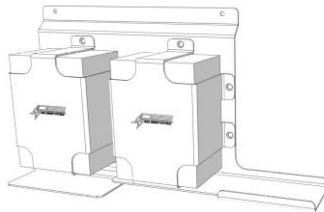


# INSTALLATION GUIDE

## Next Gen Ranger/Raptor



### **Dual Energy System™ Power Unit**

The patented DES™ Power Unit Kit is the first of its kind in that it is 100% DIY without the need to undertake any major body modifications as it bolts into the existing vehicle structure. It requires the use of only a few hand tools following a 'plug & go' wiring design for added ease of installation. The DES™ Power Unit is powered by the latest lithium technology providing up to 150 amps of continuous discharge & is simultaneously recharged from both solar and alternator using a REDARC™ BCDC In-vehicle Battery Charger; with Bluetooth enabled battery monitoring via a Victron Energy™ Smart Battery Monitor.

The DES™ Power Unit is positioned neatly behind the rear seats & does not interfere with child restraint anchor points. The DES™ Power Unit comes with fully fused, multiple amp distribution outlets giving you the added freedom to safely power additional 12V accessories such as Fridge Freezers as well as other 12volt appliances without drawing down power from your main start battery.

Australian Patent No. 2021107121  
Australian Design No. 202015879

## **WARNINGS & SAFETY INSTRUCTIONS**

SAVE THESE INSTRUCTIONS – This manual contains IMPORTANT SAFETY INSTRUCTIONS for the Dual Energy System™ Power Unit

DO NOT OPERATE THE POWER UNIT UNLESS YOU HAVE READ AND UNDERSTOOD THIS MANUAL AND THE POWER SYSTEM IS INSTALLED AS PER THESE INSTALLATION INSTRUCTIONS.

### **WARNING**

ENSURE THAT YOUR DES™ POWER UNIT IS INSTALLED AND OPERATING CORRECTLY: IMPROPERLY INSTALLED POWER UNITS CAN CAUSE DAMAGE TO VEHICLE, DES™ POWER UNIT AND OR INJURES TO OUCPANTS OF THE VEHICLE OR PERSONS WORKING ON ELECTRICALLY CHARGE COMPONETS. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE THAT YOUR DES™ POWER UNIT BE INSTALLED/MAINTAINED BY A QUALIFIED INSTALLER AS PER THE INSTRUCTIONS. ALWAYS CHECK THAT THE POWER UNIT IS SECURE AND PROPERALY MAINTAINED.

### **CAUTION**

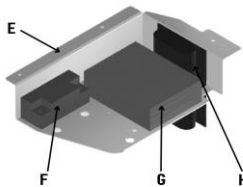
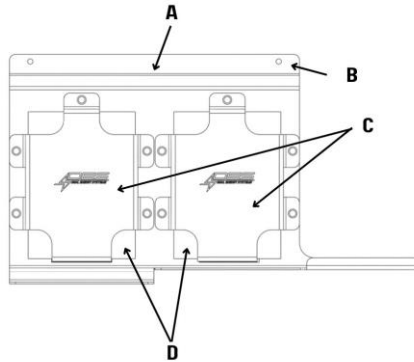
- Ensure that the DES™ Power Unit is mounted securely in a fixed location. Failure to mount securely may result in dislodgement of heavy materials which may contain potential electrical charge within the vehicles cabin area.
- Ensure that the DES™ Power Unit in installed inside the vehicle cabin and away from any environmental conditions that may cause damage to electrical components.
- All electrical fuses shall only be replaced by a qualified person. Incorrect installation or fuse amperage selection may cause damage to the DES™ electrical circuits, batteries, wiring cables, 12v appliance and may cause an electrical fire or electrical shock.
- All electrical wiring cables should be protected, secured, or always fastened to eliminate the potential of damaging wiring cables which may cause electrical sparks, fires or shocks.
- Ensure all 12v devices are in good working order before connecting to the DES™ Power Unit and are protected by the correct amperage fuse.
- Ensure all electrical connections are always secured.
- Frequently check that batteries are secured, and all fasteners are in position and tension correctly.

