CANINE (K9) TRAUMA SIMULATOR REQUIREMENTS

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PURPOSE

Volk Field Combat Readiness Training Center (CRTC) requires a high-fidelity canine (K9) trauma simulator to support Tactical Combat Casualty Care (TCCC) training for military medical personnel. The simulator will enable realistic point-of-injury treatment and tactical evacuation procedures for Military Working Dogs (MWDs).

GENERAL REQUIREMENT

The system must accurately replicate the anatomy, physiological responses, and handling characteristics of a Military Working Dog to ensure realistic training in trauma management, airway procedures, hemorrhage control, and evacuation techniques.

PHYSICAL CHARACTERISTICS

The canine trauma simulator must meet the following physical requirements:

- Realistic MWD Representation: Must accurately resemble the size, weight, and external anatomy of a Military Working Dog to support realistic handling, lifting, and litter evacuation.
- Articulated Joints: Must include fully articulated joints that allow natural positioning during assessment, treatment, and transport.
- Palpable Anatomical Landmarks: Must provide realistic tactile structures including ribs, sternum, trachea, and vascular pathways to support accurate landmark identification under stress.

MEDICAL TRAINING CAPABILITIES

The simulator must support the following medical interventions and training tasks:

- Airway Management: Must allow performance of endotracheal intubation consistent with canine airway anatomy.
- Respiratory Intervention: Must support needle thoracentesis (needle decompression) at appropriate anatomical sites.
- Hemorrhage Control: Must include simulated arterial and venous bleeding wounds located on limbs and junctional areas, with controllable bleeding for training purposes.
- Vascular Access: Must support intravenous (IV) catheterization using anatomically accurate vascular structures.

STORAGE / TRANSIT CASE REQUIREMENT STATEMENT

The canine trauma simulator shall be provided with a ruggedized storage and transit case designed to protect the device during transport, handling, and long-term storage. The case must be impact-resistant, weather-resistant, and sized to securely house the simulator and all associated accessories. It must include internal padding or custom-cut foam to prevent movement and damage during transit. The case must support repeated field transport and be suitable for use in training, deployment, and storage environments.