
Power Supply (14.00)

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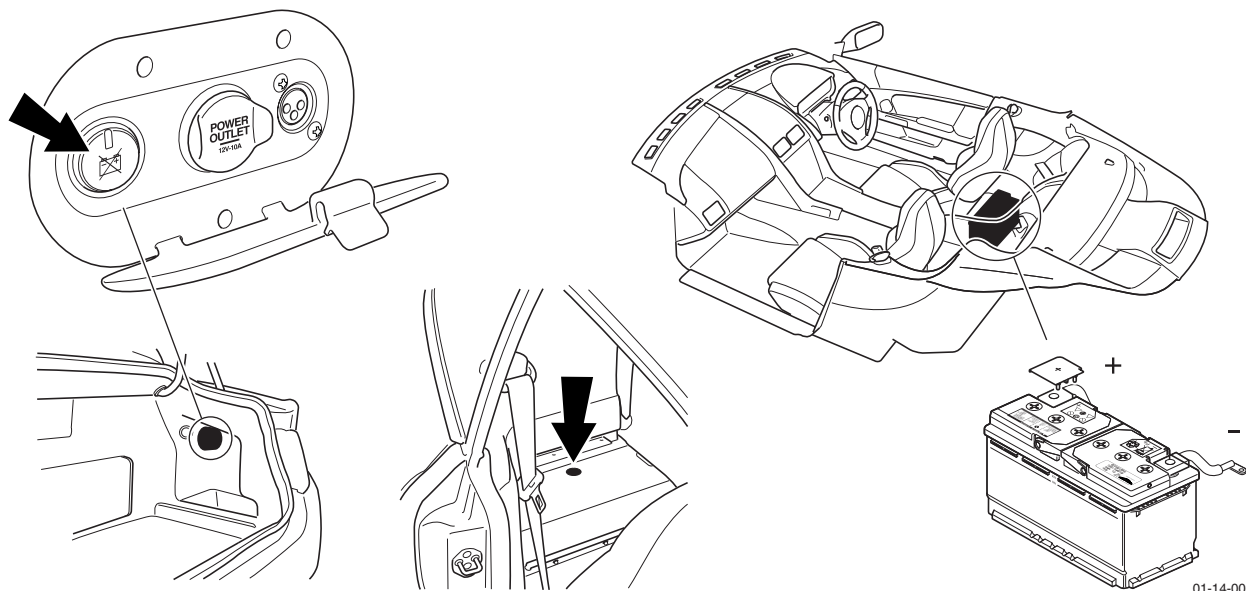
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Power Supply (14.00)

Battery System (14.01)

Description

The 12 volt negative earth ('-' ve) battery is located under the drivers side rear seat and is grounded to the vehicle body. The battery positive ('+' ve) terminal is connected to a battery connect switch. The connect switch may be accessed by raising the rear seat cushion.



Battery Connect Switch

When the battery connect switch is in an 'open' state it isolates electrical power from all systems except the 'keep alive memory' functions in the PCMs, TCU, radio, navigation system and door modules.

This function isolates electrical power from vehicle circuits under all normal service conditions with the following exceptions:

- Before any welding or other work which may induce high voltages into the electronic control modules
- Before disconnecting any of the control modules with 'keep alive memory'
- Before any major service task (e.g. engine removal)
- Before installing any accessory which involves modification of vehicle wiring

In the above four exceptions the battery earth ('-' ve) lead should be disconnected.

When the battery earth ('-' ve) terminal is disconnected, data held in keep alive memories will be lost.

After connecting the battery, the radio preset stations and the door window controllers will require to be reset (Adaptive learning data in the PCMs and TCU (Auto transmission) modules will require to be re-learned by driving the vehicle for some miles in a range of driving conditions), **driveability may be slightly compromised until the vehicle systems have completed their adaptive learning routines again.**

