

Thin Band

How hard-bitten ambulance crews were converted to using safety belts and why their use is spreading

of Safety

By Wayne Thoms

SIREN SCREAMING and red lights flashing, the Los Angeles emergency ambulance swerved around the corner. There, right before us, was the accident—the grisly details picked up by the harsh glare of the headlights.

The scene was sickeningly familiar to the attendants. They unloosened their safety belts and we ran over to the nearby car. On the run we saw the other details: a curiously quiet crowd, another car crazily twisted about, a hastily covered-up figure on the ground . . .

A young man sat dazed on the ground. His eyes filmed over with pain and shock, he kept repeating over and over how the other car had veered over the center line. He tried to avoid the crash, but couldn't.

The emergency men examine him quickly. Luckily he seems unhurt except for shock. They cover him with a blanket and we run over to the other car.

Here damage is much more extensive. The driver had dozed at the wheel momentarily. But that brief flicker of time was enough. He awakened, he told the attendants, just as his car struck the other one. The shock of the impact hurled him across the seat and jerked his hands from the crazily-spinning wheel.

After the crash the car caromed to the right, directly into a power pole, and then screeched completely around. Now all four doors of the light sedan dangled open.

The ambulance men tend to the moaning driver, still in the front seat of the wrecked car. I look around and notice that the crowd, with its natural aversion to death, stays a good distance from the tiny bundle that was hurled from the car to a grassy bank off the street . . .

The emergency men next go there, pull back the blanket from the figure, make a quick check, shake their heads. I look down at the body, feel myself choking up.

She was a strikingly beautiful girl, about 20 years old. Judging from the elaborate gown she was wearing, she was returning from a party. She was unmarked—but dead.

Her escort, the driver, was more fortunate. Although badly injured when his head struck the sharp corners of the dash

area, he was still alive and probably would recover, the attendants said, thanks to his having remained in the car.

The dead and injured loaded aboard the ambulance, we start the screaming way back to Receiving Hospital.

Neither of the attendants nor I have much to say on the gloomy return ride. But the pity of the girl's death was on all our minds. Finally, just before we turned into the infirmary, the driver says in a flat voice:

"Not a mark on her either. Strange how a person can be tossed out of a car and be killed from concussion alone—with no marks showing!"

At the emergency ward, I watch the driver swiftly unfasten his safety belt, drop to the ground and run over to the back door. He opens it and removes the web-like Gilson belt which hangs over the opening. Meanwhile the attendant in the rear seat has also taken off his safety belt and unstrapped the long nylon belt which protects the patient in the stretcher.

The gory part of the assignment over, I headed for the office of Howard Roberts, chief attendant of the Ambulance Service of Los Angeles.

With the memory of the tragic death of the girl still fresh, I asked Mr. Roberts about the frequency of such fatalities where the victim dies from being thrown out of the car.

Seeing the shock in my own eyes, Mr. Roberts was sympathetic, but not too comforting.

"Unfortunately, what you just now saw was not overly dramatic or unusual. You were fortunate in that you did not see something a great deal worse.

"A long time ago we found that almost invariably those who were thrown from an automobile were severely or critically injured. Naturally, we have been highly concerned with this since we, who must operate our own vehicles under red light and siren conditions, are extremely vulnerable to this type of accident. Also, being a municipally-operated organization, we are liable to all those whom we transport and we must be absolutely certain not to create further injury to those we carry or to our own crews."

Has recent automotive engineering improved safety, I

asked the official.

"The automobile has been improved in a lot of ways," he answered, "but we don't think the progress in door design has progressed as has speed or brakes."

"We've learned," he went on, "that any time a car is hit at any one of its corners the sill is sprung, pounding the door frame out of square and the doors then usually pop open. If the vehicle is spinning—as was the case tonight—the occupants are thrown onto the street, against a curb, into oncoming traffic—or the car itself will sometimes roll on top of them!"

"In fact," he said, "it is rare for us to see a vehicle that has been in a serious accident where the doors did not come open. And that, of course, leads to so many fatalities."

I commented to Mr. Roberts on HOP UP & MOTOR LIFE's constant campaigning for accident prevention and mentioned

how I had been impressed with the safety belts as used in the ambulances.

Mr. Roberts was pleased at my interest in what obviously was a pet project.

"We have held extensive experiments here at the Receiving Hospital for some time just on that very subject. We tried many different ways of keeping persons in vehicles, with special attention to the driver. Obviously, if he can maintain proper control of the vehicle at all times, he can prevent more serious accidents.

"At first we tried to find a way to lock the doors. We spent a lot of money and effort on various devices, but they all had the same basic fault—in a severe wreck we couldn't get the door open. Electrical devices would break contact, mechanical ones would bend and hydraulic fasteners would fail through snapped lines.

