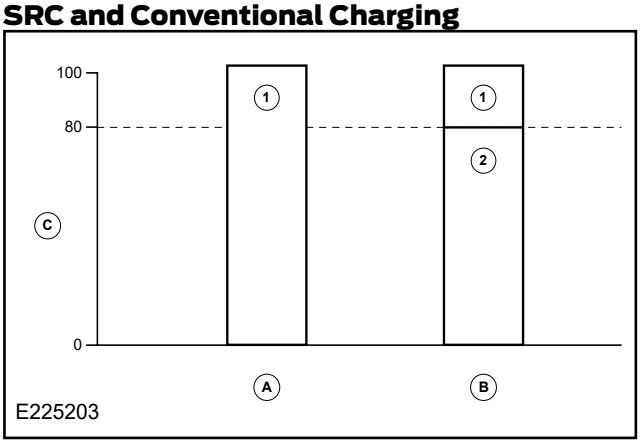
4.4.3 Smart Regenerative Charging (SRC)

Smart Regenerative Charging varies alternator output using information from the Battery Monitoring Sensor to reduce fuel consumption. Alternator output can be increased during deceleration to charge the battery without the use of additional fuel. Alternator output can also be decreased to reduce the load on the engine and therefore fuel used. During this condition the battery supports the electrical loads. This function can be turned off by using Third Party High Power mode as detailed later in this section.

By comparison, Conventional Charging aims to charge the battery at a constant level which varies with battery temperature.

SRC and Conventional Charging



Item	Description
A	Conventional Charging
B	Smart Regenerative Charging (SRC)
C	Battery Charge Level (%)
1	Minimum 13.5V at battery when charging
2	Minimum 12.2V at battery when charging

4.4.4 SRC Override

SRC can be interrupted temporarily in the following ways:

- By the Start-Stop button if the vehicle is stationary.
- By Third Party High Power mode

The Start-Stop deactivation button also deactivates SRC (LED tell-tale is illuminated). When deactivated, and when the vehicle is stationary, the engine will not shut down and the battery will be charged by the alternator with Conventional Charging.

4.4.5 Third Party High Power Mode

WARNINGS:

The Third Party High Power mode can inhibit engine shutdown (AEIS) which is a safety procedure designed to protect against carbon monoxide (CO) poisoning. Do not operate the feature on a vehicle in a confined space. Do not install the feature on a vehicle that may be left running in a confined space. Do not allow carbon monoxide to accumulate.

The Third Party High Power mode is a single method that has various effects. Do not allow the Third Party High Power mode to be active in incorrect conditions, as this may lead to unintended consequences. When implementing automated control of Third Party High Power mode, be sure to consider the full range of effects.

The Third Party High Power mode feature must not be grounded permanently. This will invalidate the emission and homologation of the vehicle. Permanently disabling the vehicle's fuel save features will require rehomologation as part of the approval process by the converter.

When fitting automated systems to control Third Party High Power mode, be sure to record details within the owner's vehicle information. Advise subsequent owners of modifications relating to application of Third Party High Power mode. Subsequent owners of equipped vehicles are to be informed of applications of Third Party High Power mode.

CAUTION: Third Party High Power mode is only to be used where required for third party equipment functionality. When equipment is off and in a normal drive cycle. All fuel and emission save features must be active.

NOTE: When a vehicle is decommissioned for resale, the Third Party High Power mode inhibit needs to be removed from the vehicle.

Introduction

Third Party High Power mode has only one input that can affect the following features:

- SRC inhibit
- AEIS inhibit (feature restricted in some markets)
- At engine off, inhibit of the timer of the Standard Battery Guard (SBG)

Examples of when to not switch to third party mode include in a normal drive cycle when no extra loads are active. Solutions should only be used for heavy electrical loads, or mechanical power from the Front End Accessory Drive (FEAD), mainly when stationary.

The Third Party High Power mode is subject to configuration and may be subject to restriction.

SRC Inhibit (Conventional Charging)

When SRC is inhibited, such as by Third Party High Power mode, then the system is using Conventional Charging.