

# Crash Ambulance Modification

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ONE OF the continuing problems of any medical facility is keeping medical supplies for emergency situations easily available. First-aid kits, disaster supplies, medical kits of all kinds, and ambulances are stocked in a different manner at almost every base. The flight surgeon is deeply concerned with the supplies available in the crash ambulance. At many installations these medical supplies are kept in "crash bags" or in boxes inside the ambulance. These containers are usually thrown around in the back of the ambulance and the supplies are in poor condition when needed.

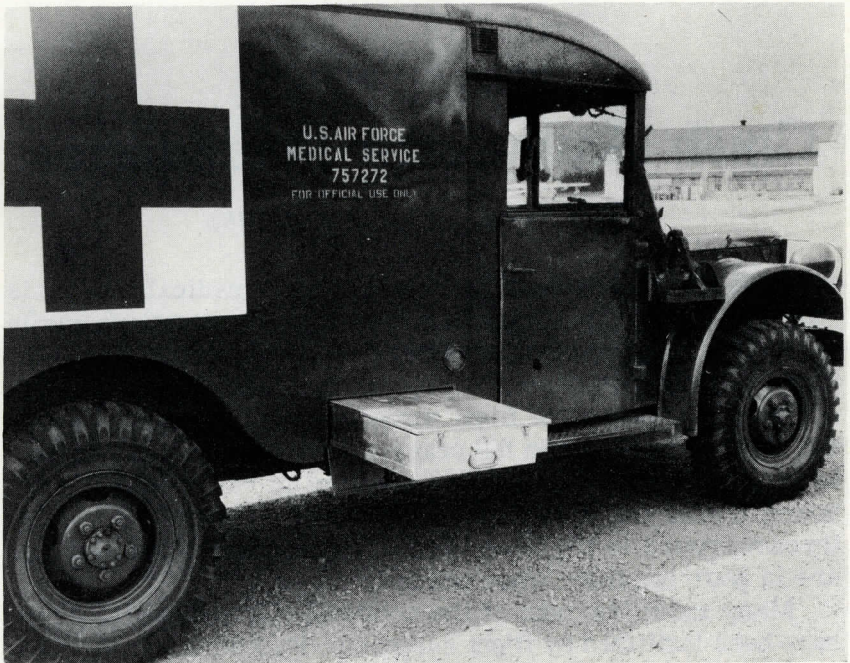
Many modifications of the conventional crash ambulance have been instituted by flight surgeons. Following two off-base crashes at Davis-Monthan Air Force Base in 1950, the base surgeon designed a crash trailer from a modified quarter-ton trailer.<sup>1</sup> This trailer contained much survival equipment for the rescue party as well as medical equipment. In 1952 a more elaborate and costly modification was made at this base.<sup>2</sup> Large exterior cabinets were added to each side of the conventional field ambulance to contain the needed medical supplies and oxygen. A large illuminated cross was placed on top of the vehicle to allow liaison aircraft to spot it in the dark and direct it to the crash scene.

## DESCRIPTION OF MODIFICATION

While serving as flight surgeon for Albrook Air Force Base, Canal Zone, I was faced with the problem of maintaining medical supplies in the crash ambulance. Any modification had to be of such a nature as to allow reconversion of the modified ambulance to its original state within 48 hours, and to conserve funds it seemed best to make something simple, light, serviceable, and inexpensive. The tool compartments of the ambulance were always empty; therefore, drawers were designed to fit inside of the tool compartment on each side in such a manner as to allow the regular tool door cover to be closed (fig. 1). The drawers

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From Department of Aviation Medicine, Randolph Air Force Base, Tex.



*Figure 1. Drawer is shown partially open with stand still folded and top in place. The drawer on the other side of the ambulance is identical.*

were made of sheet aluminum, with care to render them water-proof, and were subdivided by fixed partitions. Each drawer was equipped with a cover that was held in place by two suitcase-type fasteners, to protect the supplies against dust and moisture. Gasket-type seals are recommended for greater protection. The drawer for fluids and plasma was lined with sponge rubber, as was its cover. Each drawer also had a folding stand attached at the base of the drawer front, which could be turned down and used as a support after the drawer was open (fig. 2).

