

SC40-LR Plug-&-Play KIT + D3-TPSE (D3 specific Two Power Socket Extension) Kit installation instructions.

SC40-LR OPERATING SPECS

OPERATING VOLTAGE

8 to 18 volts

MAXIMUM CURRENT

75+ amps surge for 5 seconds

50 amps for 1 minute

45 amps continuous rated

CONTROL VOLTAGES

Cut-in voltage = When the main battery voltage rises to or above 13.2 volts

Isolating Voltage = When the main battery voltage drops to or below 12.3 volts

LED OPERATION.

When the SC40-LR is ISOLATED, the GREEN LED flashes.

When the SC40-LR is CUT-IN, the GREEN LED is on constant.

HOW THE SC40-LR PROTECTS THE BATTERIES

The primary objective of the SC40-LR is to protect the vehicle's main (cranking) battery from being discharged below a point which the battery would not be able to start the vehicle. But as most vehicle cranking batteries are capable of supplying some of their stored power for other uses and still have enough charge left to be able to start the vehicle, the SC40-LR also allows this additional power to be used.

So while there is extra power available at the main battery the SC40 shares the load between the main battery and the auxiliary battery and in doing this the operating time for the accessories running off the auxiliary battery is extended but at the same time the SC40-LR will still automatically safeguard main battery from being over discharged.

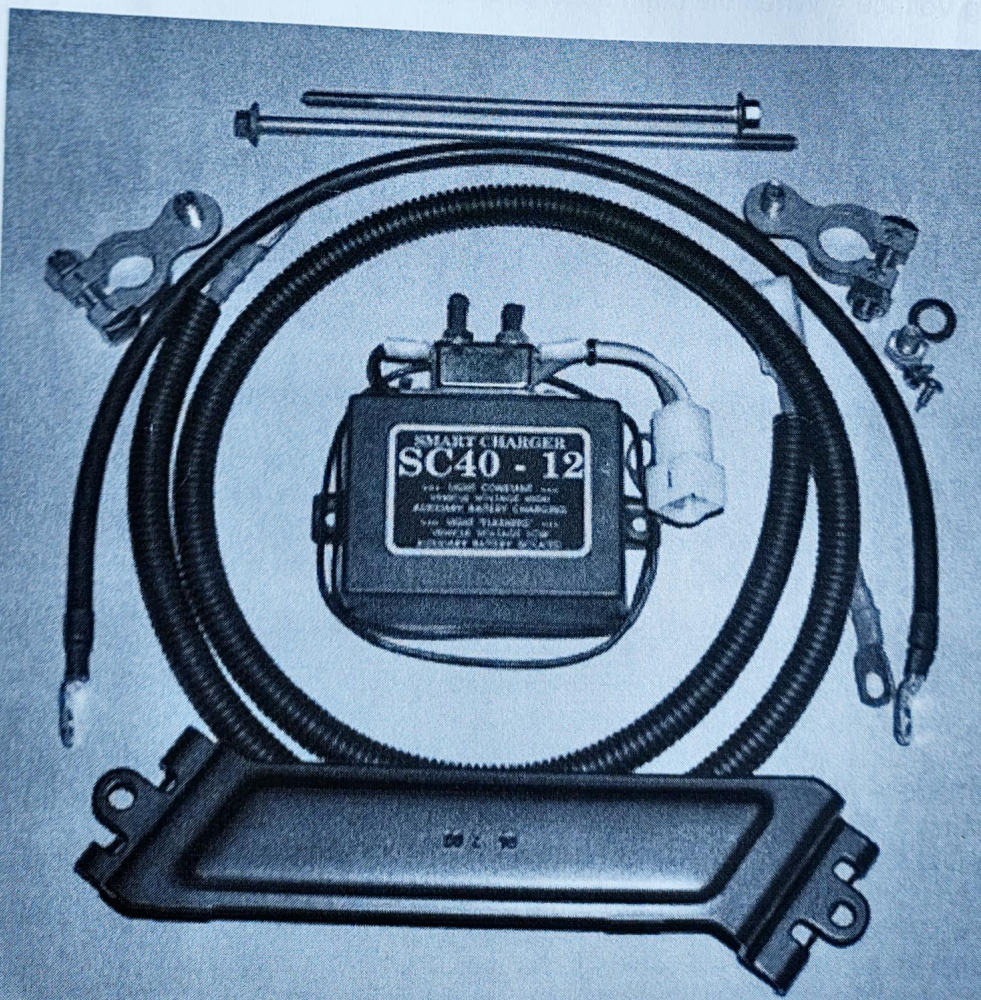
The second function of the SC40-LR is to make sure the main battery, after the vehicle is started, has a sufficiently high enough charging voltage before starting to charge the auxiliary battery(s).