- Ensure all electrical cables are positioned away from heat sources and/or rotating parts.
- Do not exceed electrical output amperage ratings, failure to abide by this recommendation may cause damage to the DES™ electrical circuits, batteries, wiring cables, 12v appliance and may cause an electrical fire or electrical shock.
- Always disconnect batteries power supply when working on DES™ Power Unit, failure to abide by this recommendation may cause damage to the DES™ electrical circuits, batteries, wiring cables, 12v appliance and may cause an electrical fire or electrical shock.
- Do not connect devices directly to battery.
- If remote charging batteries with 240v charger, only use lithium approve 240v chargers @ maximum of 40 amps.
- Do not attempt to modify any components of the DES™ Power Unit as this will void warranty of this product and may render this unit dysfunctional.
- Always keep ventilation space between electrical components on the under rear seat Distribution Panel. Do not cover any electrical components as excess heat may build up and cause a fire. This is no longer a storage space once the DES unit is installed.

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## DES™ Power Unit Overview



Letter	Part description
A	DES Backing Plate
B	Backing Plate top mount holes
C	Battery Clamps
D	Batteries
E	Distribution Panel
F	Victron Smart Shunt
G	Combi Fuse Holder
H	DC-DC Charger

Australian Patent No. 2021107121  
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### **Specifications**

Product	DES™ NEXT GEN Power Unit
Vehicle	Ford Ranger MY22 + Ford Raptor MY22 +
Position	Behind rear car seat
Battery size	2x 75Ah lithium batteries
12v Output	3x 50A – 5x 15A
Solar Input	1x 50A Anderson Connector

### **Kit Contents**

Qty	Description
1x Backing Plate	Mounting plate for 2x 75Ah DES Batteries and Jack Holder
2x Battery Clamp	Folded bracket to secure battery
1x Distribution Panel	Houses Charger, Monitor and Fuse Panel - Mounted under rear seat
2x Connection Cables marked A & B	Electrical cables to connect to vehicles start battery and in Cab fuse panel for ignition power.
1x Grey 50A Anderson plug	Connection for end of Cable A
Backing Plate fasteners	2x Clip nuts, 3x M8 Bolts, 3x 8mm DES Washers, 2x M6 Bolts and 2x 6mm DES Washers.
2x Lithium Batteries	75A Lithium batteries
Installation Guide	Installation instructions, care, and maintenance procedures.
Electrical Panel fasteners	3x M6 Bolts and flat washers 3x M6 Rivet nuts
2x Aluminum Spacer	Spacers for the rear seat latch
1x Rubber Gromet	Gromet for cables to exit from inside cabin to external of cabin
8x Zip ties	To secure cables to reduce movement



### **Tools Required**


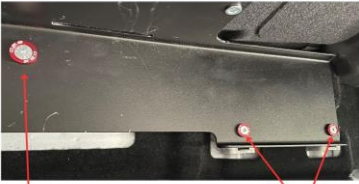

5mm hex head bit
4mm hex heat bit
T-50 star key drive bit
T- 40 star key drive bit

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Scissors
8mm socket and wrench
38mm Hole Saw
Stanley knife – retractable blade cutting tool
Philips head screwdriver
Small flat blade screwdriver
Drill
Drill bit 8.5mm
Drill bit 8mm
6mm Thread tap
Trim removal fork or pointy nose pliers
Marker Pen
Chalk

## Installation Guide

<p>Step 1</p> <p><i>Remove the rear middle seat belt bracket &amp; clasp</i></p>	<p style="color: red;"><b>Disconnect positive terminal from vehicles start battery before step 1</b></p> <p>Lift the base of the rear seat. Locate the middle seat belt and passenger clasp bracket of the rear middle seat belt. Remove retaining bolt using a T-50 Star key drive bit; also unplugging the electrical socket attached to the middle seat belt clasp bracket. (See Figure 1)</p> <p>Figure 1</p>  <p>T-50 Star Key drive bit</p>  <p>Remove seat belt and all seat belt clasps from elastic retainers in base of the rear seat.</p> <p>The middle seat belt lower bracket and all clasps should now be free and away from the rear seat to allow the seat to be removed.</p>
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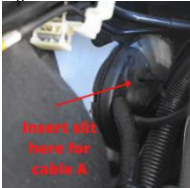
<p><b>Step 2</b></p> <p><i>Remove the rear seat</i></p>	<p>Remove all 4 rear seat retaining bolts from the rear seat mounting bracket using a T-50 Star key drive bit.</p> <p>Mounting brackets are located on the floor at the rear of the cab on the drivers &amp; passenger sides. (See Figure 2)</p> <p>Figure 2</p> 
<p><b>Step 3</b></p> <p><i>Temporary fit the Backing Plate</i></p>	<p>Carefully remove the rear seat (may require 2 persons to lift).</p> <p>Place the Backing Plate on a safe flat surface.</p> <p>Remove the Battery Clamps from the DES backing plate. Unbolt the 10x 8mm Hex head socket screws and place battery trays aside.</p> <p>Temporarily put the backing plate into position (Subwoofer models may need to temporarily remove Subwoofer). This will be on the driver's side of the cabin's rear wall, lining up the bolt holes with the previously removed jack's retainer bolt hole and the 2x bottom Subwoofer mounting points.</p> <p>Push the Backing Plate as far back against the cabins wall as possible and install 1x M8 bolt and DES M8 washer to secure into position temporarily. (See Figure 3)</p> <p>Figure 3</p>  <p><b>JACK RETAINER BOLT HOLE</b></p> <p><b>SUBWOOFER BOTTOM MOUNT HOLES</b></p>
<p><b>Step 4</b></p> <p><i>Marking the rear cabin wall carpet</i></p>	<p>Whilst the Backing Plate is in position, use a chalk marker to trace an outline of the backing plate onto the rear cabin walls carpet.</p> 







