

## The conflict between safety and accessibility

In the automotive industry new developments and technologies are evolving quickly. The use of high-strength steel, reinforcements and numerous safety restraint systems in modern vehicles, provide excellent protection of the occupants during a crash.

Due to all these safety systems the survival rate of victims of traffic crashes has increased significantly.

After a crash however, these new technologies make it more difficult for the rescue worker to access and extricate victims from the crashed vehicle.

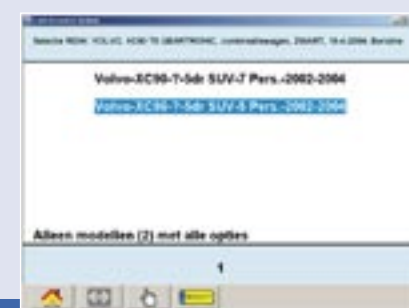
Many safety restraint components turn into a potential hazard for the rescue worker and the victim after a crash. Known examples are undeployed airbags, airbag gas generators and belt pretensioners. Determining the locations and deactivation procedure of these components is therefore extremely important during the extrication process. And that is not an easy task, since the exact locations and specifications of safety components are usually different for each make and type of vehicle.

On top of that, new models and systems appear on the market continuously, making it an impossible task for the rescue worker to keep up with technology!

## Editions and options

The Crash Recovery System® software is available in two editions: the 'Standard edition' and the 'RDW edition'. The Standard edition features manual selection of the vehicle through make, model, type and year of the vehicle. With the RDW edition, vehicles are selected manually or automatically with the license number of the vehicle (only available in the Netherlands and Sweden).

Both editions run on every modern PC, laptop or tablet PC with a Pentium III or higher processor and Microsoft Windows 2000 Professional or XP Professional. Depending on the requirements, (ruggedized) hardware is available.



## New developments

### Information for trucks

Until 2005 the Crash Recovery System® contained mainly safety component information for passenger vehicles. Because of the enormous need for safety information for trucks and vans, Moditech has determined the required criteria to display the necessary information for trucks in close co-operation with fire departments around the world. This has led to a new database module for trucks and vans.

### Web enabled version

With the increasing availability of high-speed mobile internet connections, the information of the Crash Recovery System® can also be accessed via the internet through a web browser. The web enabled version is available for all possible mobile hardware and operating systems with internet access. Registered users will have access to the information via a username and password. The main advantage of the web enabled version is that the available information is always up to date.



# Extricate victims from crashed vehicles quickly and safely

## The solution

Moditech Rescue Solutions BV has recognized the need of a practical solution for this problem at a very early stage. This has led to the introduction of the Crash Recovery System®: a mobile vehicle information database developed by Moditech that runs on virtually every laptop or tablet PC.

With this information system the rescue worker is able to retrieve quickly and easy all necessary information at the scene of the accident.

Selection of the correct vehicle model is executed via the license number or manually. After the selection a graphic of the selected vehicle model appears on the screen.

The mobile (wireless) communication is performed via any mobile data network.

The rescue worker has access to an interactive top- and side view of the vehicle, displaying all safety components as well as other relevant items such as the battery, fuel tank, windshields, etc. in one window. After clicking a component of choice, the rescue worker receives instantly important information about the component, for example its location, specifications and deactivation method.

With this information, the Crash Recovery System® ensures an efficient and safe extrication process and supports the rescue worker to choose the best methods.



The Crash Recovery System® has been developed with the future in mind. First, database and/or software updates are downloaded via a wireless or broadband internet connection. This ensures that the information in the database is always up to date, with the latest developments in the automotive industry available for the rescue worker. Secondly, the software can be extended with different modules. Modules with content management systems for object information, hazardous substances (ERICards), etc. are available. Combined with these modules, a complete decision support system is created, enabling rescue workers to retrieve all relevant information for a specific incident quickly and efficiently.

# Crash Recovery System®

**Henk den Rooijen, Commanding officer of the fire department in Doesburg, the Netherlands, about the Crash Recovery System®:**

“A very user friendly system, also for rescue workers that are unfamiliar with computers. The graphics feature different colors for each specific (safety) component in the vehicle that requires special attention from the rescue worker. The real important components are marked clearly with a red color so that you can see immediately what is important during the extrication process. We don't lose time searching for the presence and location of components that are potentially dangerous for the rescue worker and/or the victim. Navigation between components and items is real easy and the extensive use of digital photos, supporting the written information, makes everything very easy to understand. Above all, the Crash Recovery System® is a support system that provides extra safety, for both the rescue worker and the victims.”



## Features and advantages

- **Quick and easy to use**
  - Vehicle selection manually or automatically after entering the license plate number (only in the Netherlands and Sweden).
  - Technical information about the safety restraint system and other relevant components appears instantly on the screen.
  - Clearly organized graphics show the exact locations of all components that are potentially dangerous.
  - Detailed specifications and deactivation instructions of all components are displayed after just a single click on the component.
- **Saves valuable time**
  - No time is wasted scanning the vehicle for the locations of potentially dangerous components.
  - Deactivation instructions enable quick elimination of all possible hazards.
  - The rescue worker is able to focus quickly on his main objective: extrication of victims.
- **Increases safety**
  - Information about locations and deactivation procedures of potentially dangerous components makes it possible to work safely.
  - Minimizes all risks for the rescue worker and victim because the rescue worker has an overview of all relevant components in the vehicle.
- **Mobile and up to date**
  - Instant access to vehicle information on the scene of the accident.
  - Automatic selection of the vehicle via any available mobile (wireless) IP-based communication network.
  - Automatic download of updates via any available mobile (wireless) IP-based communication network.
- **Choice of different options**
  - Standard or RDW edition.
  - Different hardware options (laptop or tablet PC) available.
- **Prepared for future extensions with supplemental information databases**
  - Object information, rescue plans and maps, ERICards for hazardous substances.



## Moditech Rescue Solutions BV

Moditech Rescue Solutions BV is specialized in design and implementation of mobile information systems for rescue workers. With more than 10 years experience with data-acquisition and software development for the collision repair industry (Moditech IT Solutions BV). The company owns a large database containing technical information for passenger cars, vans and trucks. Due to close relationships with car manufacturers on international level, Moditech continually maintains and keeps this valuable source of information up to date: data for a new model often is available before the official market release! Translation of the database with technical information into a practical solution for rescue workers was a logic step that led to the development of the new Crash Recovery System®, a mobile vehicle information system that enables the rescue worker to work quicker and safer during extrication of victims from crashed vehicles. In addition to vehicle information, Moditech also offers content management modules for object information, rescue plans and maps and a database with emergency response intervention instructions for hazardous substances (ERICards).

The future for rescue workers.

This mobile information system allows rescue workers to extricate victims quickly and safely from crashed vehicles.



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