




Battery Boosting

Safe Work Procedures

Introduction

Boosting a battery can be done safely if the proper steps are followed.

PPE Requirements Summary

Image	Description	Standard
	High Visibility Vest	Required Outside of Vehicle on Active Haul Roads
	Safety Glasses	Required
	Gloves	Required

General Precautions

- Safety glasses are required.
- Never boost a frozen or potentially frozen battery.
- Familiarize yourself with the owner's manual for the vehicle you are operating. This is especially true with newer vehicles as the procedures may be slightly different.
- To prevent an explosion, ensure the batteries are of the same voltage and that the battery being boosted is not frozen.
- Place the two vehicles so the battery cables reach. Make sure the vehicles are not touching, which would "ground" the two vehicles together.
- Some electronics may be affected by sudden over or under voltage, therefore ensure to unplug all devices (cell phone, GPS, dash cam etc) before boosting.

Preparing to Boost

- If available, place reflective triangles or flares 5 vehicle lengths behind the end of each vehicle.
- Engage hazard lights.
- Apply the emergency brake in both vehicles.

Boosting a Battery

Boosting a 12V with a 12V

- Turn off the booster vehicle.
- Identify the positive terminal of both batteries. (these are coloured red, or have "+", "P", or "POS" written on the battery case, post or clamp)

- Attach one jumper cable between the two positive terminals starting with the dead vehicle, and then attaching to the booster vehicle's battery.
- Attach the end of the second jumper cable to the negative terminal of the booster battery and the other end to some part of the engine in the vehicle being started. This final connection should be at least a foot from the battery (to avoid sparks which could cause an explosion) and must be on a piece of metal that is not painted, chrome-plated, heavily rusted or coated with grease. The likelihood of a spark when connecting the cable comes with the last connection of the circuit.
- Try to start the vehicle (do not crank the starter over for more than 20 seconds at a time). If the vehicle fails to start immediately, start the engine in the vehicle holding the booster battery so it will not run down.
- Once the vehicle with the dead battery is started. Immediately undo the cables in the reverse order that you put them on.

Boosting a Battery

Boosting a 24V with a 12V

- Identify the positive and negative posts on the 12 volt vehicle.
- Identify the positive and negative posts on the equipment. There will be two batteries with a wire running from one positive post to the other batteries negative post. One negative post will have a wire to the body of the equipment and one positive post wire going to the starter.
- Always attach jumper cables from the 12 volt to one or the other of equipment batteries. Do not attach one jumper cable to one battery and the other to the other battery. Attach jumper cables positive to positive and negative to negative.
- If the vehicle does not turn over with the jumper cables on one of the equipment batteries, then try the other as one may be dead.
- Once the vehicle starts, remove the jumper cables being careful not to touch the ends together.

Boosting a 24V with a 24V

- Identify the positive and negative posts on the equipment. There will be two batteries with a wire running from one positive post to the other batteries negative post. One negative post will have a wire to the body of the equipment and one positive post wire going to the starter.
- Attach jumper cables with positive going to the positive posts that go to the starter and attach the negative jumper cable to the battery posts that has a wire going to ground on the equipment.