

## Heavy Rescue

What is Heavy Rescue? Rescue workers at the main road, trucks, buses and trains. Much of the equipment is useful and appropriate for the various above rescue efforts. It should not be confused with the Heavy Rescue Heavy Towing. Heavy Rescue is about taking care of wounded and victims of accidents. Salvage is usually a pure salvage mission. Heavy Rescue makes entirely different demands on emergency personnel, method, technique, tactics and equipment compared to cars and injury panorama can be much higher.



## Background

We are well trained and updated on road accidents with cars. In the case of heavy vehicles, we are not quite as good. We do not practice very often, or realistic with trucks and buses.

Usually we practice on old truck cab without furnishings, how many such accidents, we come to? None!

Bus accidents often involve mass casualty situations and special problems in the emergency and extrications, stabilizing, securing, partial bus lifting, access, evacuation, treatment of many injured / uninjured, the list goes over the various problems to the accident of trucks and buses.

There have been major changes in materials and vehicle designs. Of buses and trucks that currently the road is 90% of model year 2000 or newer. These are constructed differently than the scrapped vehicle cabs that emergency services often training on.

Foremost is the design changed from strong beam systems, to pressed sheet metal profiles constructions. The cabins have been air suspension and seatbelt tensioners and airbags even in trucks. Many new vehicles have glued the front window where it used to be rubber list. It is about 10-15 years ago, the manufacturers changed a lot of designs, it means that we are not updated properly on heavy vehicles. We are about 10-15 years behind in terms of knowledge of heavy vehicles.

Only through realistic and qualitative training and take part of them experiences from real accidents involving trucks and buses, we can create the knowledge we need to implement fast, secure and easy rescue work with heavy vehicles.

We need to start practicing on complete vehicles to bring wholeness, and create realistic exercises for today's modern fleet of vehicles.

Fire Department has previously been focused mainly on extrications. Usually at the expense of the important steps along the way: stabilizing, securing and lifting vehicles to dislodge the trapped people.

For several years we have created a concept for the training and equipment that gives us greater ability to make a safer and more effective rescue work. Our focus is on the victims.

## Development

Take care of the previous experience in accidents involving heavy vehicles. See how we work and practice with ordinary cars. The idea is to work as equal as possible whether it is cars or trucks and buses. But there are big differences, design, type of material, weight, height, number of injured, accessibility, collaboration between different authorities.

During the tests, the focus has been on the method, technique, tactics and equipment. The equipment is the most developed, it was not appropriate and approved equipment to many of the problems that arose. It should be quick, safe and easy to operate the equipment. Above all, the equipment must be adapted to work in severe emergency. Today, the developments of equipment come very far forward.

The second major area was to review methods of rescue work.

The method has been developed for four years and has been tested by the rescue services in Sweden and other European countries with very good results. We are able to make safer and more effective rescue operations today compared to before. One example is a bus that had gone off the road and is on hand with the trapped people under the bus. Today is the actual lifting time is about 10-15 minutes compared to when we started testing, when time was 45 minutes. It is a dramatic change when it comes to dislodge the trapped people under the bus, where time is crucial for the trapped chances of survival.

In the case of trucks, it is stabilizing very important with modern trucks, compared with the older ones. Extrications works today of trucks are now developed much from how we work with cars. It is advantageous to work with the same detached sampling methods for cars and trucks to the rescue work more efficient and safer. Of course there are differences but they are not as big with the new method compared to the older method of trucks.



## Equipment

Rescue tools on the market today are of good quality and capacity. There are no problems with new trucks, but problems arise when we are working on newer cars. Modern cars are stronger and more complex in terms of extrication compared to trucks and buses.

What is lacking is adequate stabilization equipment and lifting system as airbags to lift buses and trucks quickly to rescue the trapped people.

Now there is stabilization equipment used in the building collapse that can be used for heavy rescue and also to stabilize cars. Stabilization materials, struts and cribbing blocks material is approved equipment and can handle large loads 10-100 tonnes.

Airbags suited for us in emergency services has taken off the market. Airbags have been developed in conjunction with emergency services during exercises and training. We lift a bus today in about 10-15 minutes to dislodge the trapped people under the bus. It is much faster than when we began developing the method partial bus lift. It took about 45-60 minutes to perform partial bus lift at the beginning and we did not have the same good results whit the lift that we can create today with airbags. Purchase of right and custom made equipment is necessary for us to perform safer and more effective rescue operations involving heavy goods vehicles. The equipment we use in heavy rescue can also be used in other areas, cars, landslides, building collapse.



## Training

We have for several years developed methods, techniques and tactics to create a training program that covers them various rescue operations arising from accidents involving heavy vehicles. It is important that there is quality and not quantity that we create.

By performing tests and experiments on trucks and buses all the time so we will always follow the modern vehicle development. We only use new and modern vehicles in training.

We have over five years spent 96 new Scania trucks. This means that we have been able to develop training all the time. We have performed about 800 partial bus lifting, it means that today we can lift a bus lying on its side or on the roof with a method that is effective and safe.

It is important that we educate ourselves to cope with them complex accidents that we are dealing with heavy vehicles. Then both the fireman and officers, the entire chain must receive adequate training in their roles. Important that we cooperate in training and exercises with our partners, police, medical, salvage companies, local emergency teams and manufactures. If we can cooperate with these organizations will we create a more efficient rescue work and organization in a difficult rescue for example, at a severe coach crash. Today there are training in Heavy Rescue to acquire that are of high quality and workable from realistic accidents. It was not so earlier, remember that in training we use a brand new Scania truck, it's

not everyone who get that chance! Documentation of drills and exercises are more important than we thought?

During all training we document through film and photography. This means that we constantly creates new teaching materials and a very comprehensive picture and movie materials. The material will then be posted on our website for emergency services to download images to their own drills and exercises. Most importantly, perhaps they experience is in civil protection in accidents involving trucks and buses. Can we take advantage of them and see how the rescue efforts worked, both the positive and negative, and from them develop our methods, techniques and tactics. Then we created very good conditions to make more efficient and safer rescue work in vehicle accidents with heavy vehicles.



*I hope that together we can develop and create a forum for the Heavy Rescue, where we work to share experiences in order to make safer and more effective rescue operations involving heavy goods vehicles. The victims must be at the center. Remember that rescue work is not a job it's a lifestyle*

*Jimmy Säfström*

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HEAVY RESCUE TRAINING SWEDEN  
RESCUE – FIRE – TRAINING

Plommonvägen 169  
741 31 Knivsta SWEDEN

telephone: + 46 18-341001

Jimmy Säfström

mobil: + 46 76-807 807 0

E-mail: jimmy@heavyrescue.se

[www.heavyrescue.se](http://www.heavyrescue.se)