Another function is to protect the auxiliary battery should the main battery fail, the SC40-LR will isolate all batteries and when it comes time to start, the auxiliary battery may be used to just start the vehicle.

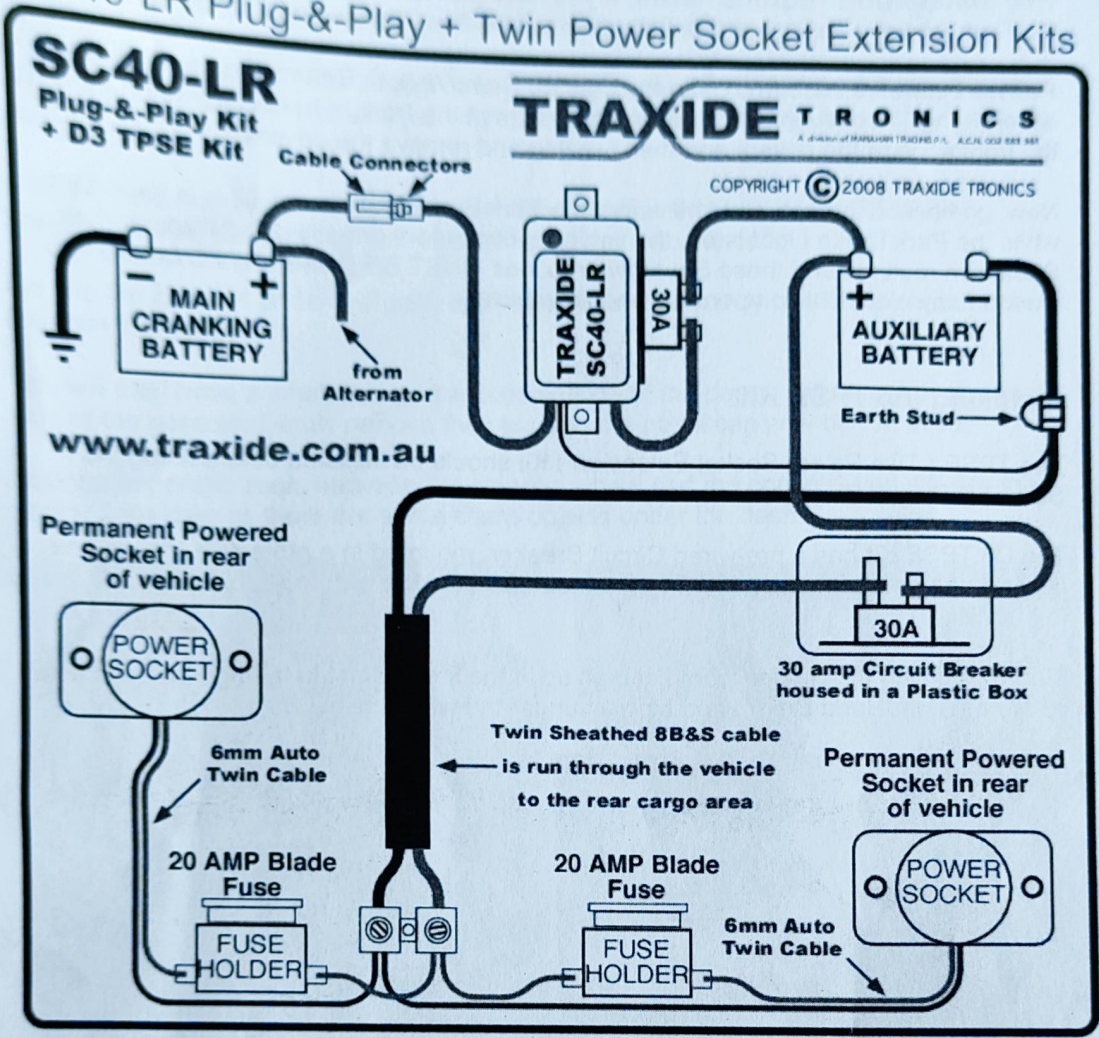
SPECIAL SAFETY NOTICE :- Once the SC40-LR is installed, should you have to disconnect either the Main (Cranking) battery or the Auxiliary Battery, first disconnect the plug and sock connection in the cable running from the Main (Cranking) battery and the SC40-LR Control module, this will avoid damage being caused if the positive battery lead is dropped and contacts any vehicle earth.

