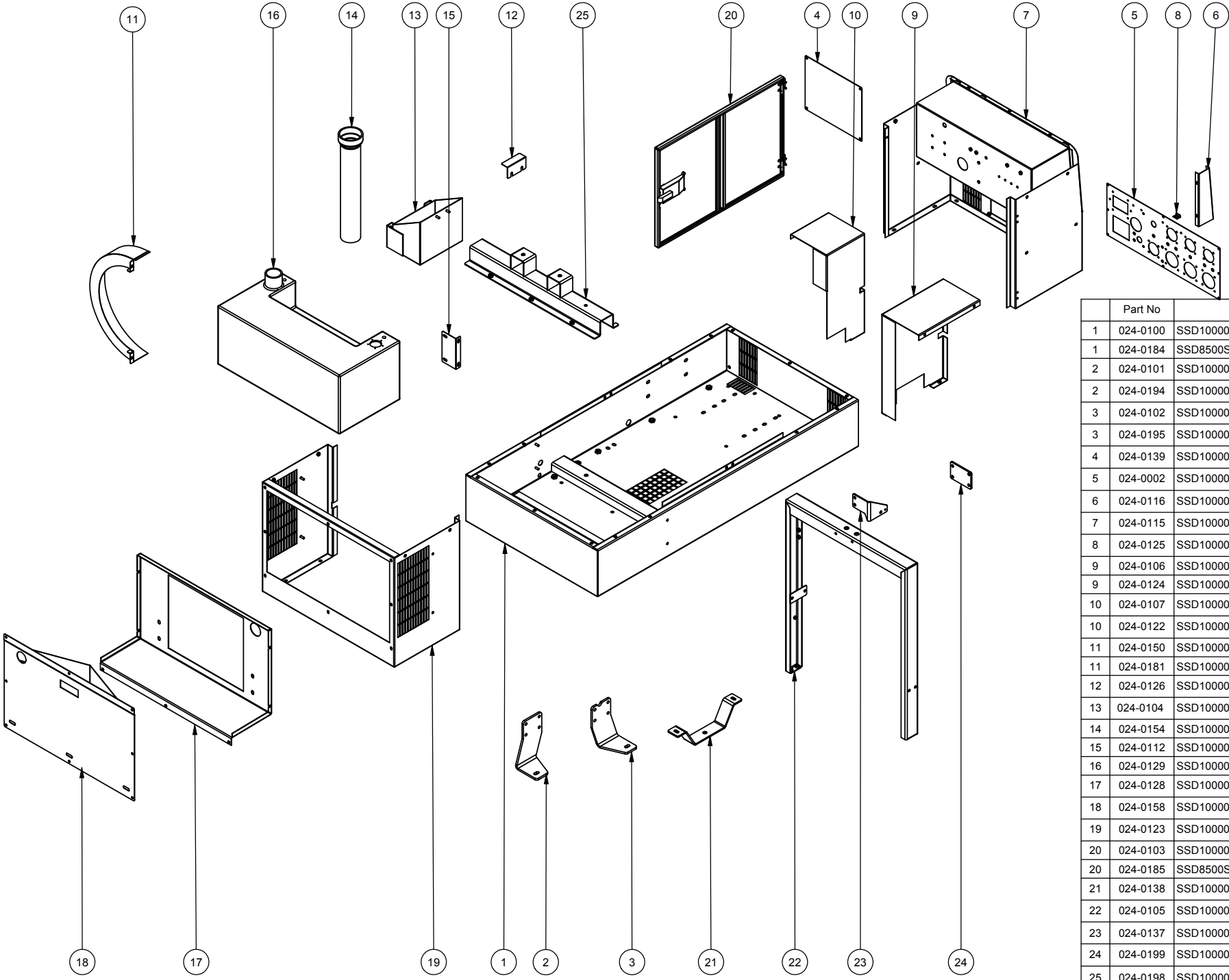
Legend

1 = Cable numbers
(1) = Terminal numbers
R1 = 60A Relay
R2 - R4 = 30A Relay

Note

All cable except battery cable to be 1.5mm White unless stated. Low fuel level switch optional.