<p>Step 5</p> <p><i>Drill through Cabins rear wall carpet</i></p>	<p>Using an 8.5mm drill bit, locate the 2x top holes on the DES Backing Plate and gently drill the 2x holes through the <b>Cabins rear wall carpet only</b>.</p> <p>Once this is completed remove the Backing Plate and set aside for later.</p>
<p>Step 6</p> <p><i>Remove trims and accessories</i></p>	<p>Remove front driver and passenger sills kick trims (See Figure 4)</p> <p>Figure 4</p>  <p>Remove rear middle seatbelt rear wall plastic trim (TIP: Lift the top of the middle seat belt trim up to release, then pull the seatbelt cover towards the front of the vehicle) Remove the rear cabin wall upper plastic trim. (See figure 5)</p> <p>Figure 5</p> 
<p>Step 7</p> <p><i>Remove rear cabin wall carpet trim</i></p>	<p>Remove rear wall carpet piece (TIP: remove the 3x black plugs retaining the rear wall carpet and cut the rear wall carpet below the rear middle seat belt as shown in figure 6 to easily remove the rear wall carpet, this will enable the removal of the carpet piece without the need of unbolting the rear middle seatbelt retractor mechanism.) (See Figure 6)</p> <p>Figure 6</p> 
<p>Step 8</p> <p><i>Setting up the Distribution Panel position</i></p>	<p>Remove the plastic floor storage tub on the driver's side. (TIP: Use a small flat blade screwdriver to pry up the top parts of the fastener plugs) Remove top section of plug then lift out the plug body, once all plugs are removed lift out plastic storage tub.</p>

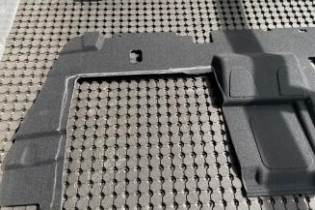

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	<p>Using a drill and 8mm drill bit, enlarge the 3x holes as marked in Figure 7. Install the supplied 3x 6mm Rivet nuts into drilled holes. Vacuum up any drilling swarf. (See Figure 7)</p> <p>Figure 7</p>  <p style="text-align: center;"><b>3X RIVNUT LOCATIONS</b></p> <p>Carefully place the Distribution panel into position ensuring cables are not pinched as well as the panel is underneath the floor carpet. Fasten Distribution Panel in position with the 3x M6 Hex Head Cap Screws with Flat Washers provided (Max Tension 15NM).</p> <p>Route Cable A directly towards the cabins rear wall. Once at the base of the cabins rear wall, turn Cable A 90 degrees and run remainder of Cable A length towards passenger side of the vehicle, then following up along the passenger's side sill section towards the front of the vehicle. This section of Cable A will be covered by the rear cabin walls carpet and Sill kick trims. 2x Aux Battery Cables can be positioned to where the Backing Plate is mounted for later connection. Route Cable B towards the rear cabin wall for now.</p>
<p><b>Step 9</b></p> <p><i>Installing start battery wire Cable A</i></p>	<p>Inside the vehicle's engine bay locate the electrical cable grommet on the passenger's side of the vehicle fire wall. (See figure 8) This can be found behind the engine bay's main fuse holder.</p> <p>Figure 8</p>  <p>Carefully Insert a 15cm slit into the located rubber boot. This slit is to allow Cable A to be inserted from the vehicle's engine bay into the vehicles cabin. Cable A will need to be neatly run along the passenger's sill towards the DES units backing plate and connect with the corresponding Blue 50A Anderson plug as fed from the Distribution Panel in the previous step.</p> <p><b>CAUTION: ENSURE EXTREME CARE IS TAKEN WHEN CUTTING GROMMET AS TO NOT CUT ANY CABLES IN THIS LOCATION, AS THEY MAY BE LIVE WITH POWER. IT IS HIGHLY RECOMMENDED THAT THE POSITIVE TERMINIAL BE REMOVED FROM THE START BATTERY BEFORE COMPLETING THIS STEP AND UNTIL INSTALLATION IS COMPLETE.</b></p> <p><b>CAUTION: DO NOT PULL ON THE ANDERSON TERMANALS PINS AT ANY TIME. THIS MAY COMPROMISE THE CONNECTION BETWEEN THE TERMANIAL AND THE CABLE.</b></p>



