



Workhorse Battery Failure

Date: August 20, 1999

Abstract

Several WorkHorse Sentinel battery packs have been found to have zero voltage once installed in the WH ADCP Sentinel End-Cap.

Instrument/Program Affected

All Workhorse (WH) systems using battery packs.

Description

The WH Sentinel End Cap uses 4 studs to attach the battery pack into place. These studs are coated with shrink tube to prevent shorting while the battery pack is installed. The top threaded portions of the studs are unprotected to allow for the retaining nut to be installed.

The battery packs are tested during their assembly to ensure that they will fit properly over the 4 studs in the End Cap. RDI has discovered that the fixture used to test this fit has been accidentally damaging the individual battery cell protective coating.

The damage to this coating allows the unprotected portion of the studs to momentarily short out the battery pack. This results in blowing the protective fuse inside the battery pack. The battery pack is then open and will read as zero volts DC.

Solution/Action

Short-Term Solution

All battery packs are being delivered with a WH Battery Pack Installation Package. This package contains 4 protective 1/8-diameter tubes to cover the unprotected portion of the threaded studs. These tubes are placed over the top of the studs prior to battery installation and then removed once the battery pack is in place.

RDI recommends that the WH Battery Pack Installation Package be used by all WH customers immediately to prevent accidental shorting of the battery pack. Customers can obtain this package free of charge by contacting RD Instruments Customer Service Department.

Long-Term Solution

We are designing a new WH Battery Pack that will contain permanent internal sleeves protecting the battery pack from any accidental shorting against the 4 WH End Cap studs. It is anticipated that all battery packs shipped after September 1999 will contain these protective sleeves.

We apologize for the inconvenience this may cause you.