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## CRASH AMBULANCE MODIFICATION

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### INTRODUCTION:

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 the back of the ambulance and the supplies are found to be in poor shape when needed.

### HISTORICAL - OTHER MODIFICATIONS:

Undoubtedly many modifications of the conventional crash ambulance have been instituted by thoughtful Flight Surgeons. Following two off base crashes at Davis-Monthan AFB in 1950, the 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 Randolph AFB, Texas.<sup>2</sup> Large exterior cabinets were added to each side of the conventional field ambulance, and these contained the needed medical supplies and oxygen. A large illuminated cross was placed atop the vehicle to allow liason aircraft to spot and direct it to the crash scene in the dark.

### DESCRIPTION OF MODIFICATION:

While serving as Flight Surgeon for Albrook AFB, Canal Zone, I was faced with the problem of maintaining medical supplies in the crash ambulance. There was no money for the elaborate modifications described

above. The ruling concerning re-modification in 48 hrs. also was considered. In view of these obstacles, it seemed best to make something *simple*, light, serviceable, and ~~still~~ <sup>inexpensive</sup> adequate. The tool compartment of the ambulance was always empty, and therefore two drawers were designed to fit this opening. Each drawer was made of sheet aluminum, and the drawer for fluids was lined with sponge rubber. The drawers were fitted to the inside of the tool compartment on each side and allowed the regular tool door cover to be closed. See (Figure 1). Each drawer was equipped with a top which was held in place by two suitcase type fasteners. This top protected the supplies against dirt and dust, and in the case of the fluid supply drawer, was lined with sponge rubber.

The drawer also had a folding stand attached at the base of the drawer front, and this could be folded out and used as a support after the drawer was opened. See (Figure 2). As has been stated, one drawer was designed for fluids and plasma, and the other for bandages, etc. The list of equipment carried is as follows:

#### Fluid drawer

- |                                |                             |
|--------------------------------|-----------------------------|
| (1) Sodium Chloride 1000cc     | (1) Arm splints (bass wood) |
| (2) Dextrose 5% 1000cc         | (2) Gauze, petrolatum       |
| (3) Dextran 500cc with IV sets | (3) Airways                 |

#### Dressing Drawer

- (1) Syringes with needles (sterile)
- (2) Surgical set complete (sterile)
- (3) Splint Straps
- (4) Gauze roller plain 3 inch
- (5) Gauze 4 x 4 Pkgs. (sterile)
- (6) Bandage, compress 4 inch
- (7) ~~Bandage, 1 x 6 roller~~ Gauze 2x2 Pkgs. (sterile)
- (8) Bandage, first aid small
- (9) Bandage, first aid large
- (10) ~~Bandage, 1 x 6 roller~~
- (11) Bandage, muslin
- (12) Bandage, roller 2 inch
- (13) ~~Arm splint straps~~ Sheets (sterile)
- (14) Adhesive tape, roller 3 inch
- (15) Bandage, ace, 3 inch



- (16) Bandage, ace, 4 inch
- (17) Suture Set complete (sterile)
- (18) Bandage scissors
- (19) Eye Pads

This list will obviously vary according to the desires and experience of the local Flight Surgeon, but the drawers provide quick access to the needed medical supplies, and it is felt that enough equipment can be carried for the usual emergency. The equipment would also be supplemented by that carried in the Flight Surgeon's bag.

An aluminum box containing a type G-1 oxygen cylinder, A-14 regulator, and A-13A mask was also designed and used as an oxygen source. This would allow use of the mask and regulator as a resuscitator if no other source were available, ~~see~~ (Figure 3).

#### SUMMARY:

A <sup>simple</sup> ~~easy~~, cheap, modification of the conventional field crash ambulance is described. Its principal advantages are its light weight, its low cost, <sup>and</sup> easy availability of the medical equipment when the drawers are open. It might be noted that the drawers are easily removable and could be placed in another vehicle during maintenance on the crash ambulance.

The drawers should be removed during any washing of the ambulance. Care should be taken to render the drawers waterproof, ~~however.~~

#### REFERENCES:

1. Anon: Crash Trailer. USAF Med. Serv. Digest II (7): 21 August 1951.
2. Anon: Crash Ambulance, USAF Med. Serv. Digest III (2): 6-7, March 1952.