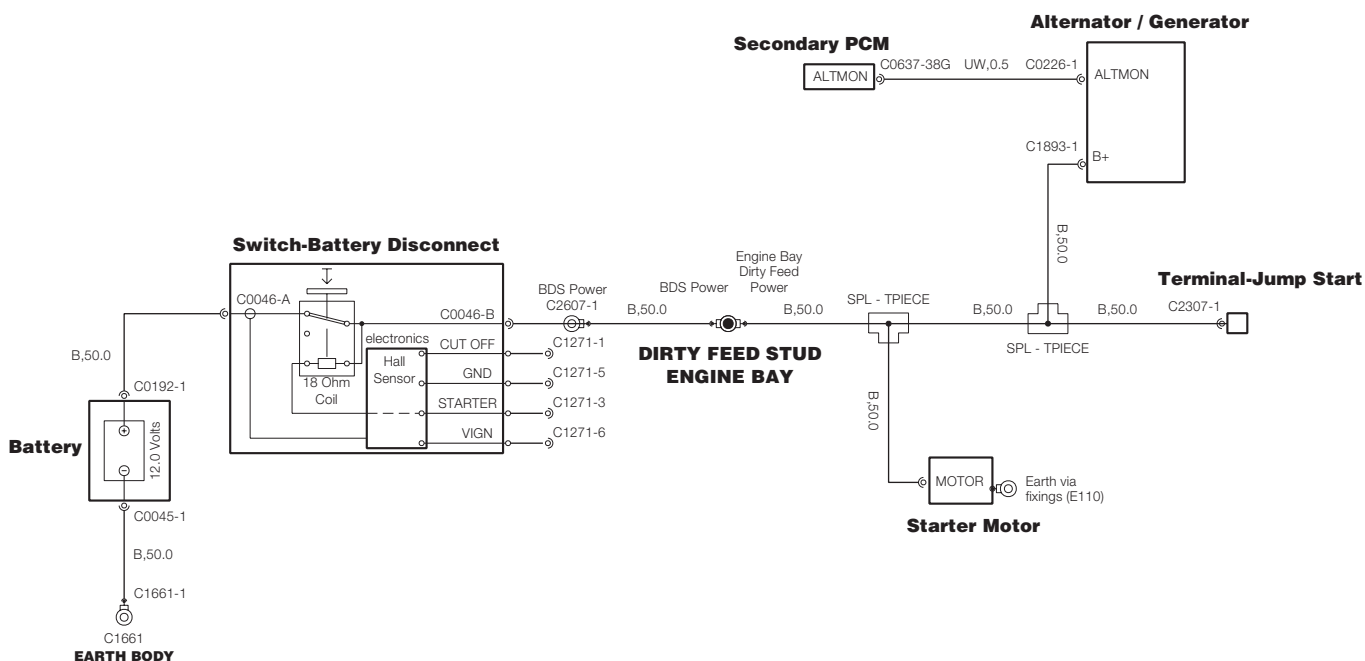
Battery Disconnection and Alarm Activation

The vehicle is installed with an alarm which will be activated if the battery is disconnected. This alarm is driven by a back up battery within the alarm sounder unit.

To prevent the alarm from sounding when the battery is disconnected (for workshop procedures), disconnect the battery within 10 seconds of switching off the ignition. Always carry out the following procedures upon connection of the battery.

- Reset the clock
- Reset the radio preset programmes.
- Reset the window maximum up and maximum down settings.

Charging Circuit



Electrical power generated at the alternator flows via two 'T Piece' connectors to the engine bay 'Dirty Feed' stud. It then flows via the Battery Disconnect Switch (BDS) to the battery positive terminal. Both the alternator and the battery are earthed via the vehicle body to complete the charging circuit.

The starter motor and the 'jump start terminal' are also fed directly from the charging circuit.