STEPHILL GENERATORS Phone 01933 677911 Fax 01933 677916	Drawing Number SW16008 Drawn R Golding	Description Wiring diagram Deep sea 3110 Kubota Z602 D722	Last Number Used 33	Issue	Date	Revision
				E	07/01/13	Fuel gauge wiring changed.
				D	21/02/12	Fuel level sender wiring changed.
				C	30/01/12	Fuel level sender wiring changed at plug.



	Part No	Description	Qty
1	024-0100	SSD10000 Skid base	1
1	024-0184	SSD8500S / SSD10000S Skid base	1
2	024-0101	SSD10000 D722 Engine foot service side	1
2	024-0194	SSD10000 Z602 Engine foot service side	1
3	024-0102	SSD10000 D722 Engine foot non service side	1
3	024-0195	SSD10000 Z602 Engine foot service side	1
4	024-0139	SSD10000 Mark 2 Access cover plate	1
5	024-0002	SSD10000 Dual voltage control panel 3110	1
6	024-0116	SSD10000 Control panel divider	1
7	024-0115	SSD10000 Alternator end panel	1
8	024-0125	SSD10000 Control panel cover catch	1
9	024-0106	SSD10000 Air inlet duct	1
9	024-0124	SSD10000 PE31 Air inlet duct	1
10	024-0107	SSD10000 Air inlet duct battery side	1
10	024-0122	SSD10000 PE31 Air inlet duct battery side	1
11	024-0150	SSD10000 PE32/NPE31 Alternator cowl	2
11	024-0181	SSD10000 PE28 Alternator cowl	2
12	024-0126	SSD10000 Battery bracket	1
13	024-0104	SSD10000 Battery tray	1
14	024-0154	SSD10000 Fuel tank filler hose	1
15	024-0112	SSD10000 Fuel tank bracket	2
16	024-0129	SSD10000 Fuel tank	1
17	024-0128	SSD10000 Radiator plate	1
18	024-0158	SSD10000 Radiator air outlet plate	1
19	024-0123	SSD10000 Engine end panel	1
20	024-0103	SSD10000 Door	2
20	024-0185	SSD8500S / 10000S Door	2
21	024-0138	SSD10000 Angled skid	4
22	024-0105	SSD10000 Lifting beam	1
23	024-0137	SSD10000 Fuel filter bracket	1
24	024-0199	SSD10000 Z602 Air filter plate	1
25	024-0198	SSD10000 Alternator channel NSM	1