	<p>Connect Cable A Anderson terminals ends with 50A Blue Anderson plug housing supplied. Ensure Anderson terminal plugs click into their correct position aligning with the positive + (red cable) and negative – (black cable) locations. (See figure 9)</p> <p>Figure 9 (Anderson Plug colour maybe different from picture)</p> 
<p>Step 10</p> <p><i>Installing the ignition power cable</i></p>	<p>Install the Cable marked Cable B.</p> <p>Open the fuse panel cover underneath the steering wheel and remove the 30 Amp mini blade fuse in outlet 38. Place the removed mini blade fuse into the inline mini blade fuse holder on the end of Cable B. Connect the inline mini blade fuse holder back into outlet 38.</p> <p>Run the remainder of Cable B behind the plastic kick trim on the driver side (may need to temporarily remove kick trim) and continue to run Cable B along the driver's side sill with the black QC connector toward the rear of the vehicles cabin and connect with the black QC connector from the Distribution Panel. Theses should join under the rear seat near the Solar input Anderson Connector.</p>  <p>Replace the fuse panel cover.</p>
<p>Step 11</p> <p><i>Install 12v accessory cables</i></p>	<p>Locate the plastic rear wall infill panel.</p> <p>Using a drill and a 38mm hole saw, carefully drill a 38mm in the centre of the panel. Insert 38mm rubber grommet blank as supplied. This is now the time to install the power cables for accessories intended for the external areas of the vehicle. Carefully slit holes as needed to pass power cable to the external areas of the vehicle.</p> <p>(TIP: If the vehicle has permanently mounted solar panels, this is now the time to install the cables into the vehicle's cabin to attach to the Red Anderson plug for solar input as positioned under the rear seat near the Distribution Panel. (See figure 10)</p>

	<p>Figure 10</p>  <p><b>CAUTION:</b> ENSURE CORRECT THICKNESS OF CABLES ARE USED WHEN ATTACHING DES UNIT TO 12-VOLT APPLIANCES/SOLAR DEVICE. ENSURE THE CORRECT AMPERAGE REQUIREMENTS FOR APPLIANCES ARE MET AS WELL AS ADDITIONAL FUSING REQUIREMENTS AS SPECIFIED BY THE APPLIANCE MANUFACTURER FAILURE TO DO SO MAY CAUSE DAMAGE TO APPLIANCE, DES UNIT AND OR RESULT IN A POTENTIAL FIRE HAZARD. SEEK GUIDANCE FROM THE APPLIANCE MANUFACTURER FOR CORRECT CABLE THICKNESS GAUGE. DO NOT EXCEED THE MAXIMUM AMPERAGE LABELED TO THE ACCESSORY POWER CABLES</p> <p>Ensure all external cables are adequately protected with convoluted tubing, secured to the vehicle, away from heat sources and rotating parts. Attach all external accessory/solar input wires to intended outlets and or devices. Now repeat the same steps for any internal 12 volt accessory power requirements and secure cables into position.</p>
<p>Step 12</p> <p><i>Complete drilling holes</i></p>	<p>Temporary reinstall the DES Backing Plate and secure using 1x M8 bolt and DES M8 washer through the Jack retainer bolt hole. Using an 8.5mm drill bit, slight start drilling the 2x top hole locations at the top of the DES Backing Plate. DO NOT DRILL COMPLETE HOLES, this step is to mark the hole's correct location.</p> <p>Now remove the Backing Plate once again and complete drilling through pre-marked holes outlined above. (<b>NOTE:</b> Ensure that the holes are evenly spaced from the bottom edge of the predrilled marks to allow clip nuts to be inserted over the hole correctly.) (TIP: Using a small piece of timber inserted behind the intended drill hole area, this will protect the rear wall of the vehicles cab from damage when drilling holes)</p> <p><b>CAUTION:</b> DO NOT OVER DRILL INTO THE REAR WALL OF THE VEHICLES CAB, ONLY DRILL THROUGH THE SUBCROSS MEMBER FRAME IN THE PRE-DRILLED LOCATIONS</p> <p>(TIP: Place a drop sheet to catch the drilling swarf for easy cleaning) Vacuum up all drilling swarf after drilling holes.</p> <p>Install 2x clip nuts over the drilled holes in the rear wall sub cross member frame. (See figure 11)</p> <p>Figure 11</p> 

