



Collins Aerospace

MDC BATTERY FAILURE

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MDC BATTERY FAILURE

MDC Battery The Maintenance Diagnostic Computer (MDC) contains an internal CIMOS battery that is required to keep Non-Volatile-Memory and real time clocks active while avionics power is off. Over time this battery can and will deplete. When this happens all NVM and real time clock data will drop upon avionics master shut down

MDC Types and Part Numbers Affected See Table Below:

Type Equipment	Part Number
MDC-3000	822-1139-001/021/301/401/402
MDC-3110	822-1987-001/002/003/004/005/006/007/008
MDC-4000	622-9818-001/002/003/004/005/006/020/101/102/110/120/121/122/153/201/210/212/213/301/401/402/403/404/501/610/652/653/701/751/771/773
MDC-4110	822-1988-001/004/005/008/024/028/104

SIL Recommendations Rockwell Collins has published a Service Information Letter MDC-XXX0 SIL 11-1 (523-0819323) that highlights this issue that includes replacement intervals as well as Special Pricing Guidelines on replacements.

Preventative Maintenance Steps Rockwell Collins recommends that these units are proactively replaced or repaired as to reduce the possibility of aircraft down time. The aforementioned SIL contains a recommended repair interval table that calls out different replacement and repair times based on unit MOD status and Flight Hours per year.

Clock Reversion When the MDC Battery dies the most apparent notification is the ARINC Clock reverting back to a 1990s default date. When the aircraft is powered up the GPS looks for a valid time and date which is being provided by the MDC. As such when this happens the aircraft's databases will show not current and in aircraft with XM Weather functionality will inhibit proper operation.



Dropping of MDT Tables and Checklist Another effect of battery depletion is the Non-Volatile Memory items, namely the Maintenance Diagnostic Tables (MDT) and the aircraft checklist files will be erased. This can be easily seen when attempting to enter the Maintenance Main Menu pages with a dead battery. The prompt No Data Available will be seen on the screen.



Last Replacement Date If you have questions on when your battery was last changed. Contact Customer Support at 319-295-5000 with the unit part number and serial number.

Replacement Guidelines

Repair/Rental Exchange When the internal battery has failed the MDC must be removed and either sent to an authorized Rockwell Collins repair facility (facility search in link below), <https://portal.rockwellcollins.com/web/repair/repair-locations> or a new unit can be dropped shipped to you directly via our Rental Exchange Pool (Contacts for Rental Exchange Below)

Rental Exchange

rentalexchange@rockwellcollins.com

US Phone: 1-800-713-7693

Int'l Phone: 1-319-295-4361

MDT Needed Upon receipt of the new or overhauled unit the Maintenance Diagnostic Tables will need to be installed in order to restore proper functionality. The MDC-3000/4000 series units are pre-loaded at the Service Center with the proper MDT based on the unit part number. The MDC-3110/4110 series units are field loadable. Once the customer identifies the proper part number MDT for their aircraft configuration. The table can be downloaded from the website below:

<https://portal.rockwellcollins.com/web/support-self-service/welcome> If the part number is provided the MDT for these series can be pre-loaded at the service center as well.

Load Procedure The exact loading procedure can vary from aircraft to aircraft. For proper instructions please check the Avionics System Manual for your specific aircraft. A general load procedure can be found at the link below: [Load Procedure](#)

Checklist Procurement and Reload As the Electronic Checklist will be lost when the unit is sent for repair, you will need to either:

1. Obtain the raw .cle file from the aircraft OEM and build the respective checklist files using the Rockwell Collins Checklist Editor Tool, or

2. Rebuild the customer checklist completely using the Rockwell Collins Checklist Editor Tool.

Once the checklist has been built follow the same load procedures as the MDTs.

If additional assistance is required beyond the aforementioned videos and articles, technical assistance is available. Collins Aerospace Customer Support Engineers (CSE) that are assigned to your area. A listing of CSE points of contact can be found at the following web link, under the "Service and Support" section:

<https://www.rockwellcollins.com/Search/ContactDirectory>