"Then we decided that if we couldn't keep the doors closed, why not try to

keep the occupants inside? On that premise we've taken to the safety belts."

The ambulance supervisor raised his hand. "We don't believe that the belt is the complete answer, but we feel that it is the best solution at the present time and we plan to keep using it until something better is discovered."

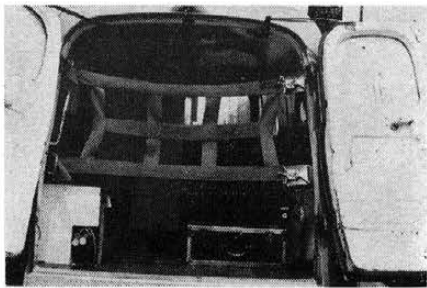
Outside I heard the noise of arriving ambulances screaming up to the emergency gate. I asked if Mr. Roberts would care to give me a close-up view of some of the safety belts in use and a detailed explanation of each type. He gladly assented and we walked outside.

The first thing he pointed out was the distinctive color—red—that was used throughout on all the belts.

"It's psychology," he smiled. "Any man stepping into a vehicle, no matter how engrossed he might be in the immediate

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Death was the result of collision between Los Angeles Municipal Ambulance (above) and police car (below) answering emergency call. Each failed to hear the others siren at intersection. Occupants of badly damaged police car suffered minor injuries but ambulance was spun and rear seat attendant killed when he was thrown into street. New Gilson belt (left), now standard on all ambulances, could have prevented this tragedy



present, is attracted by the color to the belt and has no excuse for overlooking it."

All the belts in use, with the single exception of the Gilson Belt in the rear of the ambulance, are easily disengaged by a slip buckle and personnel quickly learn how to get out of them in a simple and swift motion.

"But there's lots more to belts than merely making them available," Mr. Roberts said. He told me of the research that went into finding proper methods for installation that was safe.

"Just like any other safety device, the belt must be used properly or it can become harmful. We make sure that our belts are installed at an angle of 30 degrees across the body to insure that the pressure will come at a point where the body naturally bends. In the event of an emergency stop this might make the muscles a bit sore, but it is nothing compared to a fractured pelvis or thigh bone.

"Also, it is important that the belts be attached through a portion of the floorboards, preferably into the frame, so they cannot be pulled loose. In many accidents we have found that the seats tend to give way. But we have found, too, that a properly installed belt will hold both passenger *and* seat in place."

In addition to standard seat belts in front and for the attendant in the rear, each ambulance is equipped with two other types. One is a long nylon belt that passes from the floor across the center of the stretcher and clips to the side wall of the vehicle. Its use is not mandatory but attendants usually attach it after carefully explaining to the patient that it is a safety measure—and not a restraining medium.

The other one is compulsory. It is the Gilson Belt, named after an attendant who was thrown out of an ambulance when it went into a spin and killed. This consists of two horizontal straps across the rear doors with a positive hook fastener, of a type used in military aircraft. The horizontal straps in turn are connected by four short vertical bands. This forms an effective web that prevents attendant and stretcher from being flung into the street in case of a crash. It is the driver's responsibility to see to this belt's proper functioning at all times.

Knowing how many ordinary motorists scoff at safety belts, I asked the official how he had been able to convince his drivers of their worth.

"It was a delicate matter," Mr. Roberts admitted. "Our men, after all, had lots of driving experience, and all had been through crackups of one kind or another. As a result they had become fatalists—believing that 'if the number is up, that's that.' They said that a belt wouldn't help in a crash."

A slight smile crept along his face. "I'll admit too that I was pretty hard-

headed about the belts myself at first. But I was open-minded enough to realize that something had to be done."

He continued gravely. "I was seeing our men killed or crippled for life and knew that I would have to act.

"We organized training classes to break down the men's resistance to the safety belts. Surprisingly, after a few lessons in practical physics, they sat up and paid attention to the facts.

"We showed them how safety belts could save their lives in a real situation. In an average crash at 30 miles per hour, we demonstrated that a man would build up momentum equal to 3,000 pounds of force when he struck the windshield 18 inches away from his face.

"The driver can appreciate the fact that with a belt, we can keep that momentum to within 200 pounds of his own weight and he never should strike the windshield.

"After a few more lessons and specialized instruction in the use of the belt, we had the crews sign orders stating that they knew just how and when and where the belts were to be used. We encouraged them to become familiar with the belts and always to use them."

Roberts stressed that there is no law making their use mandatory, but the drivers have been convinced that they can save their own lives, or prevent serious injury by using them.

Have the safety belts proven themselves on the basis of accident reports?

Roberts, to answer this key question, pulled out a heavy book. In it was listed the number of vehicles in operation, the yearly mileage, number of drivers, safety program and so forth.

"We have learned that we must expect about 20 accidents each year. Of these, 10 are major—resulting in either time lost from work or property damage of over \$150 in seriousness.