STEPHILL GENERATORS
Phone 01933 677911
Fax 01933 677916

Drawing Number 24-167

Drawn R Golding

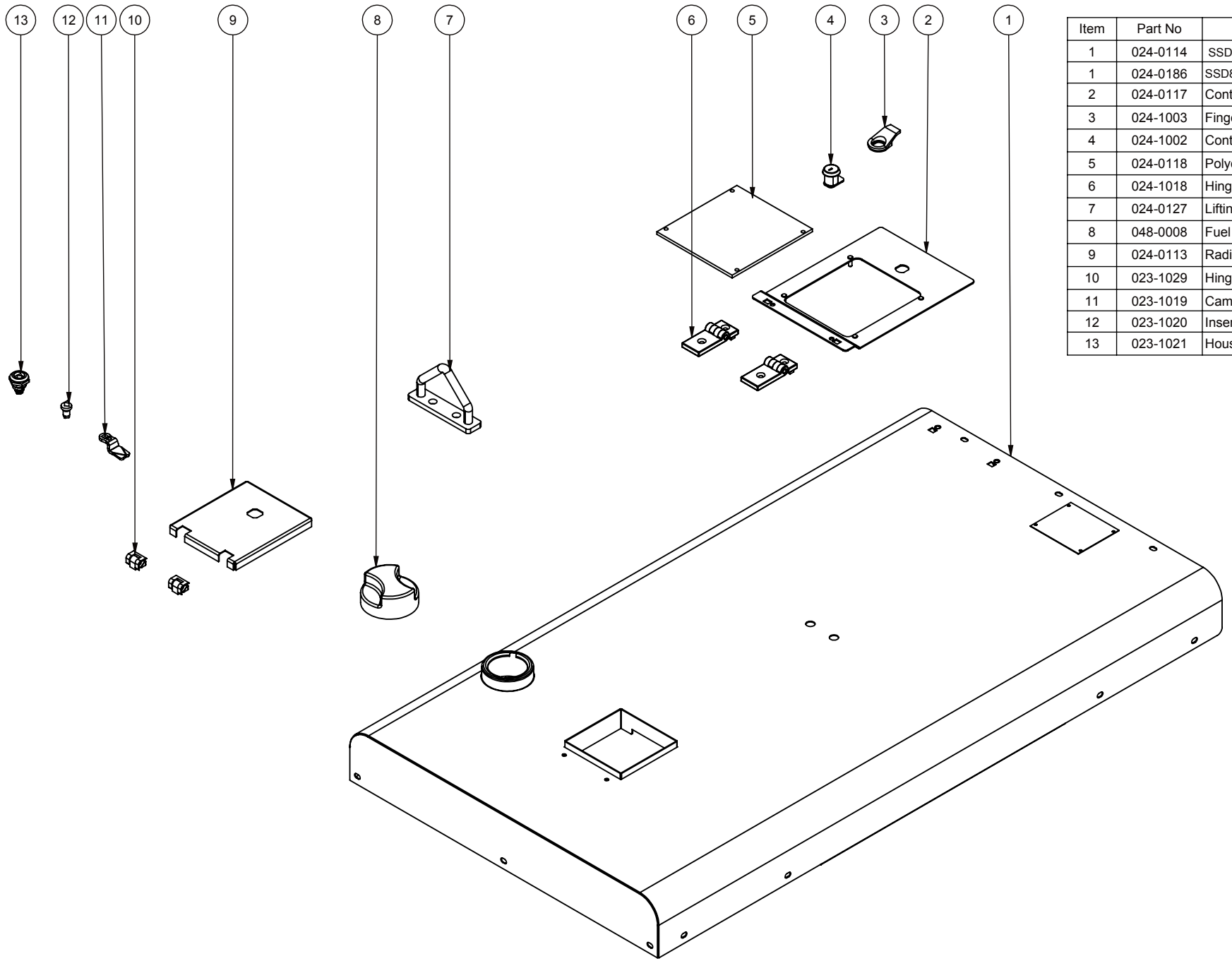
Description SSD8500S/10000/10000S Canopy exploded view

Issue	Date	Revision
E	21/09/10	New drawing
D	31/01/08	New drawing
C	09/01/08	Part numbers added.

Colour N/A

Material Mild steel

THIRD ANGLE PROJECTION



Item	Part No	Description	Qty
1	024-0114	SSD10000 Roof	1
1	024-0186	SSD8500S/10000S Roof	1
2	024-0117	Control panel cover	1
3	024-1003	Finger pull	1
4	024-1002	Control panel lock	1
5	024-0118	Polycarbonate cover	1
6	024-1018	Hinge	2
7	024-0127	Lifting eye	1
8	048-0008	Fuel cap	1
9	024-0113	Radiator flap	1
10	023-1029	Hinge	2
11	023-1019	Cam 28mm	1
12	023-1020	Insert slot	1
13	023-1021	Housing	1

STEPHILL GENERATORS
Phone 01933 677911
Fax 01933 677916

Drawing Number	Description
24-168	SSD8500S/10000S/10000 Roof exploded view
Drawn: R Golding	

Issue	Date	Revision
D	21/09/10	Drawing updated.
C	09/01/08	Part numbers added.
B	27/03/06	Part numbers changed.

Colour: N/A

Material: Mild steel

THIRD ANGLE PROJECTION