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### AMF/Deadman Battery Replacement

#### A. BACKGROUND

This AMF/Deadman feature provides a means of commanding the SEM to initiate an ESD sequence if four circumstances occur simultaneously. These are:

- Loss of Conduit Pressure
- Loss of Hydrostatic Head Pressure
- Loss of SEM power
- Loss of Communications (between PODs).

The AMF/Deadman system uses batteries to power up the SEM electronics (9VDC regulated to 5VDC) and also provides solenoid valve electrical power (27VDC).

The original manufacturer of the batteries was sold to another battery manufacturer. The new manufacturer's upper management decided there was not enough quantity of the existing battery to justify setting up a new production line. The new manufacturer has a similar battery and offered to utilize these batteries in a new pack. The new battery is of the same chemical makeup (Li-MnO<sub>2</sub>) but of different amp-hour rating. Due to this smaller amp-hour rating more batteries will be required to equal the original battery amp-hour rating.

#### B. RECOMMENDED COURSE OF ACTION

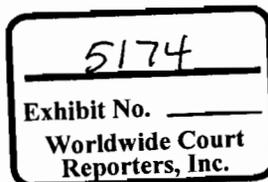
Due to obsolescence of the existing AMF lithium battery a replacement will be introduced. The part numbers that will be obsolete are:

- 619083-01-13 – Battery Pack Assembly
- 2021604-01 – 3 Cell Battery Pack Assembly
- 2021604-02 – 6 Cell Battery Pack Assembly
- 2711396-01 – Lithium Battery Cell

Cameron engineering, working with the new battery manufacturer came up with a 9 VDC battery pack that would be used to make up the SEM 9VDC and 27VDC requirement. There will be two battery packs, one for SEM A and one for SEM B 9VDC. Three other battery packs, connected in series, are for the 27VDC. This gives a total of 5 battery packs for each POD.

This arrangement will be for Mk I and Mk II PODs.

Systems that have battery packs located in the STM will convert to having all AMF/Deadman batteries located in the SEM.



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For first time installation a kit (P/N 2186374-04) will be ordered. This kit would include mounting hardware, battery packs and installation instructions. After the initial installation only the battery packs (P/N 2232368-01) need to be ordered.

Cameron is making the same recommendations for battery replacement:

**It is recommended that the 9VDC and 27VDC battery packs be replaced after:**

- **One year of on-time operation.**
- **When the number of actuations has been exceeded for that year (33).**
- **Five years after date of purchase.**
- **Whichever of the above events happens first**