



## **FACTUAL REPORT ATTACHMENT**

CT Transit Electric Bus Safety Pamphlet

**Hamden, CT**

**HWY22FH011**

(4 pages)

## WE ARE GOING ELECTRIC!

### CT transit introduces the New Flyer All Electric Bus

#### CTTRANSIT SAFETY & TRAINING DEPARTMENT

Looks like a New Flyer, Drives like a New Flyer,  
That's because it is a New Flyer!

In partnership with New Flyer, CT DOT has unveiled the new Xcelsior CHARGE NG: a new EV (Electric Vehicle) bus for mass mobility in our transit system. The vehicle incorporates three distinct technological advancements to deliver a high-performance bus, including next generation high energy batteries that extend range up to 13%, an advanced protective battery package designed for easy install and simpler serviceability, and a new lightweight electric traction drive system with up to 90% energy recovery.

Based on North America's first low-floor transit bus introduced by New Flyer in 1991, the Xcelsior series was launched in 2009, with over 16,000 delivered to date. New Flyer says it has applied the best of zero-emission design, performance, research, and ingenuity to develop its newest electric bus.



The 2021 New Flyer Xcelsior All Electric Bus  
Coming to a street near you...

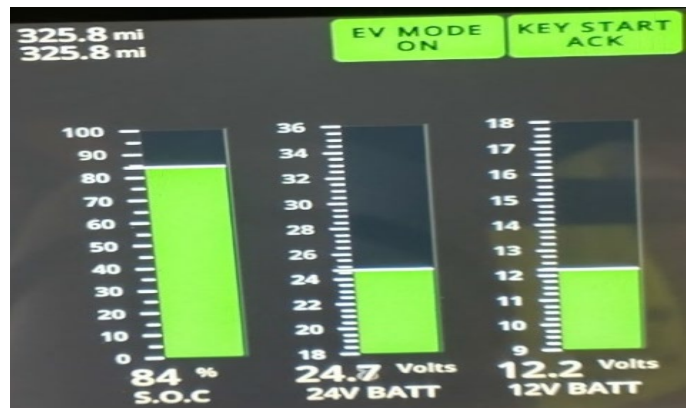
### Big Tech with Small Differences

Only minor variations exist in the care and operations of the new electric buses vs the last generation of New Flyer vehicles. The exterior, interior and drivers area appear nearly identical to the most recent New Flyer series purchased. Below are a few highlights of minor operational differences...



#### PRE-TRIP & VEHICLE STARTING

- Ensure that charging equipment is disconnected from the vehicle (*Contact dispatch immediately if plugged-in*)
- Turn the Master Run switch to the **NIGHT-RUN** Position
- Ensure that the parking brake is applied
- Confirm that the **Wait to Start** indicator on dash is no longer illuminated
- Press and hold the Start Button until **EV Mode ON** is displayed on the control panel
- Upon pre-trip & start-up, the state of charge gauge (S.O.C) shall display current battery level. Please make note of level and **contact dispatch if below 50% S.O.C.**
- Complete Remaining Pre-Trip Inspection



## PRIOR TO DEPARTURE

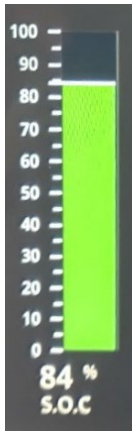
Prior to moving the bus after start-up, the *Smart-Rider* suspension & kneeler must be reset. To reset...

- Toggle the **KNEEL SWITCH** momentarily to the **RECOVER** position. Bus will raise to normal ride height and normal vehicle operation may resume.



## VEHICLE OPERATION

General vehicle operations, driver maneuvers, braking and accelerating will all be very similar to previous series vehicles. Unlike any before, these new vehicles are FULLY electric and as such some system variations do exist.



- The number of stops/starts on a route, outdoor temperature, roadway conditions and weather can affect the state of vehicle charge % (SOC) and distance the vehicle can travel on a charge.
- Operators shall monitor the SOC% level during operation. **Any SOC% below 20% shall be reported to dispatch for further instruction.**
- During operation, any and all service lights, check engine lights or system fault notifications shall be reported to dispatch immediately.

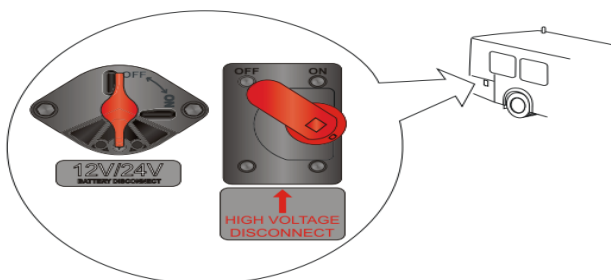
## BATTERY RESETS & SHUTDOWN

Due to advanced technology and electronic systems the bus electrical power should not be shut-off or cycled to reset equipment or field diagnose issues.

- All vehicle or equipment issues should be reported to dispatch via radio for further instructions when safe to do so.
- To shut down the bus, set parking brake and turn the Master Run switch to the **Stop System** position.

### FOR EMERGENCIES ONLY...

- The location of the emergency shut-off switches on the vehicle are located on the curb-side rear.
- These switches should only be accessed and operated by maintenance staff or first-responders. These switches should NOT be cycled for any reason.



## REAL-TIME FEEDBACK & EFFICIENCY

New technology called *New Flyer Connect* allows for real-time driving feedback and efficiency information to be shared directly with the operator. The system works to improve a driver's skills by teaching them which maneuvers are inefficient and reminding them to improve performance during each trip. Efficient operations will lead to increased safety and extended battery range.

- During vehicle operations, the real-time feedback provided is based on driver operations and maneuvers including acceleration, braking and turning. Progressively lit yellow, amber and red lights will illuminate when inefficient vehicle operations are detected.



- At the conclusion of operation, the *Connect* system will display an overall score of efficiency based on the diagram below. At any time, an operator can attain a real-time overall score by pressing the **blue activation button**. Our objective is for operators to set goals to improve ride smoothness and efficiency.



## THE DANGERS OF QUIET

Advancements in technology make our buses substantially more efficient by lessening environmental impacts and urban noise pollution. The removal of diesel engines has eliminated nearly ALL carbon emissions and **NOISE!**



As a reminder, all operators shall remain vigilant while scanning for hazards and prepare for the

unexpected. Although you may see a pedestrian,  
they may not SEE or **HEAR** you.