

Sechrist Millennium Technical Bulletin 004

Differences Between Older & Enhanced Battery Assemblies

Introduction

Sechrist medical products have been undergoing continual product improvements. The enhanced battery assembly is part of the latest Millennium Infant Ventilator hardware improvements.

Enhanced Battery Assembly (P/N 21561)

The major design change improvements in the enhanced battery assembly are:

1. the replacement of the mechanical power switch with an internal electronic switch, and
2. an addition of power control signal via the short cable to latch on the battery power output.

The change item 1 prevents battery from being totally discharged if the ventilator is turned off while the mechanical power switch remains on.

The change item 2 increases power-up sequence reliability by utilizing the LCD backlight control signal to latch on the battery power. This is why if you use the enhanced battery assembly as power source without the AC power adapter, you must **press and hold** the

System On/Off (⏻) button on the front panel until the LCD display is turned on. On the other hand, as long as the AC power adapter is connected to the enhanced battery assembly, the ventilator will always receive the electrical power. Pressing of the System On/Off (⏻) button (no holding required) will turn the ventilator on immediately.

IMPORTANT: If you use the enhanced battery assembly (P/N 21561) power source *without* AC power adapter connected, and to turn on the ventilator, you must **PRESS & HOLD** the System On/Off (⏻) button until the LCD display is turned on.

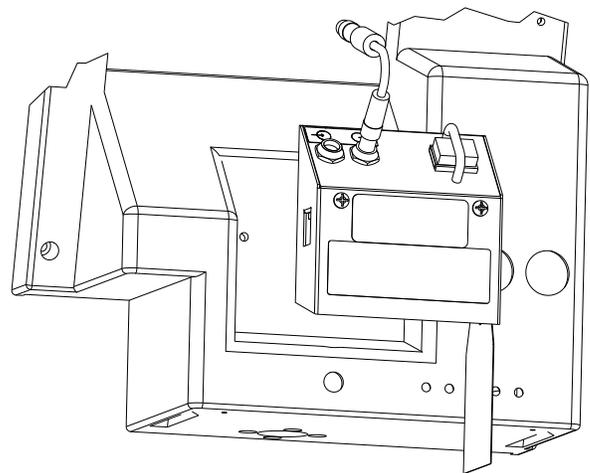
NOTE: The Enhanced Battery Assembly (P/N 21561) can be charged with the AC power adapter alone, without the need to be connected to the ventilator. *(The same condition holds true with the Older Battery Assembly (P/N 21513) but the battery power switch must also be turned on.)*

Older & Enhanced Battery Assemblies Comparison

The following are the major differences between Older Battery Assembly (P/N 21513) and Enhanced Battery Assembly (P/N 21561):

Older Battery Assembly (P/N 21513)

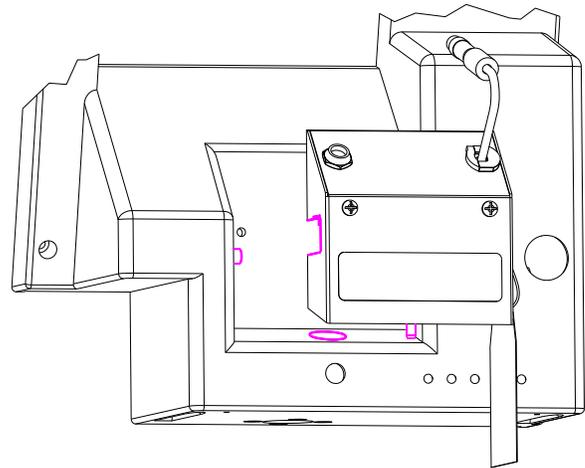
- Mechanical Power On/Off switch must be turned off when ventilator is removed for storage
- Mechanical Power On/Off switch is also used to latch on battery power
- If AC power adapter is plugged in, ventilator is turned on immediately
- If only battery power is used, ventilator is also turned on immediately
- Short power cable to ventilator is detachable
- No keying mechanism, but cannot be properly installed in ventilators with S/N 70000 & higher



Older Battery Assembly (P/N 21513) and the Battery Compartment of Millennium ventilator (S/N 69999 and lower). Note that NO key mechanism installed.

Enhanced Battery Assembly (P/N 21561)

- Electronic switch automatically shuts off battery power to prevent battery damage (No mechanical power switch)
- LCD backlight control signal is used to latch on battery power if AC power adapter is not used
- If AC power adapter is plugged in, ventilator is turned on immediately
- If only battery power is used, press & hold System On/Off (⏻) button until ventilator display is turned on
- Short power cable to ventilator is permanently attached
- Key stud at bottom & key slot at left of battery assembly prevent it from properly installed in ventilators with S/N 69999 & lower



Keying mechanism installed in the Enhanced Battery Assembly (P/N 21561) and the Battery Compartment of Millennium ventilator (S/N 70000 and higher).

Older & Enhanced Battery Assemblies Compatibility

	<i>Older Battery Assembly (P/N 21513)</i>	<i>Enhanced Battery Assembly (P/N 21561)</i>
Millennium Ventilator w/ S/N 69999 and Lower	Compatible	<ul style="list-style-type: none"> • Not compatible • Ventilator would NOT indicate power, battery charging, & low battery status • Ventilator would NOT operate from battery power • Ventilator would operate from AC power adapter via battery assembly, but NOT recommended • “Key” prevents it from properly installed in battery compartment • NO damage to ventilator if accidentally plugged in
Millennium Ventilator w/ S/N 70000 and Higher	<ul style="list-style-type: none"> • Not compatible • Ventilator would NOT indicate power, battery charging, & low battery status • Ventilator would operate from battery power but NOT recommended • Ventilator would operate from AC power adapter via battery assembly, but NOT recommended • Ventilator “key” prevents it from properly installed in battery compartment • NO damage to ventilator if accidentally plugged in 	Compatible

WARNING: To insure compatibility, use **Older Battery Assembly (P/N 21513)** only with Millennium ventilator **S/N 69999 and lower**.

WARNING: To insure compatibility, use **Enhanced Battery Assembly (P/N 21561)** only with Millennium ventilator **S/N 70000 and higher**.

WARNING: To insure compatibility, the battery assembly must be properly installed in the ventilator's battery compartment. The two mounting screws must be properly secured and tightened.