DEPARTMENT OF THE AIR FORCE
AIR FORCE LIFE CYCLE MANAGEMENT CENTER
ROBINS AIR FORCE BASE GEORGIA

August 17, 2015

MEMORANDUM FOR HQ ACC/A5RA

FROM: AFLCMC/WIU (SOF/PR) Rotary Division
235 Byron Street, Suite 19A
Robins AFB, GA 31098- 1670

SUBJECT: Use of Qualified Medical Equipment/Patient Movement Items (PMI) on the HH-60G

1. This Safe-to-Fly (STF) letter supersedes and cancels the STF letter, Use of Carry-on Patient Movement Items (PMI) for HH-60G, 08 April 2013.

2. AFLCMC/WIUE has reviewed applicable system and test data and approves the use of the following medical equipment on the HH-60G aircraft:

a. Phillips Healthcare Heartstart MRx Monitor/Automated External Defibrillator (AED)
b. Philips IntelliVue MP2 Physiological Patient Monitor
c. AutoMedx Medical Support Technology Simplified Automated Ventilator (SAVe)
d. Impact Instrumentation 731M EMV+ Ventilator
e. Belmont Instrument Corporation Buddy Plus Fluid Warmer

(1) The 413th Flight Test Squadron successfully demonstrated electromagnetic capability (EMC) between systems 2a. through 2e. and aircraft systems with no electromagnetic interference (EMI) observed (reference AAC Letter Report 12-39).
(2) These items are to be operated on their own internal battery.
(3) Item 2a is incompatible with night vision goggles equipment.

f. Vital Signs enFlow IV/Blood Warmer, Model 100 with A/C Power Supply Model 120

(1) Device has “yellow” and “red” LEDs that are not NVIS compatible.

g. Thermogear Chillbuster Portable Electric Blanket System (Model 8001)

(1) Device is not compatible with 400 Hz aircraft power
(2) Audible alarm for low battery light cannot be heard during flight. Trained users must rely on the visual alarm.

h. Welch-Allyn Inc. Propaq Encore 206EL

(1) United States Air Force Research Laboratory found this unit, and all 206ELs with serial numbers higher than EA000225 and beginning with D, acceptable for use during all phases of flight on all USAF aircraft while operating on its internal battery (reference AFRL-HE-BR-TR-1998-0053).
(2) It is recommended to restrict operational use in extreme hot/cold environments if the carbon dioxide and breath rate sensor is a critical portion of patient monitoring.

i. Welch-Allyn Flexiport Blood Pressure Cuff (Use With Propaq Encore 206EL).

(1) Contains no electrical parts; EMI testing not required.

j. Active Signal Technologies A-Scope Noise Immune Stethoscope

(1) The United States Army Aeromedical Research Laboratory (USAARL) successfully demonstrated EMC between system and aircraft systems with no EMI observed (reference USAARL Report 2012-03).
(2) This item is to be operated on its own internal battery.
(3) It is recommended that the stethoscope be stored with the extension cable inserted into the connector to avoid the material fatigue associated with repeated insertion and removal of the cable.
(4) When the item experiences low battery power, a loud buzzing or repetitive noise is heard through the headphones/earplugs. This noise prevents use of the equipment. Users should immediately replace batteries in the event of low battery power.
(5) When using the item in a high-noise environment with the CEPs, a second form of hearing protection, such as flight helmet ear cups, is recommended.

k. Vidacare EZ-IO G3 Power Driver Model 9040

(1) The USAF Aeromedical Test Lab has successfully conducted Safe-To-fly testing of the item (reference report no. FY12.007). After studying the internal schematics of the item provided by the manufacturer, the technical experts at AFRL/RYWD and ASC/ENAC deemed that EMI testing was not required for this item.
(2) Item is powered by a lithium-ion battery fully encapsulated within the driver. It is recommended that item be checked monthly for battery leakage and disposed of if there are any signs of battery leakage.
(3) It is recommended to check the status of the LED battery indicator before and after missions and plan for immediate replacement on first flashing red light indication.
(4) Trigger cover may inadvertently come off. It is recommended to transport the item in its original packaging inside AE crew's medical supply bag.
(5) It is recommended not to rock the catheter while removing and not to leave the catheter in for more than 24 hours.
(6) Use of this item during takeoff or landing is not recommended.

l. Adams Magnetic Neodymium Magnet, Henkel Corp. Loctite Epoxy and Aesculap Inc.SterilContainer for the Impact Special Medical Emergency Evacuation Device (SMEED).

