



**Technical Service Bulletin**

**PATIENT MONITORS**

Welch Allyn, Inc.®  
4341 State Street Road  
Skaneateles Falls, New York  
13153-0220 USA

Tel: 1-800-535-6663 Fax: 1-315-685-3361  
[www.WelchAllyn.com](http://www.WelchAllyn.com)

**Bulletin Type: AS NEEDED**

**Manufacturer: Welch Allyn**

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**THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION**

It can be distributed or made available to only those individuals, companies, and organizations which have current Welch Allyn Confidentiality Agreements, and have a need to know.

- Subject:** TSB–SPOT 4200/LXi LI-ION BATT UPGRADE
- Distribution Scope:** Welch Allyn Global Technical Support, Product, Field & Customer Service Teams & WA ASP's
- Product(s) Referenced:** All SPOT 4200 & SPOT 4500 (LXi) Models  
LITHIUM BATTERY UPGRADE KIT, SPOT P/N: 105631  
BATTERY (Sealed Lead-Acid) ,6 VOLT FOR SPOT P/N: 4200-84  
LITHIUM BATTERY UPGRADE KIT, SPOT LXI P/N: 105632  
LEAD ACID BATTERY (for LXi) P/N: 4500-84
- Serial No.:** The Lithium-Ion (Li-Ion) batteries will be introduced into manufacturing starting with the following serial numbers:
- SPOT 4200 – S/N: 201405000 (Introduction April 18, 2014)
  - SPOT 4500 (LXi) – S/N: 20140405000 (Introduction April 7, 2014)
- Summary:** Welch Allyn is pleased to announce the release of the Li-Ion Battery Upgrade Kits for the SPOT 4200 and the SPOT LXi 4500. The new Li-Ion batteries will enhance battery performance.
- Issue:** The performance of the Sealed Lead-Acid Batteries created customer dissatisfaction with the batteries and with the devices into which they were installed.

### **Li-Ion Battery:**

The new Li-Ion battery addresses customer dissatisfaction with aspects of the performance of the Sealed Lead-Acid battery. Compared with the SLA battery, the Li-Ion battery provides:

- Longer battery life (~10x). Because of the Lithium-Ion Iron Phosphate chemistry and smart charging technology employed in the Li-Ion battery, there is very slow battery capacity degradation over time when the battery is repeatedly allowed to fully discharge before recharging.
- SPOT LXi only: Up to 30% faster charge time (~ 8 hours from fully discharged to full capacity).
- SPOT 4200 only: Increased battery operating capacity per full charge (~50%) and up to 15% faster charge time (~10 hours from fully discharged to full capacity).

**Note: The warranty period of the Li-Ion battery for both SPOT 4200 and SPOT LXi is one (1) year.**

### **Action: Li-Ion Battery Support:**

The Li-Ion battery upgrade kit can be ordered through Welch Allyn or distribution using the part numbers listed above.

The Li-Ion battery is a direct replacement part for the existing SLA battery. In order to connect the battery to the device, a Phillips head screwdriver will be needed to open the battery compartment door and, after attaching the battery, to secure the battery door. Replacement instructions are provided in the kit, see:

WA material #720744 SPOT Vital Signs Battery Upgrade Install Instructions

WA material #720745 SPOT Vital Signs LXi Battery Upgrade Install Instructions

### **Battery Gauge Performance and Charging Behavior:**

When a Li-Ion battery is installed, the vital signs device is usable *as long as the battery icon is completely full.*

If anything less than a full battery icon is displayed, the device may shut down at any time. If this should happen, the device may not be usable until the battery has been charged. Welch Allyn recommends to plug the device into A/C power and recharge the battery until the unit indicates that it is no longer accepting a charge before using.

### **Reference to Standards:**

- 21 CFR Part 820, ISO 13485, MPD SOP-0002

**Updates:** Internet/Intranet ☒

**Service Strategy:** Note: The Li-Ion Battery is not a required upgrade. Both Sealed Lead-Acid batteries (P/Ns: 4200-84 & 4500-84) will not be available from Welch Allyn after June 30, 2014.

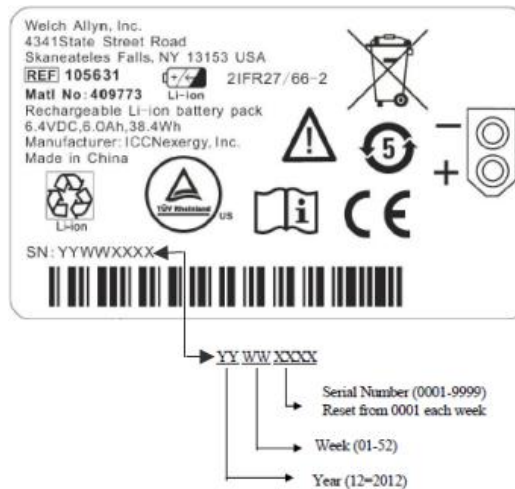
SLA batteries that stop functioning while in warranty on or before June 30 will be replaced with SLA batteries. SLA batteries that stop functioning within the warranty period, but after June 30, will be replaced with the appropriate Li-Ion battery at no additional cost to the customer.

