I. 2. On the Organization in the Piemonte and Torino Areas

E. Ciocatto and R. Pattono

In Italy for any kind of emergency (automobile accident, electrocution, fire, poisoning, etc.) the people concerned or the bystanders dial 113. In the sanitary aid region of Piemonte the operator of 113 contacts the nearest qualified Hospital and an ambulance is sent to the site of the accident. Generally, the operator of 113 will also contact the Road Police station, who deal with the medicolegal problems and first aid. The Piemonte Area has an area of 25,399 sq km with the following population:

<table>
<thead>
<tr>
<th>City</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alessandria</td>
<td>102,424</td>
</tr>
<tr>
<td>Asti</td>
<td>76,151</td>
</tr>
<tr>
<td>Cuneo</td>
<td>54,544</td>
</tr>
<tr>
<td>Novara</td>
<td>100,687</td>
</tr>
<tr>
<td>Turin</td>
<td>1,167,968</td>
</tr>
<tr>
<td>Vercelli</td>
<td>56,494</td>
</tr>
</tbody>
</table>

It is important to remember that the ambulances are parked near hospital emergency departments, ready to leave with 2 technicians, specialized in anesthesia and resuscitation. In some cases (myocardial infarction, shock, etc.) there are qualified doctors on hand. We believe that the ambulance is even today still the most efficient method of bringing aid to the injured, and ours is a real mobile intensive care unit. Obviously the autoambulance needs technical equipment as in the ambulance provided by FIAT with the cooperation of the Institute of Anesthesia and Resuscitation of the University of Turin (Figs. 1 and 2).

The basic vehicle meets all requirements due to its modern technical design, comfort, compact size, roominess, arrangement, and comfortable and functional cab. The possibility of installing a wide range of auxiliary equipment transforms a basic ambulance into a specialized and efficient sanitary unit, which, if fully-equipped, could work as a mobile intensive care unit.

Technical Data of the Vehicle

Body: completely metallic, integral body. Wheelbase 2.40 m. Track: front 1.484 m; rear 1.489 m.
Frame: built into body structure in center and rear; independent and bolted to the body in the front.
Engine: four cylinders in line, displacement 1438 cm³, bore 80 mm, stroke 71.5 mm. Compression ratio 8 to 1. Max power 46 HP (DIN). Cast iron cylinder block. Aluminium cylinder head. Crankshaft on five supports. O. H. Timing gear. Horizontal carburetor.
Engine-clutch-gearbox unit in front, transversally located and suspended on resilient blocks.
Clutch: single plate dry clutch with hydraulic control. Automatic recovery of wear clearance.
Fig. 1. Fiat ambulance Model 238 (prototype)

Front wheel drive. Axle shafts connected to the differential by sliding joints and to the wheelshafts by constant velocity joints.
Gearbox: four speeds plus reserve. Constant mesh gears. All forward speeds synchronized. Gearshift lever on floor.
Front suspension with independent wheels equipped with lower wishbones and upper cross leafspring. Leafspring functions also as stabilizer. Telescopic double acting hydraulic shock absorbers. Joints lubricated for life.
Rear suspension with independent wheels and cross torsion bars; longitudinal wishbones with variable resilience bumpers; stabilizer bar and telescopic double acting hydraulic shock absorbers.
Worm and roller steering gear. Steering with independent and symmetrical tierods. Link rod between steering gear housing and transmission lever. Joints of the tierods system: lubricated for life.
Hydraulic brakes on all wheels, with vacuumoperated brake booster. Brake action compensator acting on rear wheel brakes. Hand brake acting on front wheel brake shoes.
Underfloor rear gasoline tank. Capacity approx. 41 liters.
12 volt electric system. 53 A a. c. generator. 48 amp/h battery.
Heating and ventilating system with two-speed electric fan.
Wheels with disc rims, 5K-14". 6.50-14" tires (6 p. r.).
Speed: over 105 km/h.
Payload (besides driver): 6 persons + 310 kg.