<p>Step 13</p> <p><i>Cut carpet and reinstall</i></p>	<p>Place the rear wall carpet on a flat surface. Using the chalk marks from step 4 measure towards the centre approximately 20mm and remark with chalk lines. These newly drawn lines will be your cutting lines (See figure 12). This extra 20mm will tuck behind the Backing Plate once installed.</p> <p>Figure 12</p>  <p>Cut along the newly marked lines and remove the centre section of the carpet and dispose. Place the carpet piece back into position against the rear wall of the vehicles cab. <b>NOTE:</b> Ensure that the rear middle seat belt stays on the outside of the carpet when reinstalling. On the rear wall carpet, cut out small vertical openings into the pre drilled holes where the clip nuts are located to allow bolts to pass through the rear wall carpet when attaching the backing plate. Reinstall plastic plugs removed in step 7. Ensure Cable A and Cable B are behind the carpet when reinstalled.</p>
<p>Step 14</p> <p><i>Tap 6mm treads into Subwoofer bottom mount holes</i></p>	<p>Using a M6 x 1.00p Right hand Coarse tread tap. Tap in treads into the 2x bottom subwoofer mount holes. (See Figure 13)</p> <p>Figure 13</p>  <p>Vacuum any shavings once completed.</p>
<p>Step 15</p> <p><i>Install the backing plate</i></p>	<p>Place the DES backing plate into position firm against the cabins rear wall &amp; secure with 3x M8 x20mm bolts and DES washers using the 5mm Hex Head Bit to tighten. MAX TORQUE: 15 NM</p> <p>Note: Ensure all cables behind the backing plate are free from crushing when tightening Backing Plate fasteners.</p> <p>Models with Subwoofers are to reinstall Subwoofer. Secure the bottom Subwoofer mounts with the 2x M6 bolts and DES washers using a 4mm Hex Head bit to tighten. MAX TORQUE: 10 NM</p>
<p>Step 16</p> <p><i>Install the DES batteries</i></p>	<p>With the Battery clamp facing down, gently slide in the DES battery ensuring the Anderson plugs are in the outwards position of Battery Clamps when mounted to the DES Backing Plate. Place the battery and battery clamp into position aligning with the bottom slotted section. Add 5x M8 bolts and DES washers, tighten into position MAX TORQUE: 20 NM. Repeat for the opposite battery and battery tray. (See Figure 14)</p> <p><b>CAUTION: DO NOT CONNECT DES BATTERY CABLES AT THIS STAGE</b></p>

