

## Jump Starting E-Transit (owners manual)

Note: *This procedure is only for the 12 volt battery.*

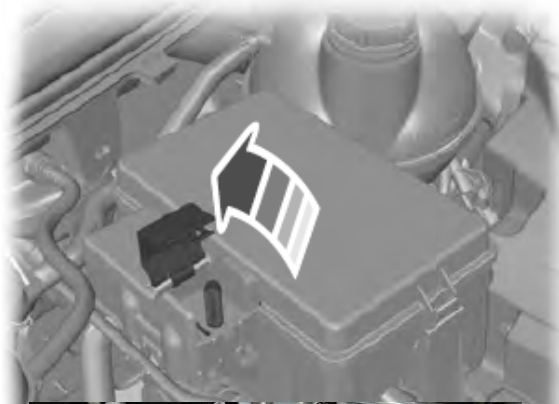
Note: *Your vehicle has a 12 volt battery that is under the driver seat. The 12 volt battery controls the switches and contacts that engage the high voltage battery. Do not jump start the high voltage battery using a standard 12 volt battery. Tow your vehicle to an authorized dealer if the high voltage battery does not accept a regular charge.*

Link to 12V battery access video: <https://www.youtube.com/watch?v=xglmBiyTifQ>

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Your vehicle has a positive (+) access terminal and a negative (-) ground connection point that you can access under the hood, even though the actual battery is under the driver seat. You can jump your vehicle using these points.

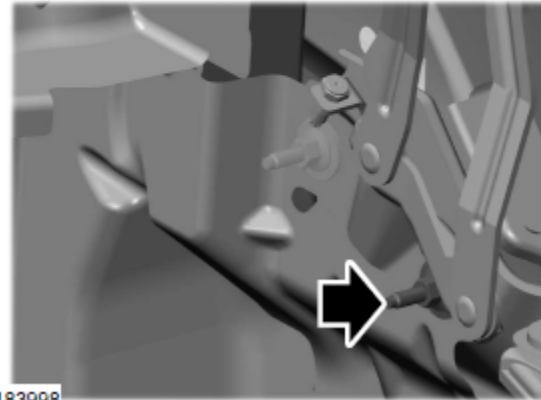
The positive (+) access terminal is next to the fuse box, under a red cap. To access the positive (+) terminal, lift the red cap up.



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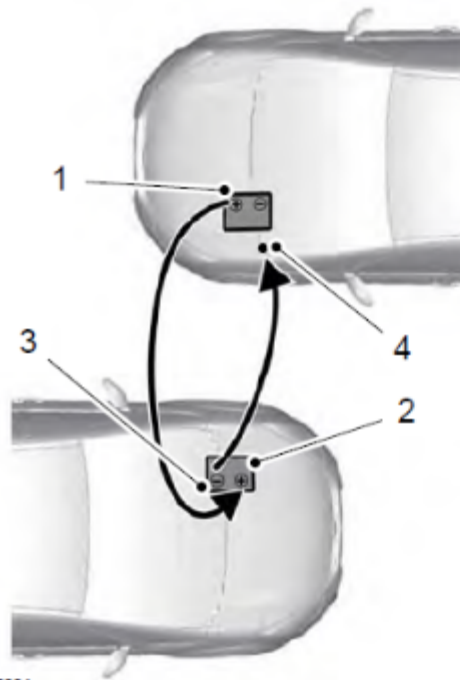
The negative (-) terminal is a post on the driver side, near the hood hinge. It is a ground connection point. You need to remove the rubber covering first.



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1. Connect the positive (+) jumper cable to the positive (+) access terminal of the vehicle with the discharged battery.
2. Connect the other end of the positive (+) cable to the positive (+) terminal of the assisting battery.
3. Connect the negative (-) cable to the negative (-) terminal of the assisting battery.
4. Make the final connection of the negative (-) cable to the ground connection point of the vehicle with the discharged battery.



**WARNING:** Do not connect the negative jumper cable to any other part of your vehicle. Use the ground point.

5. Start the engine of the booster vehicle and rev the engine moderately, or press the accelerator gently to keep your engine speed between 2000 and 3000 rpms, as shown in your tachometer.
6. Switch on the ready to drive mode in the vehicle being jumped (make sure trans is in park)
7. Once you start the disabled vehicle, run both vehicle engines for an additional three minutes before disconnecting the jumper cables.

Remove the jumper cables in the reverse order that they were connected.



# 12V Battery Charging System

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- The 12V battery is charged by the DC / DC converter control module. The BMS continuously monitors the battery state of charge condition and provides the BCM with this information. The BCM communicates this information to the PCM over the HS-CAN1 . The PCM communicates the battery desired setpoint to the DC / DC converter control module which supplies the necessary charge voltage to the 12V battery.

## 12V Battery Management System

- **NOTICE:** When any vehicle module is being programmed, connect an external battery charger to make sure the module programming is completed without interruption due to the load shedding feature becoming active. The external battery charger must maintain a system voltage above 13 volts. This may require a charger setting higher than the lowest charge setting. The external battery charger negative connection must be made to an engine or vehicle chassis ground and not the negative battery terminal. If the connection is to the negative battery terminal, load shedding may begin and module programming may be corrupted. After charging has begun, start the engine to clear any load shed states and then turn the engine off and proceed with programming.

## Charging and Jump Starting

- Do not charge or jump start the vehicle by connecting to the battery negative terminal. Refer to the Owners Guide for more information.
- If the 12V vehicle battery has been charged by connecting to the battery negative terminal, do not reset the Battery Monitoring System.