(1) The test results indicate the device will not cause adverse effects to the patient, aircrew, or aircraft when used in accordance with manufacturer guidelines, the tie-down configuration and with the limitations provided in the attached technical report. The tie-down configuration and limitations are as follows:
(2) Use protective gloves when handling individual magnets during installation or repair. Each magnet has an attraction force of 178-200 N (40-45 lbs.) at contact that can lead to contusions.
(3) Close proximity to magnets may interfere with magnetically-sensitive medical. implants. Magnets will interfere or temporarily adjust settings for devices such as pacemakers , and adjustable shunt valves. Pacemakers should be at least 18 cm away from each magnet. Two connected magnets will exert a magnetic flux density of 4.6 gauss at 18 cm and 4350 gauss at the source. Care provider should be aware of patient implants and patient proximity to magnets.
(4) Keep electrocardiogram wires at least 13 cm away from each magnet. Keep Common Access Cards (CAC) and other magnetic cards, such as credit cards, more than 3 cm away. Other Aeromedical Evacuation equipment will not be susceptible. Keep magnetic compasses 50 cm away for accurate readings.
(5) Magnets will be permanently demagnetized when in temperatures above 150° C. When sterilizing the magnets, ensure that the temperature stays below 150° C.
(6) When handling the individual magnets, do not leave magnets unsecured. Magnets are brittle and colliding magnets can splinter into sharp fragments.
(7) The magnet-tray device will be pre-assembled before use in an operational environment. Do not magnetically attach the magnet-tray device to surfaces other than the SMEED. If any of the eight magnets are cracked or missing, do not use magnet-tray device.

m. Zoll Propaq MD Defibrillator and Vital Signs Monitor

(1) The USAF Aeromedical Test Lab has successfully conducted EMI/C testing per MIL-STD-461F.
(2) The Detachment 1, 413th Flight Test Squadron successfully conducted EMI/C testing during ground and flight conditions for the Zoll Propaq MD on the HH-60G IAW IAW MIL-STD-464, *Electromagnetic Environmental Effects Requirements for Systems,* and MIL-HDBK-516, *Airworthiness Certification Criteria* .
(3) Unit to be operated on internal battery power only.
(4) Zoll Propaq MD is to be powered off during fueling operations.
(5) Zoll Propaq MD may not operate correctly below 0° C or above 50° C.

n. Verathon Ranger Glidescope Video Laryngoscope System
   (1) The USAF Aeromedical Test Lab has successfully conducted EMI/C testing per MIL-STD-461F.
   (2) The Detachment 1, 413th Flight Test Squadron successfully conducted EMI/C testing during ground and flight conditions for the Verathon Glidescope on the HH-60G IAW IAW MIL-STD-464, *Electromagnetic Environmental Effects Requirements for Systems,* and MIL-HDBK-516, *Airworthiness Certification Criteria* .
   (3) Unit to be operated on internal battery power only.
   (4) Verathon Glidescope is to be powered off during fueling operations.
   (5) Verathon Ranger Glidescope may not operate correctly below -13° C or above 60° C.

3. The above equipment is also limited by the following restrictions as well as TO 1H-60(H)G-2-1, AFI 10-2909 and applicable flight releases:

   a. Electronic medical equipment has been evaluated for compliance with MIL-STD-461F. However, equipment anomalies may occur due to the electromagnetic environment. AFLCMC/WIU engineering shall be notified of any EMC observed to assess impact on safety of flight. The Zoll PropaqMD and Verathon Ranger Glidescope have been EMI/C tested during ground and flight operations including landing on the HH-60G.
   b. The equipment listed has not been tested for compliance with MIL-STD-704D and may not operate correctly when connected to aircraft power. The Zoll PropaqMD and Verathon Ranger Glidescope aircraft power on the HH-60G.
   c. HH-60G cabin noise levels or use of hearing protection by aeromedical personnel may impact ability to discern audible alarms generated by emergency medical equipment components.
   d. Emergency medical equipment may not perform per manufacturer specifications for altitude, temperature, and humidity extremes in which the HH-60G may operate.
   e. Personnel using the devices should be fully aware of any warnings, cautions, and notes associated with the device.

4. Any change to the currently approved configuration will require engineering evaluation and approval from AFLCMC/WIU.

5. Engineering POC for this [redacted]

[redacted]