Customer Service and Technical Support:

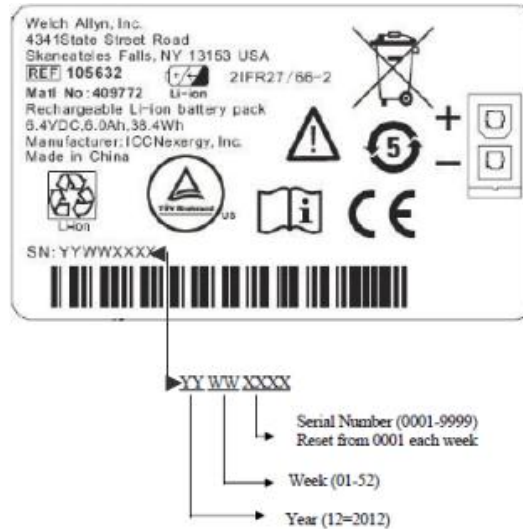
- Customers may order the Li-Ion Battery Kit, through Welch Allyn, its Service Centers and distributors.
- Exceptions to the costs and discounts of the Li-Ion battery will be handled on a case-by-case basis through established procedures and/or the appropriate product manager.
- Non-functioning Welch Allyn SLA & Li-Ion batteries will be replaced with Li-ion batteries at no charge for customers covered by the appropriate Partners In Care (PIC) agreement.
- Distributors can purchase the Li-Ion Battery Upgrade Kit at their standard discount rates.

The age of the battery may be determined using the serial number printed on the battery label as shown below. In certain cases, an invoice may be requested from the customer to confirm warranty status.

**SPOT 4200:**



## SPOT LXi:



## Global Service and Repair Centers:

Note: Both SLA batteries (P/Ns: 4200-84 & 4500-84) will be available to order for service replacement until June 30, 2014.

SLA's that stop functioning while in warranty on or before June 30 will be replaced with an SLA. SLAs that stop functioning within the warranty period, but after June 30 will be replaced with the appropriate Li-Ion battery at no additional cost to the customer.

- The option to upgrade to the Li-Ion battery should be included on all repair estimates for devices that have the SLA installed when received into repair.
- After June 30, 2014, if a unit is received for repair with a bad SLA battery and the customer declines the upgrade to Li-Ion, the unit will be returned to them with the bad SLA battery.
- Exceptions to the costs and discounts of the Li-Ion battery will be handled on a case-by-case basis through the appropriate product manager.
- Service shall follow the installation instructions, included in the upgrade kit, for installing the battery and applying the Li-Ion battery sticker to the device.
- All CDs and literature included in the upgrade kit will be shipped with the unit back to the customer.

All shipping packages containing devices with the Li-Ion Battery installed will need to be updated with the applicable Li-Ion Battery label (WA material # 713033).

All devices containing the Li-Ion battery, including new units, loaners and repaired units, will ship with the battery disconnected.

This is a change to our installation procedures for our customers. For

connection details, refer to the following documents which will be included with repaired product shipments:

- DIR# 80018653: LIT INSERT BATT CONNECT INITIAL SPOT (WA material #720736)
- DIR# 80018654: LIT INSERT BATT CONNECT INITIAL SPOT LXi (WA material # 720737)

**Required Tools:** #2 Philips Head Screw-Driver

- Required Materials:**
- LITHIUM BATTERY UPGRADE KIT, SPOT P/N: 105631
  - LITHIUM BATTERY UPGRADE KIT, SPOT LXI P/N: 105632
  - DIR# 80018653: LIT INSERT BATT CONNECT INITIAL SPOT (WA material #720736)
  - DIR# 80018654: LIT INSERT BATT CONNECT INITIAL SPOT LXi (WA material # 720737)
  - Li-Ion Battery label (WA material # 713033)

**Quality Documents:** **All service centers using SAP to record service transactions:** For each product serviced, record the service activity in SAP.  
**All other service centers and Field Service:** For each product serviced, complete and file a service report and attach to the service DHR.

**Notes:**

1. Contact Welch Allyn regarding any questions or concerns from this or other issues.
2. Drawings, illustrations, and part numbers in this document are for reference purposes only and subject to change.

**End of Bulletin**

Revision History					
Version	Description	Change #	Init	Release Date	Appr
A	Initial Release	D*	SMB	D*	D*
B	<ul style="list-style-type: none"> <li>• Added Manufacturing Serial Numbers</li> <li>• Corrected Material Number descriptions</li> <li>• This version supersedes previous version</li> </ul>	D*	SMB	D*	D*
D* SEE SAP DIR FOR CHANGE NUMBER, APPROVER NAME AND DATE OF APPROVAL					