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	<p>Figure 14</p> 
<p>Step 17</p> <p><i>Connect the vehicles start battery</i></p>	<p>Connect the negative (black cable) end of cable A to the vehicles start battery negative terminal block.</p> <p>Connect the positive (red cable) end of the cable A to the vehicle's positive terminal block. Reconnect the vehicles positive cable to the start battery.</p>
<p>Step 18</p> <p><i>Reinstall the rear seat</i></p>	<p>Reinstall the rear seat &amp; 4 bolts into rear seat mounting brackets.</p> <p><b>CAUTION: ENSURE THAT THE SEAT MOUNTING BOLTS ARE CORRECTLY TENSIONED AS PER VEHICLES MANUFACTURERS SPECIFICATIONS. ENSURE NO CABLES ARE PINCHED WHEN REINSTALLING SEAT.</b></p>
<p>Step 19</p> <p><i>Connect all remaining connectors/plugs</i></p>	<p>Connect all remaining connectors/plugs to the correctly corresponding coloured QC connectors/Anderson plugs.</p> <p><b>CAUTION: THE DES POWER UNIT IS NOW LIVE WITH POWER.</b></p> <p>Test all powered outlets and or connected devices to ensure they are correctly connected to the DES Power Unit. Set up the battery monitor as per included instructions from the battery monitor's manufacturer.</p>
<p>Step 20</p> <p><i>Add spacers under rear seat clasp</i></p>	<p>Using a T-40 star key drive bit, remove the rear seat clasp bracket from the cabins rear wall. Add the 2x Aluminium Spacer behind the rear seat clasp bracket and reinstall MAX TORQUE 25 NM. (See Figure 15)</p> <p>Figure 15</p> 
<p>Step 21</p> <p><i>Reinstall remaining plastic trims</i></p>	<p>Reinstall all remaining plastic trims in reverse order from step 6 ensuring that all cables and connectors/plugs are neatly tucked away under plastic trims so as not to be seen or exposed to damage.</p>
<p>Step 22</p>	<p>Reinstall rear middle seat belt bracket and fix with previously removed retaining bolt as in step 1.</p>

<i>Reinstall middle rear seat belt</i>	<b>CAUTION: ENSURE THAT THE REAR MIDDLE SEAT BELT BRACKET BOLT IS CORRECTLY TENSIONED AS PER VEHICLES MANUFACTURERS SPECIFICATIONS.</b>  Reconnect the electrical plug previously removed.  Reinsert all rear seat belt clasps back into the elastic retainers.
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Installation is now completed.

## **Operation**

1. Once the DES™ Power Unit is installed as per instructions, turn vehicles ignition to the on position and check the charging indication light is illuminated on the Redarc™ charger
2. Check the Victron Smart battery monitor to ensure the monitor connects to the Bluetooth device. (Victron App will need to be installed on mobile device and synced-see manual for details)
3. Set battery low-capacity levels on the Victron battery monitor as per instructions
4. Check operation of 12v devices connected to the DES™ Power Unit
5. Check the voltage usage of attached 12v appliance through the Victron battery monitor

## **Maintenance**

It is important to ensure that your DES™ Power Unit is operating correctly before you set out. The following should be checked, along with standard maintenance, immediately after installation (to be done by a qualified Auto-Electrician)

- Test the installation/vehicle wiring. Testing your DES™ Power Unit wiring is best done by connecting test light. (max 21W filament globe) checking all outlets and electrical connectors.
- Check all the Blade fuses and Midi fuses are in operational condition.
- Check all power outlet connectors for damage or distortion.
- Check battery levels.
- Check batteries are charging when vehicle is running, displayed on the Redarc™ Charger display panel.
- Check all fasteners are secured and in position.
- Wipe away any dust or dirt build up with a dry cloth.
- Check battery levels through Victron monitor when system is in constant use. Charge batteries or disconnect devices accordingly.



## **Frequently Asked Questions**

### ***A red indication light is illuminated on the blade fuse holder***

This indicates the corresponding fuse has blown and requires replacement with the same size and amperage fuse. Check 12v device attached to corresponding outlet for fault.

### ***The 12v device will not power up.***

Check wiring for damage or pinches, check connection plugs are firmly connected, check corresponding fuse condition.

### ***No lights are displaying on the Redarc™ indication panel when vehicles ignition is on.***

Check the positive and negative connections to the vehicles start battery. Inspect the 60 Amp fuse condition near the vehicles start battery on Cable A positive cable. Check the black fuse holder panel for any broken fuses. Replace any broken fuses once units cable work has been checked for damage.

### ***No display is showing on the Victron™ battery monitor.***

Check that both batteries 50Amp Anderson connections are firmly connected.

### ***Can I put the DES™ Power Unit into another vehicle?***

Yes, if the vehicle is match with the models listed in the Specifications table.

### ***Can I connect a device with higher amperage requirements that are more than the maximum amperage allowance labelled on the power outlet cables?***

No, this will cause damage to the DES™ Power Unit or device.

### ***Can I connect 240v inverter to the DES™ Power Unit?***

Yes, if the inverters power supply requirements don't exceed the maximum amperage of the labelled power outlet.