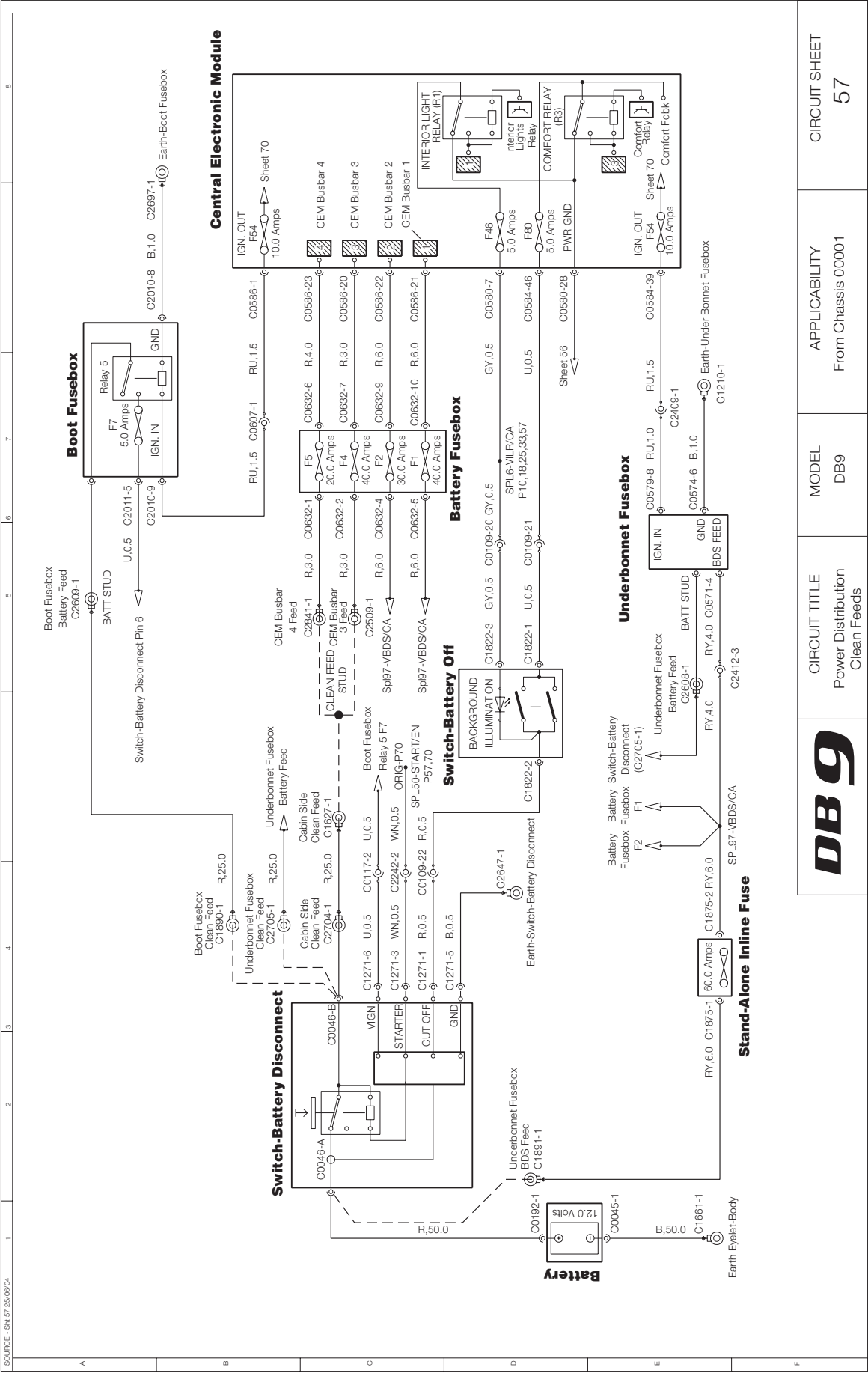
+12 Volt Distribution

The +12 volt supply comes from the battery to the battery disconnect switch (BDS). Assuming that this switch is not activated, 12 volt power is then available from C0046-8 on the BDS to all of the clean feed battery studs.

The following clean feeds are then live:

- Boot fuse box clean feed
- Under bonnet fuse box clean feed
- CEM busbars 1, 2, 3, 4 and 5 clean feeds

12V power to all systems and components is then controlled by the CEM and the under bonnet / boot fuse boxes.



Specifications

Torque Figures

Description	Nm.	lb. / ft.
Battery Compartment Cover	9	7
Battery clamp	9	7
Battery Terminals	9	7

Maintenance Battery

Repair Operation Time (ROT)

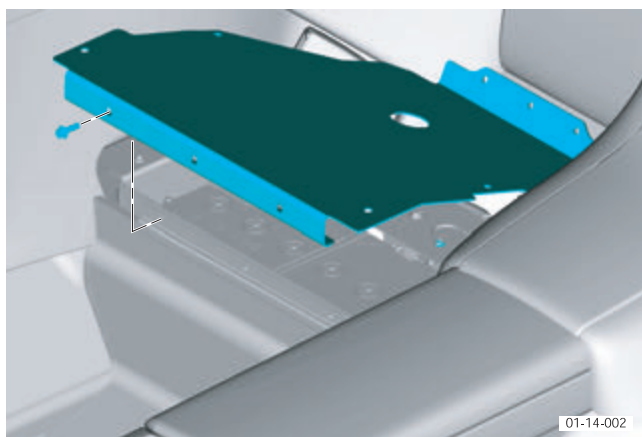
Item	Code
Battery Renew	14.01.AB

Removal

1. Power the drivers seat forward.
2. Remove the RH rear seat to reveal the battery compartment.

The rear trim 1/4 panel may need to be removed to gain access to the battery compartment lid bolts.

