



***TRANSIT
WORKFORCE
CENTER***

Making Connections 2022

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Drive to Revive: Preparing Operators for ZEB Deployment

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An embedded video played on this slide during the presentation - you can view the video on the resource page: https://www.transitworkforce.org/resource_library/making-connections-2022-drive-to-revive-preparing-operators-for-zeb-deployment/

Q&A



New Training Course **Battery-Electric Bus**

Familiarization Training



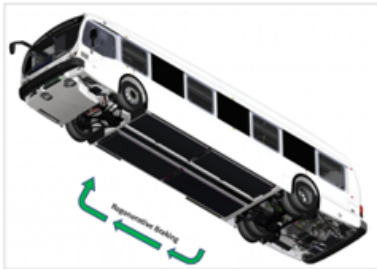
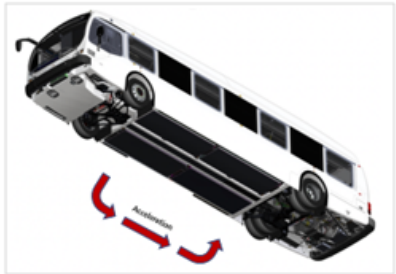
Course Preview

Regenerative Braking

Before we take a closer look at the components, let's examine a principle unique to BEBs and hybrid buses: **regenerative braking**. What is regenerative braking you ask?

Well typically, with BEBs during normal driving conditions the high voltage batteries will provide energy to the traction motor, which supplies torque effort to turn the wheels on the drive axle.

During regenerative braking however (example being coasting to a stop), the flow of energy is reversed. The traction motor then becomes a generator, where the motion of the wheels on the drive axle turns the transmission and traction motor, charging the high voltage batteries and extending the drive time. Regenerative braking undergoes a deceleration similar to that of a traditional retarder. Keep in mind that regenerative braking will stop as soon as the operator reapplies the accelerator, in turn requesting torque from the propulsion system.

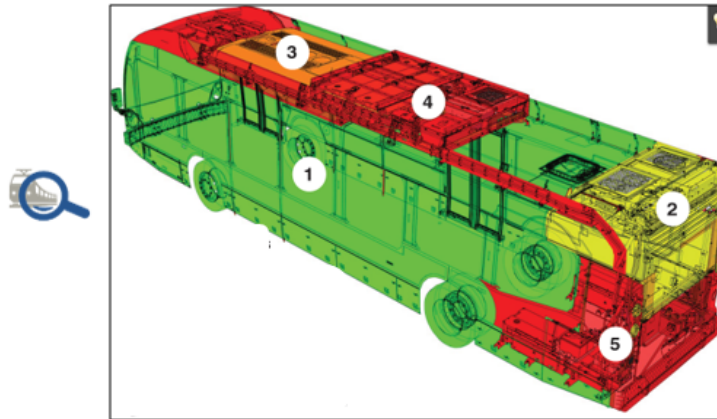


It is absolutely vital to a BEB that regenerative braking be working efficiently. As mentioned, it is a process that begins anytime the driver starts to reduce acceleration, and turns the motor into a generator and try and recuperate that energy. In that regard it kind of works like a hybrid, as we decelerate, trying and recover some of that power.



Learning Application 1D - Identify areas associated risk

Review the following image:



Without referring back to your notes and/or guide, list out the associated areas for each of the corresponding colors in the rows below:

High Risk (shown in Red):

Turn OFF 12/24 VDC Battery Disconnect for the bus and apply a multi-lockout device and a lock and tag on the switch to prevent it from becoming energized.





Project Timeline

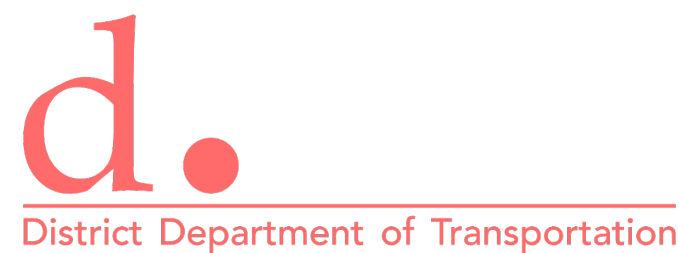
Course
Development
January –
December 2022

Pilot tests –
Coming January
2023

Course open to
public –
February/March
2023



Thank you to our partners:



Session Evaluation

