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# POWERING THE UNIT



Once your welfare cabin is safely deployed, you need to get it up and running. Electricity can be supplied from either an external source or from the unit's on-board Redbox generator.

With the ECO+ electrical specification, several items can be run from battery power alone without the need for generator or external power. These items are: 12V LED lighting; 12V charging points for mobiles, tablets, notebooks and 12V Webasto diesel heater (if specified).

If you have Eco Hybrid or Eco Ultimate electrical specification, the following additional items can also be run from battery alone: low power inverted 230V power sockets to run computers, printers etc.; 12V Webasto diesel heater.

# 4

# 4.1 USING AN EXTERNAL POWER SOURCE

## WATCH THE VIDEO



**1.** The welfare unit can be connected to an external electrical power supply using a standard 32A 230V AC cable connected to the socket located under the anti-vandal cover.

**2.** Once connected, locate the Internal/ External Power Selector Switch close to the floor under the worktop. Turn the switch to position 1 for external power.

# 4.2 USING THE REDBOX GENERATOR

## WATCH THE VIDEO



### ! IMPORTANT

The patented design of the Redbox INFINITY generator means that every 50 hours of operation, the generator will stop to perform an automatic oil change cycle which takes 5 minutes. While the oil change is happening a red light will illuminate on the generator control panel in the canteen.



During the oil change cycle, a valve is automatically opened allowing the oil from the engine sump to drain to the external oil tank. The oil from the engine merges with the oil inside the external tank then the oil is pumped back into the engine sump passing through the oil filter and delivering clean oil back into the engine. After 5 minutes and when the oil in the engine sump is at the correct level the valve is closed and the pump stops. The generator is now available for use and will restart automatically.

Your welfare cabin is fitted with either a Redbox standard generator or a Redbox Infinity generator. If it is an Infinity, that will be stated on the side panel of the generator.

This on-board generator is used to power the hot water, plinth and fan heating if fitted, appliances, 230 volt 3-pin power points and charge the battery.

The generator is usually located in a self contained compartment at the rear of the unit which can also be used for drying wet clothing etc.

On the generator itself, there is an emergency stop control, the large red button located on the panel to the left of the generator. Push this button in to stop the generator in an emergency. Turn the button to the right to release when resetting the control.

On top of the generator is the main generator control panel. This contains:

1. An RCD panel
2. The blue generator alarm reset button
3. Circuit breakers for the 12V DC 2A and 20A systems and for the 220V AC 1 A system
4. The DSE generator control device



### ! NOTE

Do not use the buttons on the generator to switch the generator on and off unless in an emergency. See Section 4.4 for how to start your generator correctly.

Service Intervals	
Redbox	1000 hours
Redbox Infinity	2000 hours

# 4.3 GENERATOR CHECKS BEFORE USE

Before switching your generator on, it is important to always check your oil and fuel levels and top up as necessary. There are two different ways to check and fill your oil depending on if you have a Redbox standard generator or a Redbox Infinity generator. It is essential you follow the correct instructions.



RedBox Standard



RedBox Infinity

## 4.3.1A OIL CHECK REDBOX INFINITY GENERATOR



1. First remove the generator side cover.



2. Check the oil using the two circular gauges found towards the base of the generator on the sump tank. The oil should be filled to the Maximum line marker next to the top gauge.

**CAUTION**

To check the oil levels on the Redbox Infinity generator, it is very important to use the gauges found on the external oil sump reservoir. Do not use the dipstick in the generator engine to check oil levels. Never fill the oil reservoir through the dipstick hole or you risk overfilling the engine itself.



3. If your generator needs more oil, please remove the cap on top of the external sump oil reservoir that has the gauges on the front. Fill with suitable engine oil until the level reaches the maximum mark halfway up the top sight glass. Do NOT overfill. Always use the grade of oil specified in the appropriate RedBox generator manual.

## 4.3.1B OIL CHECK REDBOX STANDARD GENERATOR



**1.** First remove the generator side cover.



**2.** To check the oil in a standard Redbox generator, remove the dipstick with the orange cap located in the side of the engine. Check that the oil level is between the MIN and MAX markers on the dipstick.



**3.** If your generator needs more oil, fill with suitable engine oil through the same hole as the dipstick is located. Be careful not to overfill, only fill up to the MAX level on the dipstick. Always use the grade of oil specified in the appropriate RedBox generator manual.

## 4.3.2 FUEL CHECK



**1.** The fuel gauge and fuel tank cap for the RedBox generator are both set into the floor of the generator room in front of the generator.



**2.** Please check the fuel level using the gauge.



**3.** If fuel is needed, remove the fuel tank cap and fill the fuel reservoir with the correct amount of diesel. Replace the cap.

# 4.4A STARTING THE GENERATOR STANDARD, ECO+, ECO HYBRID

The generator is controlled directly from the remote control panel located in the canteen area.



**1.** Before starting the generator, turn the Cabin Power Isolator switch in the cabin to the ON position.



**2.** To start the generator, press the green button on the front of the cabin control panel once.



**3.** When the generator is running, set the Internal/External Power Switch to Position 2 for Internal (generator) power.

# 4.4B STARTING THE GENERATOR

## ECO ULTIMATE



1. Turn the Power Isolator switch in the cabin to the ON position.
2. The generator will now automatically switch on when it is needed to power an appliance or charge the battery. There is no need to switch it on or off manually.



### NOTE

With the Eco Ultimate Intelligent Load Management System, not all electrical devices can be run at the same time. In order for the generator to operate at maximum fuel efficiency, the ILMS automatically switches power between appliances in an order of priority:

Priority	Appliance used
1	Toilet hot wash facility
2	Canteen hot wash facility
3	Kettle and/or microwave (low-power inverted 3-pin sockets not affected)
4	Fan and plinth heaters (Webasto diesel heater not affected)

In addition, battery charge condition is monitored constantly and the generator will be started automatically if the monitor detects that the battery level may fall below prescribed limits. In this case, it will run the generator for a period of one hour to restore sufficient charge to the battery before switching off automatically.

## 4.5A TURNING THE POWER OFF STANDARD, ECO+, ECO HYBRID



1. When you want to stop the generator, press the red button on the cabin control panel once.



2. When you leave the cabin for an extended period during or at the end of the day, or before towing, please ensure the Cabin Power Isolator switch is switched off to avoid accidental discharge of the battery and protect against theft.

### CAUTION

Except in an emergency, the STOP button on the generator itself should never be used for shutting it down. Doing this risks the full discharge of the batteries and could prevent the generator being restarted.

## 4.5B TURNING THE POWER OFF ECO ULTIMATE



1. To turn off power to an Eco Ultimate specified cabin, twist the Cabin Power Isolator switch to the off position.