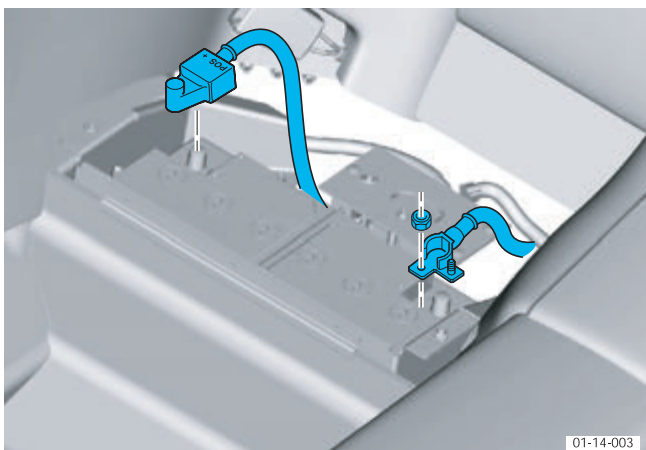
3. Remove bolts (x10). Remove the battery compartment cover.



4. Disconnect the battery terminals.

⚠ Warning ⚠

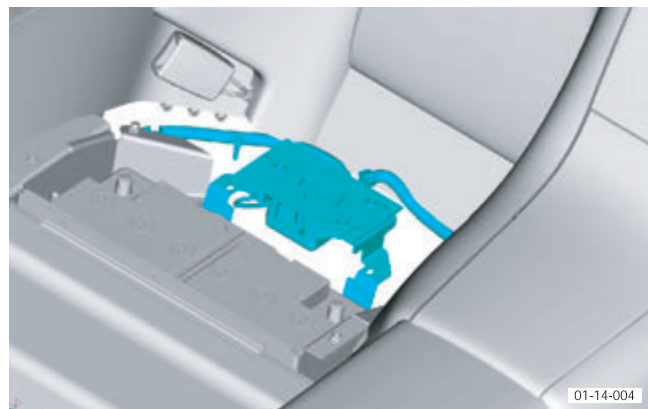
Always disconnect the earth (- ve) terminal first.



5. Remove the battery clamp. Disconnect battery vent tube and pull the battery from the compartment.

⚠ Warning ⚠

The vehicle battery is heavy and access to the battery is restricted. Take care when lifting the vehicle battery.



Installation

⚠ Warning ⚠

The vehicle battery is heavy and access to the battery is restricted. Take care when lifting the vehicle battery.

1. Lower the battery into it's compartment.

Ensure that the battery vent tube is attached to the battery and that it located into the opening provided in the body.

2. Clamp the battery. Torque bolts to **9 Nm**.

Ensure that the battery vent tube is not distorted by the battery.

⚠ Warning ⚠

Always connect the earth (- ve) terminal last.

3. Install the battery terminals. Torque to **9 Nm**.
4. Install the battery compartment cover. Torque bolts to **9 Nm**.
5. Install the rear seat base.
6. Reposition the drivers seat.



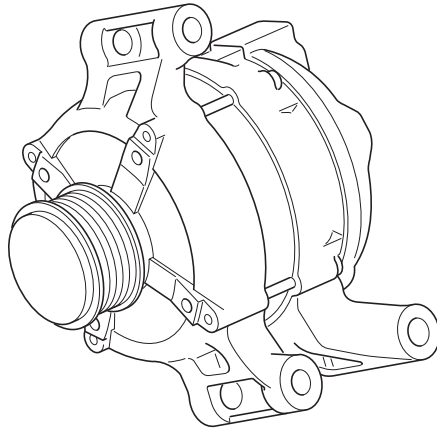
ASTON MARTIN

Power Supply (14.00)

Alternator and Regulator System (14.02)

Description

The alternator installed to this vehicle is a Denso, SC2, 150 amp rating, with a 14.4 volt regulator.



The Alternator has an 'Altmon' signal that goes to and from the secondary PCM via a wire in the 3 way connector.

The 'Altmon' signal is monitored by the secondary PCM which adjusts ignition timing and fuelling if necessary to maintain idle speed when the alternator is charging.

The alternator pulley has an in-built mechanical clutch which will slip if there is a rapid change in drive belt speed. This reduces the 'snatch' in the auxiliary drive system during gear changes.

