CHAPTER SIX

EMERGENCY CARE

INTRODUCTION

6.01 Ideally all road accident rescue personnel should be trained in basic medical emergency procedures. As occasions will arise where rescue personnel will have to take first aid initiatives in the absence of ambulance or qualified medical personnel, this chapter is a guide to basic first aid principles.

FIRST AID

6.02 PRIORITIES

First aid priorities are.

1 dangers:

2. airway maintenance;

3. breathing restoration;

4. circulation restoration;

5 haemorrhage control;

6 crush injury management;

7. fracture immobilisation; and

8. communicable diseases.

6.03 Problems with airway, breathing and circulation are all separate problems dealt with individually. However, they must also be considered collectively as part of a total package. Any casualty may need management of only one or possibly all three of these areas.

6.04 BREATHING

If the casualty has a blockage of the airway, this must be cleared. If breathing has stopped, the rescuer must breathe for the casualty after first clearing the airway (ie Expired Air Resuscitation E.A R.)

6.05 HEARTBEAT

If the casualty's heart has stopped beating, artificial circulation must be provided (External Cardiac Compression E C C). The techniques of resuscitation are described in Annex A.

6.06 BLEEDING

Since body functions depend on an adequate and uninterrupted supply of blood, any opening in the circulatory system through which blood may be lost should be considered dangerous.

6.07 Severe or continued bleeding may lead to collapse and death

6.08 The rescuer must be able to recognise, and if possible, control and manage a haemorrhage (see Annex B)

WARNING: See Annex C - Communicable Diseases.

6.09 COMPRESSION AND SPINAL INJURY

It is important that rescue personnel be able to recognise:

a. a trapped casualty suffering a compression (crush) injury and to have an understanding of the techniques in releasing the compressive force and the management of the possible resulting syndrome (if this situation is not understood and correctly managed, it can lead to death of the casualty (see Annex D); and

b. an injury situation involving suspected spinal damage and implement appropriate handling techniques (see Annex E).

FIRST AID PRIORITIES

In a medical emergency it is necessary to have an action plan, one that will work every time, regardless of the type of incident. The following action plan is called D.R.A.B.C. Each letter stands for something the rescuer must do, and the sequence in which it will be done

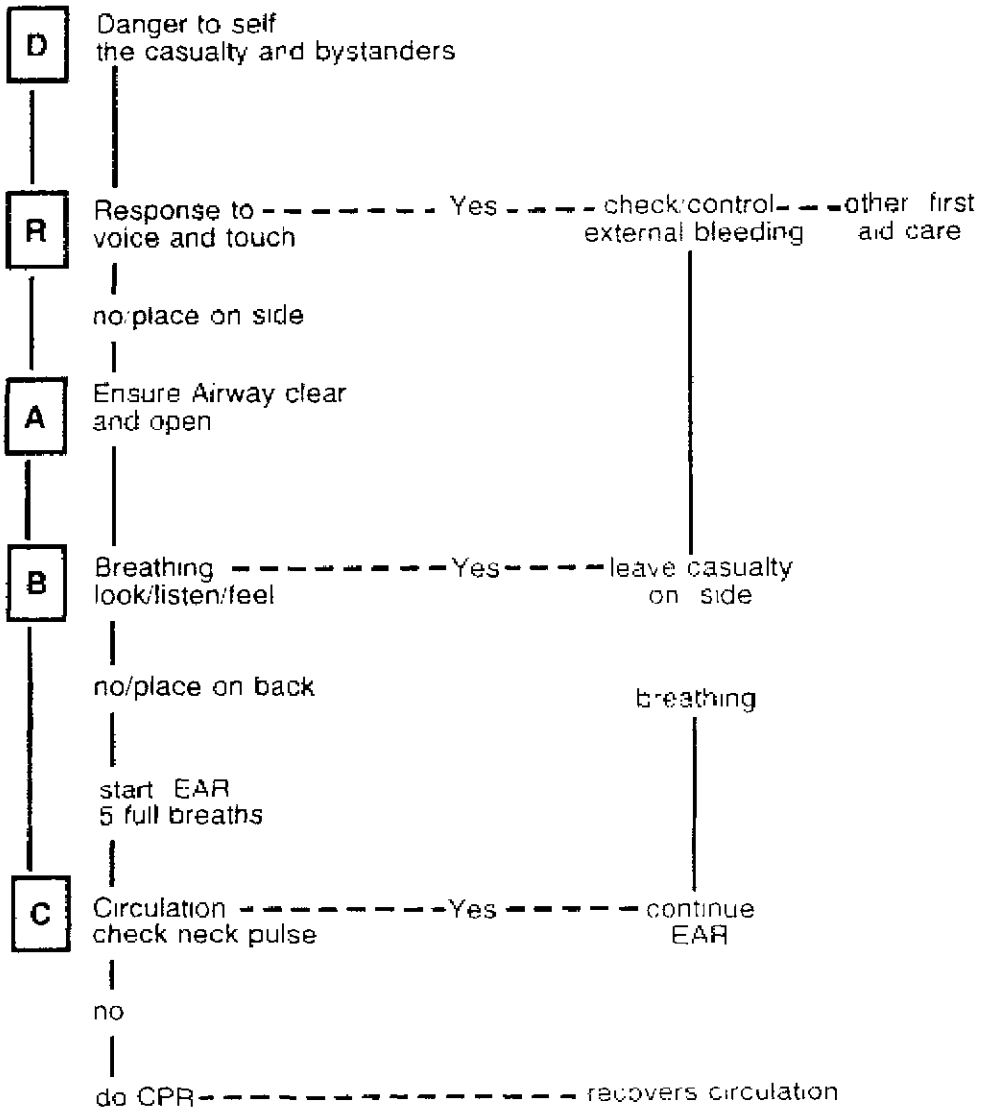
The following chart sets out the D.R.A.B.C. Action Plan, comprising

