

Egg Harbor Fire Department and First Responders Standard Operating Guidelines

**SUBJECT: RESCUE STRUT SUPPORT SYSTEMS
(ACME THREAD STRUT SYSTEM) OPERATION AND MAINTENANCE**

SOG 322

PURPOSE: This guideline addresses the use and maintenance of strut system. Familiarity with this guideline will maximize the effectiveness of strut use during an emergency response.

SCOPE: This policy shall apply to all members of the Egg Harbor Fire Department.

GENERAL INFORMATION AND SAFETY PRECAUTIONS

- A. Personnel not directly involved in operation or maintenance of a rescue support system should keep a safe distance from the work area.
- B. Installation/operation of a rescue support system by unauthorized personnel or minors is prohibited.
- C. Wear proper apparel and safety goggles during operation and maintenance of a safety support system.
- D. During operation, do not over reach. Maintain a stable footing and balance at all times.
- E. Do not connect any pressurized hose to a strut. Bleed off any pressure from the strut and/or hose before connecting or disconnecting hoses.
- F. Never point a strut toward yourself or other personnel. Accidental activation could cause the strut to extend rapidly and forcefully resulting in serious injury or possible death. Do not activate a strut unless it is between two work surfaces.
- G. Keep the work area clean when maintaining or repairing a rescue support system.
- H. Do not use any accessory that exhibits an air leakage condition.
- I. Any reduction of air pressure could result in collapse and endangerment of personnel.
- J. Do not adjust pressure regulator to exceed the maximum pressure rating of any component in the system apparatus.
- K. In collapse rescue situations, struts are not designed to accept more than 2 extensions totaling 36" (91.44 cm) in length.
- L. Do not use struts as a ladder in trenching operations.

NORMAL OPERATING PROCEDURE

- A. Determine the proper support configuration and select the individual components (extendible acme thread struts, strut extensions and base plates) necessary to achieve the desired configuration and height extension. Struts are not designed to exceed more than two (2) extensions with a total combined length of 36".

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- B. Pull out the lock pin assembly knob on the selected base plate to retract the lock pin. Fully engage the components and then release the knob to lock the components together.

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- C. Secure the base plate(s) with straps, chains, or pins.
- D. Place the acme thread strut in the desired position between the surfaces to be held and a solid surface. Manually extend the strut until the base plates are in contact with the surfaces to be held.

TAKEDOWN

- A. Take down and repositioning is accomplished by removing the load pressure and then manually turning the nut up the inner shaft. If during release, a load shift begins to forcibly collapse the strut, simply releasing the nut will again lock the strut in that extended position where the nut was released.

SCHEDULED MAINTENANCE

- A. Introduction:
 - a. The major components of the RSS and accessories require little maintenance to ensure optimum performance.

GENERAL MAINTENANCE

- A. During Use: Check for erratic movement of the delivery pressure gauge needle. Check for air leakage at all connections and from all components.
- B. After Use: Clean all dust, dirt, oil and grease from the RSS components and accessories.
- C. Quarterly: If not used periodically for training or incidents, the full complement of equipment shall be field tested to ensure its integrity and flawless operational capability.

SURFACE CLEANING

- A. Keep the exterior of all components clean of all dirt, grit, oil and grease accumulations. Wipe exterior surfaces with a lint-free cotton machinery wiping towel lightly dampened with clean water. Then dry the surfaces thoroughly with a clean, dry, lint-free, cotton machinery wiping towel or low pressure compressed air. Compressed air may be used for cleaning in less accessible areas.

INSPECTION

- A. Do not paint any of the RSS components. Check for loose hardware and cracked or deformed parts. Check for O-ring seal leakage while the system is pressurized.
- B. During operation, verify the delivery pressure gauge(s) reads a relatively constant pressure regardless of the inlet pressure and flow rate. Also check for air leakage around any connection or main housing fitting. Any leakage of air at these mating interfaces denotes either a loose connection or a defective O-ring seal that necessitates replacement.
- C. If during the last three (3) months struts and ancillary equipment have not been used for training or incidents they should be field tested to ensure they do not leak and are fully operational in preparation for their next use.