## Warranty

In the unlikely event that a technical issue arises with a DES™ Power Unit, customers are encouraged in the first instance to contact SJM OFFROAD Pty Ltd via email [info@sjmoffroad.com.au](mailto:info@sjmoffroad.com.au) for diagnostic purposes and product support.

The DES™ Power Unit comes 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 good repaired or replaced if the goods fault to be of acceptable quality and the failure does not amount to a major failure.

The benefits of this Warranty are in addition to other rights and remedies available at law in respect of the Products and shall not derogate from any applicable mandatory statutory provisions or rights under the Australian Consumer Law.

DES™ Power Unit trading as DES offers a warranty in respect of its product where the product has been purchased from SJM OFFROAD as an authorised distributor, on the terms and conditions, and for the duration outlined below in this document.

1. In this Warranty, the term **Products** means:
  - 1.1 all products manufactured or supplied by DES™ (excluding 12v BCDC charger, Lithium Batteries and Battery Monitor which are covered by the components manufactures warranty) from the time of purchase of the DES™ Power Unit.
  - 1.2 Any component of or accessory for any product in clause 1.1 manufactured or supplied by DES™.

### Offer and duration of product warranties

2. DES™ warrants that its Product will be free, under normal application, installation use and service conditions, from defects in materials and workmanship affecting normal use, for **2 years** from the date of purchase (**Warranty period**)
3. Where a DES™ Power Unit malfunctions or becomes inoperative during the Warranty Period, due to a defect in materials or workmanship, as defined by SJM OFFROAD Pty Ltd, then subject to further rights conferred by the Australian Consumer Law on the Purchaser, DES™ will, in exercise of its sole discretion, either:
  - 3.1 Repair the defective Product;
  - 3.2 Replace the defective Product; or
  - 3.3 Provide a refund to the Purchaser for the purchase price paid for the defective Product, without charge to the Purchaser
4. The warranty given by DES™ in clause 3 covers the reasonable costs of delivery and installation of any repaired or replaced Products or components of Products to the Purchaser's usual residential address notified to DES™, together with the reasonable costs of removal and return of any Product determined by DES™ determined to be defective.
5. If the Purchaser incurs expenses of the nature referred to in clause 4 in the context of making a claim pursuant to this Warranty that is accepted by DES™, the Purchaser will be entitled to claim for reimbursement of those expenses which DES™ determines, in exercise of its sole discretion, to be reasonably incurred, provided that the claim is notified to DES™ via SJM OFFROAD Pty Ltd in writing at the postal address PO Box 246, Glass House Mountains Q 4518 or email [info@sjmoffroad.com.au](mailto:info@sjmoffroad.com.au) and includes:
  - 5.1 Details of the relevant expenses incurred by the Purchaser; and
  - 5.2 Proof of the relevant expenses having been incurred by the Purchaser

### Exclusion and limitations

6. This Warranty will not apply to, or include any defect, damage, fault, failure or malfunction of a Product, which DES™ determines, in exercise of its sole discretion, to be due to:
  - 6.1 Normal wear and tear or exposure to weather conditions over time;
  - 6.2 Accident, misuse, abuse, negligence, vandalism, alteration or modification;
  - 6.3 Non-observance of any of the instructions supplied by DES™, including instructions concerning installation, configuring, connecting, commissioning, use or application of the Product, including without limitation choice of location;
  - 6.4 Failure to ensure proper maintenance of the Product strictly in accordance with DES™ instructions or failure to ensure proper maintenance of any associated equipment or machinery;
  - 6.5 Repairs to the Product that are not strictly in accordance with DES™ instructions;
  - 6.6 Installation, repairs or maintenance of the Product by, or under the supervision of, a person who is not a qualified auto electrician or technician, or if non-genuine or non-approved parts have been fitted;
  - 6.7 Faulty power supply, power failure, electrical spikes or surges, lightning, flood, storm, hail, extreme heat, fire or other occurrence outside of the control of DES™;
  - 6.8 Use other than for any reasonable purpose for which the Product was manufactured;
  - 6.9 Any indirect or incidental damage of whatever nature outside the control of DES™.
7. Warranty claims in respect of a Product must be made in writing to DES™ via SJM OFFROAD Pty Ltd in writing at the postal address PO Box 246, Glass House Mountains Q 4518 or email [info@sjmoffroad.com.au](mailto:info@sjmoffroad.com.au) within the Warranty Period. Such claims must include the following:
  - 7.1 Details of the alleged defect or fault and the circumstances surrounding the defect or fault;
  - 7.2 Evidence of the claim, including photographs of the Product (where the subject of the claim is capable of being photographed);
  - 7.3 The serial number of the Product, specified on the label affixed to the Product; and
  - 7.4 Proof of purchase documentation for the Product from the authorised distributor of DES™.