Specifications

Torque Figures		
Description	Nm.	lb. / ft.
Alternator mounts	43-52	32-38.5

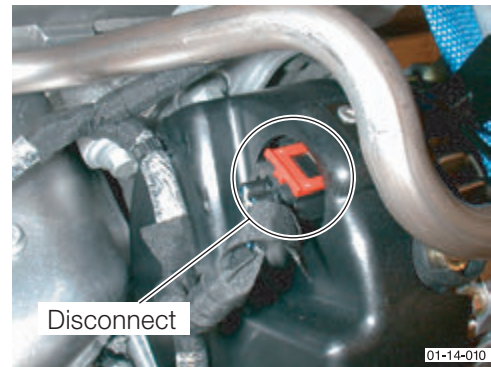
Maintenance

Alternator

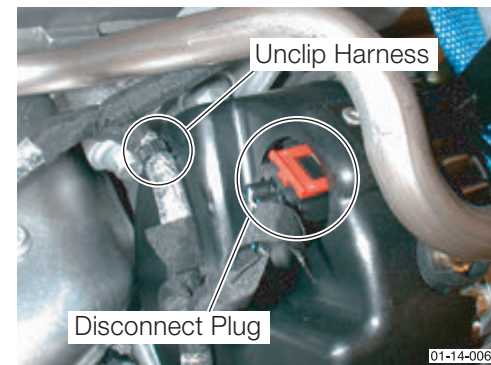
Repair Operation Time (ROT)	
Item	Code
Alternator Renew	14.02.AB

Removal

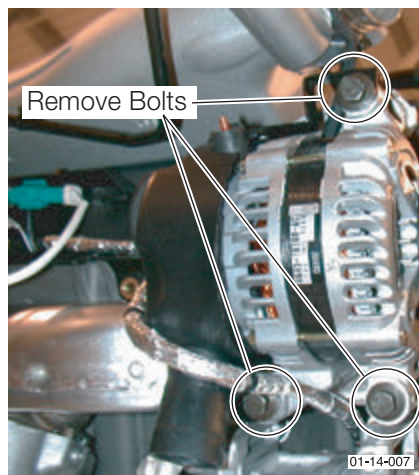
1. Disconnect the vehicle battery.
2. Disconnect the wiring harness plug on rear of alternator.



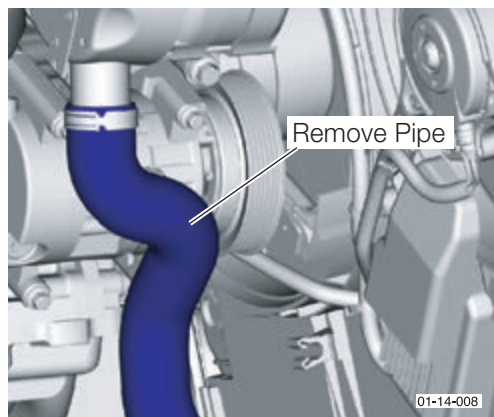
3. Raise the vehicle and make safe. Remove the road wheel and road wheel arch liner.
4. Remove the undertray.
5. Release the polyvee drive belt (Refer to 'Accessory Drive System (03.05)', page 3-6-1).
6. Unclip the wiring harness from the cooling cover.



7. Remove bolts / washers (x3). Withdraw the alternator complete with the cooling shield.



For easier access to bolt, remove air ducting from underside of cooling shield.

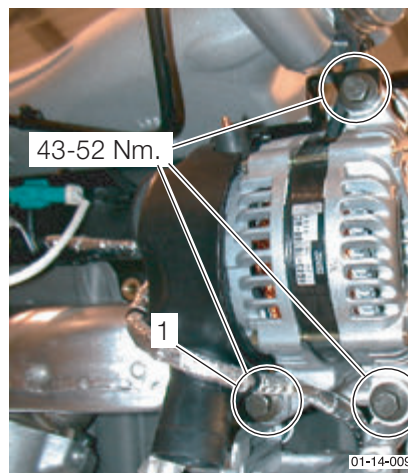


Installation

1. Place the alternator complete with the cooling shield to mountings.

Insert bolt (1) as cooling shield is placed to alternator.

2. Secure the alternator and cooling shield assembly to engine block. Tighten bolts (x3) to **43-52 Nm**.



3. Install the air ducting to the cooling shield, if removed.
4. Clip the wiring harness to the cooling shield.
5. Connect the wiring harness plug to the alternator.
6. Install the drive belt (Refer to 'Accessory Drive System (03.05)', page 3-6-1).
7. Install the road wheel arch liners.
8. Install the road wheels (Two stages (Refer to 'Road Wheel Nut Torque Tightening', page 4-5-7)).