The kit contains the following :-

- SC40-LR Control Module with pre-wired Circuit Breaker mounted on the side.
- Red Battery fitted with 8mm eye terminal, 2 pin plug, covered with Black Split Tub
- Black Auxiliary Battery Earth Lead.
- Auxiliary Battery mounting Bracket.
- 2 x Long Bolts for Auxiliary Battery mounting Bracket
- 2 x Battery Terminal Clamps
- 1 x 8mm Stainless Steel Bolt and Stainless Steel Washer.
- 2 x Alcohol Swabs
- 4 x Wire Ties.



SC40-LR Plug-&-Play + Twin Power Socket Extension Kits



This kit is designed to add two new permanently powered cigarette lighter type power sockets to the rear of a D3 and the kit is designed to be connected to the Auxiliary Battery fitted in the engine bay.

Most cigarette type power sockets will only carry 10 amps but the 2 Power Sockets provided in this kit will each carry up to 16 amps.

The kit contains the following items :-

- 5m x 8B&S Twin Sheathed Cable
- 3m x 6mm Auto Twin Sheathed Cable
- 2 x Flush Mount Power Sockets + 4 Countersunk Self Tapping Screws
- 2 x In-line Blade Fuse Holders + 2 x 20 amp Blade Fuses
- 1 x 30 amp Circuit Breaker in a Protective Plastic Box
- 1 x 2 Way Screw Block Terminal
- 8 x Yellow Female Spade Crimp Terminals
- 5 x Wire Ties

Pre Installation requirements. If you have just turned your Ignition off, make sure the Park Brake is applied and the key is removed from the ignition.

Pull the bonnet release and open the bonnet. Remove both Battery Compartment covers. This is done by first releasing the 2 tabs at the front of both covers and then lift the front edge of the covers and then twisting and remove the covers.

Now, go back to the cab and check that the Park Brake Light is out. This is important, while the Park Brake Light is on, the vehicle's computers are still going through their Shutdown routines and these Shutdown routines **MUST BE COMPLETED** before you work on any electrical components on this vehicle.

Installing the TPSE Kit.

The TPSE (Two Power Socket Extension) Kit should be installed before fitting the SC40-LR Plug-&-Play Kit.

The D3 TPSE Kit has a pre-wired Circuit Breaker, mounted in a protective Plastic Box fitted to one end of the 8B&S Twin Sheathed Cable, along with the cable terminals, ready to install.

Start by locating the rubber grommet high up in the firewall just to the right of the master cylinder (Right Hand Drive) and high up under the windscreen.



Once you have located the rubber grommet, remove it and cut the grommet as illustrated in the picture.

Do not reinstall the grommet just yet.

SPECIAL NOTE, in some LEFT HAND DRIVE D3/LR3 Discoverys, there is no grommet so you will need to make a hole in the rubber boot that covers the wire loom coming through the Firewall next to the Steering Column. Take care not to cut any of the wires in the loom.