"For the first six months of this year—the first measurable period in which the belts have been used—we have had 10 accidents, exactly as forecast. However, only one of these was major, instead of the five we averaged in previous years. The difference, the decrease in injuries, *must* be attributed to the belts."

With this phenomenal statistic—an 80 percent reduction in injuries simply through use of safety belts—I checked other public and private agencies in the Los Angeles area that have been conducting their own experiments.

Surprisingly, a growing number of individuals are adopting safety belts. This is attested to by the increasing number of companies that are now manufacturing civilian automobile belts, as well as the firms that are installing them.

Ray Brown Automotive of Los Angeles pioneered in experimentation in the auto safety belt field. As a manufacturer and

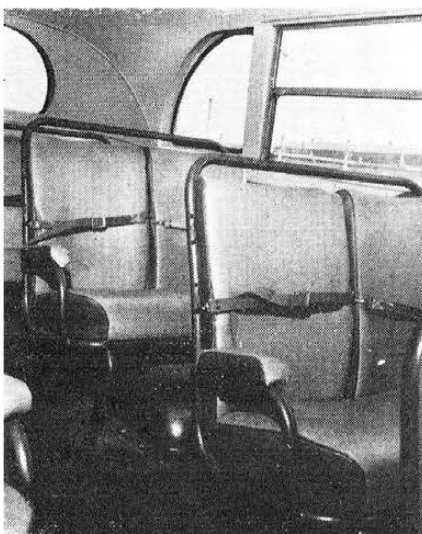
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Rear seat belt as installed in Los Angeles' City Ambulances is demonstrated by Chief Attendant Howard Roberts. Gilson belt attached to door frame at left



Pioneering the use of safety belts, the Los Angeles City School Bus System Co. has transported handicapped children for ten years under the protection of belts



Handicapped children in Los Angeles ride safely to school! held secure'y in place by specially designed safety belt set-up



Won over to the virtues of safety belts, ambulance crew here shows typical installation easily adaptable to passenger car

Popular race driver Andy Linden lived through this Carrell Speedway smash-up to race another day. He gives well-anchored safety belt credit for saving his life



THIN BAND OF SAFETY

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installer he supplied some of the ambulance belts described in this article. Also, the Los Angeles Department of Water and Power, Washington State Police and Oregon State Police have purchased belts from Brown.

The Parachute Corporation of America, Los Angeles, is another member of the growing fraternity of belt manufacturers, having switched some of their production from aircraft to the auto market. Agencies serviced by these and other firms include the Pasadena Police Department, California Highway Patrol, Indiana State Police, Pennsylvania State Police and the list is growing daily.

I also learned, with some surprise, that Los Angeles school busses have been equipped with a special type of safety belt for the last 10 years. Their use has been restricted to handicapped children who otherwise would experience difficulty in case of sudden stops or lurches. And while the installation does not come up to the standards of other passenger vehicles, their effectiveness has been proven in the last decade.

Satisfaction with the use of belts was expressed by the Pasadena Police Department, after a year's experimentation, and the California Highway Patrol is now making them standard equipment on all new vehicles delivered.

Under the direction of Clayton M. Allen, the Los Angeles Department of Water and Power has carried on a series of experiments for the last two years. He has been interested in shoulder harnesses and while he doesn't believe this type ever will come into general vogue, he nevertheless maintains that any progress in convincing motorists of the benefits of any safety device is good.

Allen and Roberts both made an interesting observation. Safety belts have been accepted most readily by Air Force veterans—who know from firsthand experience how these devices save lives.

But, the experts added, once other personnel becomes properly instructed in their use and effectiveness they become equally enthusiastic and dependent on safety belts and enjoy using them.

It doesn't take years for a serious accident—as any driver knows who has ever experienced the sickening sensation of an imminent crash.

Will he plunge through the windshield or be hurled to the ground, to be seriously and perhaps fatally injured?

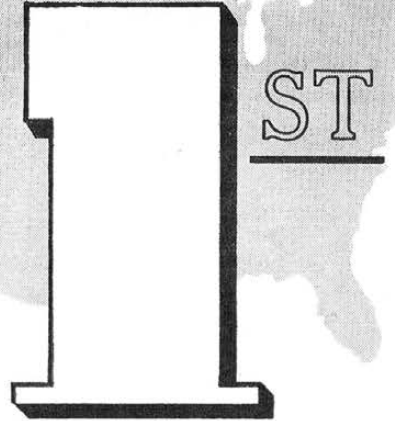
Or will he—protected by these thin bands of safety—remain at the wheel in full control of the vehicle, able to prevent a more serious disaster?

This is no theoretical point. It could be a matter of life or death—YOUR life or YOUR death!

Heed the experts. Install a safety belt in your car!

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