The following supplies and equipment were carried:

Fluid drawer

- Normal saline, 1,000 ml
- Dextrose 5 per cent, 1,000 ml
- Dextran, 500 ml, with intravenous sets
- Arm splints (bass wood)
- Gauze, petrolatum
- Airway

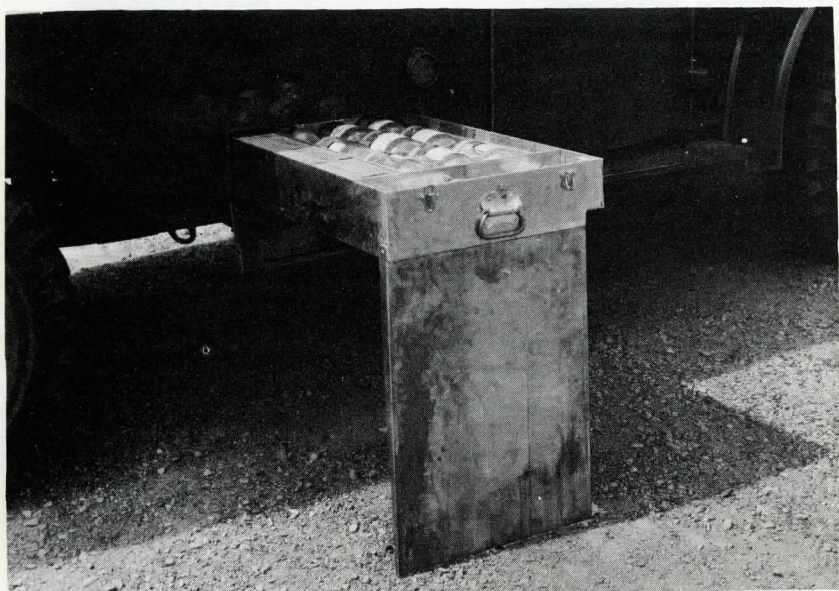
Dressing drawer

- Syringes with needles (sterile)
- Surgical set complete (sterile)
- Splint straps
- Gauze roller plain, 3 inch



Gauze 4 by 4 packages (sterile)  
Gauze 2 by 2 packages (sterile)  
Bandage, compress 4 inch  
Bandage, first-aid small  
Bandage, first-aid large  
Bandage, 1 by 6 roller  
Bandage, muslin  
Bandage, roller 2 inch  
Sheets (sterile)  
Adhesive tape, roller 3 inch  
Bandage, ace, 3 inch  
Bandage, ace, 4 inch  
Suture set complete (sterile)  
Bandage scissors  
Eye pads

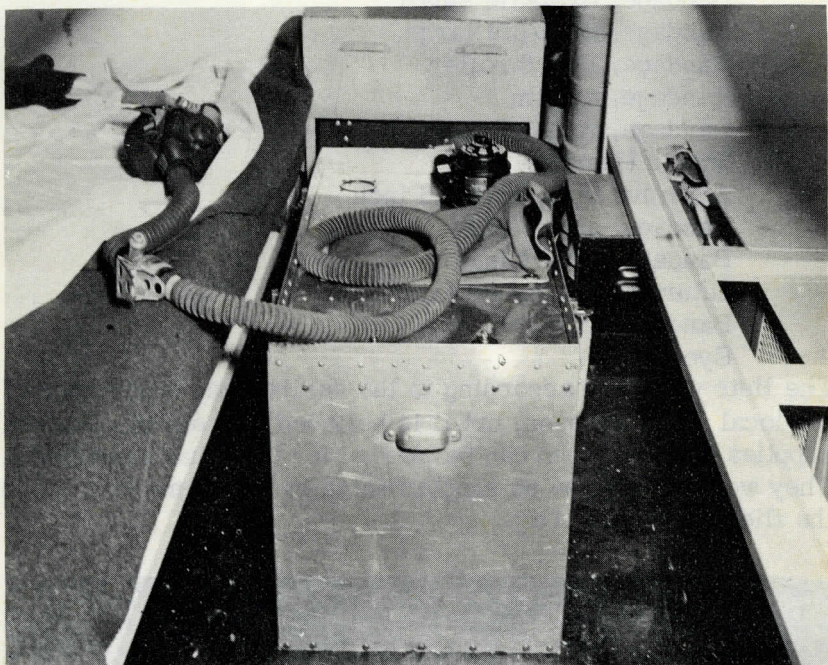
The lists will vary according to the desires and experience of the local flight surgeon, but it is believed that enough medical supplies and equipment can be carried for the usual emergency. They would of course be supplemented by the items carried in the flight surgeon's bag.



*Figure 2. Fluid drawer open with stand extended. Bottles are cradled in sponge rubber.*

An aluminum box containing a type G-1 oxygen cylinder, A-14 regulator, and A-13A mask was also designed for use as an oxygen source. The mask and regulator can be used as a

resuscitator if no other source is available (fig. 3). Gasket-type seals appear to be necessary to prevent infiltration of dust and moisture into the box.



*Figure 3. Portable oxygen supply box in position between litters.*

### SUMMARY

A simple and inexpensive modification of the conventional field crash ambulance is described. Its principal advantages are its lightweight, its low cost, and the easy accessibility of the medical supplies and equipment. The drawers are easily removable and could be placed in another vehicle during maintenance work on the crash ambulance.

### REFERENCES

1. Crash Trailer. U. S. Air Force Medical Service Digest II: 21; 25, Aug. 1951.
2. Crash Ambulance. U. S. Air Force Medical Service Digest III: 6-7, Mar. 1952.



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