The return of any Product without the prior written instructions of DES™ will not be accepted.

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8. Without limiting any other clause in this Warranty, DES™ has the right to reject any Warranty claim made by a Purchaser pursuant to this Warranty where:
- 8.1 The Purchaser does not notify DES™ via SJM OFFROAD Pty Ltd in writing of a Warranty claim within the Warranty Period;
  - 8.2 The Purchaser does not notify DES™ via SJM OFFROAD Pty Ltd in writing of a Warranty claim within 1 month of becoming aware of the relevant circumstances giving rise to the claim, so that any further problems with the Product are minimised;
  - 8.3 The serial number of the Product has been altered, removed or made illegible without the written authority of DES™
  - 8.4 The Purchaser is unable to provide proof of purchase documentation in accordance with clause 7.4 or evidence that the Product was properly installed and removed (if relevant), and that proper maintenance has been performed on the Product, by, or under the supervision of, a qualified auto electrician or technician, in accordance with the instruction of DES™
9. If the Product is found to be working satisfactorily on return to DES™ via SJM OFFROAD Pty Ltd or upon investigation by DES™ via SJM OFFROAD Pty Ltd, the Purchaser must pay DES™ via SJM OFFROAD Pty Ltd's reasonable costs of testing and investigating the Product in addition to shipping and transportation charges. Where DES™ via SJM OFFROAD Pty Ltd is in possession of the Product, the Product will be returned to the Purchaser on receipt of the amount charged.
10. Any replaced Products or components of Products shall become the property of DES™ via SJM OFFROAD Pty Ltd
11. DES™ may, in exercise of its sole discretion, deliver another type of Product or component of a Product (different in colour, weight, brand and/or other specification) in fulfilling its obligations under this Warranty, in the event that DES™ has discontinued manufacturing or supplying the relevant Product or component at the time of the Warranty claim, or where such Product or component is superior to that originally purchased by the Purchaser.

**Other conditions of Warranty**

- 12. If the Purchaser acquired a Product for the purpose of resupply, then this Warranty shall not apply to that Product.
- 13. In particular, the sale of a Product via an online auction, online store or other internet website by a party that is not an authorised distributor or reseller of the Product will be deemed to be a resupply within the meaning of the Australian Consumer Law and will render this Warranty void, as DES™ has no control over the storage, handling, quality or safety of Products sold by such persons.
- 14. A Purchaser shall only be entitled to the benefit of this Warranty after all amounts owing in respect of the Product have been paid.
- 15. While DES™ warrants that the Product will be free from defects in materials and workmanship in the circumstances set out in this Warranty, to the maximum extent permitted by law DES™ does not warrant that the operation of the Product will be uninterrupted or error-free.
- 16. To the maximum extent permitted by law, DES™ via SJM OFFROAD Pty Ltd determination of the existence of any defect and the cause of any defect will be conclusive.
- 17. Spare parts or materials for the Product are guaranteed to be available for a period of at least 2 years after purchase of the Product.
- 18. The agents, officers and employees of any distributor or reseller of the Product and of DES™ are not authorised to vary or extend the terms of this Warranty.
- 19. DES™ shall not be responsible or liable to the Customer or any third party in connection with any non-performance or delay in performance of any terms and conditions of this Warranty, due to acts of God, war, riots, strikes, warlike conditions, plague or other epidemic, fire, flood, blizzard, hurricane, changes of public policies, terrorism and other events which are beyond the control of DES™. In such circumstances, DES™ may suspend performance of this Warranty without liability for the period of the delay reasonably attributable to such causes
- 20. If a clause or part of a clause in this Warranty can be read in a way that makes it illegal, unenforceable or invalid, but can also be read in a way that makes it legal, enforceable and valid, it must be read in the latter way. If any clause or part of a clause in this Warranty is illegal, unenforceable or invalid, that clause or part is to be treated as removed from this Warranty, but the rest of this Warranty is not affected.





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