

Date: Aug 10, 2020  
Applicability: XEM – XPULSE – XDS1 - XBOLT  
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## BACKGROUND

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Higher run lengths and higher peak demand are being demanded from the XEM battery during operation. To meet this demand, Extreme is releasing an 18V probe to field test. This probe is a combination of existing commercial parts with a custom battery pack designed and manufactured by Charger Industries.

## FIELD TEST SOLUTION

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The 18V Extreme battery solution provides 22% more capacity under normal operating loads. It can also handle higher peak demand than the existing battery assembly without premature depletion.

If successful, these batteries will help extend the downhole life of the string from a maximum of 150 amp-hours to 183 amp-hours while providing a better performance for the 100V xBolt telemetry probe or existing HVTX in some high load applications.

The primary differences between the standard 14V and new 18V solutions are:

- Voltage of cells increased from 14V to 18V
- Battery life increased roughly 22%
- New 7.2.0.12 Firmware released for managing increased voltage (backwards compatible)
- XDirect v4.0.0.63 or newer will be utilized to properly program the new 18V battery
- 18V battery probe assembly is slightly longer than a standard lithium battery
  - o 64" – 14V Lithium Battery with resizable centralizer
  - o 76.225" – 14V Lithium Battery
  - o 76.72" – 18V Lithium Battery
- 18V lithium battery must use resizable centralizer that is commercial on xBolt II. This will result in an overall shorter string length and be field-sizeable (with replacement centralizers)
  - o 31.72' – String with two 18V batteries
  - o 35.70' – String with two standard 14V batteries
- Tool length calculator has been updated to incorporate the 18V and field resizable centralizers

