

## REMOVE AND REFIT THE DC/DC CONVERTER

## Remove

1. Ensure the Ignition switch is OFF, remove keys from the vehicle and place in a secure location at least 2 metres from the vehicle.

Caution: Please wait 30 minutes after the vehicle power system has been switched off to allow any power stored within the inverter capacitors to have been discharged.

Warning: ALWAYS ensure the correct PPE is worn when working on, or with HV components.

- 2. Disconnect both the negative and positive battery cables see LV Battery Disconnection
- 3. Locate + Remove both Master Service Disconnect devices (MSD) see

  Master Service Disconnect Remove/Refit
- 4. Raise the vehicle using a suitable lifting apparatus while complying with lifting weight restrictions to a safe working height
- 5. Locate the DC/DC converter under the vehicle (the DC/DC is mounted inside of the block with the Auxiliary invertor (KEB)



6. Unfasten the two HV security brackets and disconnect the KEB



7. Remove the HV cable from the side of the KEB (unfasten Torx 20 Bolts)





8. Disconnect the connectors from front of the Battery Management System (BMS) and KEB



9. Release the cable clip from the BMS housing and temporarily adjust location of loom to the side of the KEB



10. Position a coolant catch can underneath the coolant hoses into the KEB. Clamp off the two cooling hoses and remove.



11. Clamp off and disconnect the two DC/DC coolant hoses via the release tags on the connections.





- 12. Support the DC/DC converter with a suitable transmission jack
- 13. Unfasten the 4 DC/DC mounting bolts and remove along with the rubber washers
- 14. Slowly lower the DC/DC convertor until you gain access to the earth bus bar



15. Unfasten and remove the second earth connection from the KEB



16. Unfasten and remove the two bolts securing the earth bus bar and place bus bar onto a clean secure workstation





- 17. Lower DC/DC converter down further to gain access to the KEB securing bolts
- 18. Lift off the KEB and lower the DC/DC converter to a safe level to lift from the jack.
- 19. Place DC/DC converter in a clean secure workstation





## Refit

- 1. Place DC/DC converter back onto the lifting jack
- 2. Raise DC/DC converter up to a level that you can refit the KEB, use thread lock and tighten to 48nm
- 3. Refit earth bus bar and tighten to 23nm
- 4. Refit KEB earth cable and tighten to 23nm
- 5. Making sure all washers and rubbers are in the correct location, raise the DC/DC converter back into its position
- 6. Resecure the DC/DC converter, use thread lock and tighten the bolts to 48nm
- 7. Refit the two DC/DC coolant hoses (Push fitted)
- 8. Refit the two KEB coolant pipes and tighten clamps to 7nm
- 9. Refit all associated front electrical connectors
- 10. Refit the three HV connectors into the KEB
- 11. Refit the two HV connector security brackets
- 12. Confirm all connections are secure
- 13. Lower vehicle and fill coolant to manufacturer specified level *see operators manual*
- 14. Locate and put on relevant PPE for reconnection of HV system
- 15. Refit MSD's
- 16. Reconnect 24v battery links
- 17. Confirm vehicle is safe and ready to switch on
- 18. Key on vehicle and scan/clear any faults
- 19. Check and confirm no leaks from cooling system
- 20. Test the vehicle and confirm all ok.