D - Danger R - Response A - Airway B - Breathing C - Circulation

The chart also shows the order of priority and the appropriate time for the control of bleeding and the care of the unconscious casualty.

All first aid management begins with D.R.A.B.C.

EMERGENCY CARE ACTION PLAN



Check for danger to: yourself; the casualty; and bystanders. Act only if safe to do so: Do not become the next casualty. Remove danger from the casualty, or if necessary the casualty from danger Warn bystanders of any danger and ask them to keep a safe distance. If unsafe, wait for expert assistance to arrive.	D-Danger
Check for response: Gently shake and shout loudly. If the casualty responds, check and control serious external bleeding If no response, proceed with ABC.	R-Response
Firstly place casualty on side, then. open the mouth; clear if needed; and keep the airway open (head tilt and jaw support)	A-Airway
Look, listen and feel: Is the lower chest or the abdomen rising and falling? Can you hear breathing sounds? Can you feel breathing? Then: if the casualty is breathing but not responding place onto side; or if the casualty is not breathing, start expired air resuscitation (EAR).	B-Breathing
Check the carotid neck pulse: If present, continue EAR. If absent, start CPR	C-Circulation

Note: These procedures apply to a casualty **outside** of a vehicle. Considerable improvisations may have to be implemented for the casualty trapped **inside** a vehicle

ANNEX B
TO CHAPTER 6

HAEMORRHAGE CONTROL

1. INTRODUCTION

Bleeding may be external, internal or both. When bleeding occurs internally, treat for shock and elevate the lower extremities if possible. This casualty must be transferred to a medical facility as quickly as possible, since surgical procedures may be required to stop the bleeding.

2. TYPES OF EXTERNAL BLEEDING

Bleeding is classified according to its source

- Arterial
- Venous bleeding
- Capillary bleeding

Arterial bleeding is characterized by the flow of bright red blood that issues from the wound in distinctive spurts.

Venous bleeding is characterized by a steady flow of blood that appears to be dark red. Although it may be profuse, it is much easier to control than arterial bleeding

Capillary bleeding is characterized by the slow oozing of blood, usually from minor wounds such as abrasions. It is easily controlled. Normally the threat of contamination may be more dangerous than blood loss.

3. CONTROL AND MANAGEMENT

There are very few situations in which external bleeding cannot be controlled. Since this is one of the most common conditions that rescuers will encounter, they should be thoroughly familiar with the techniques of control

Severe external bleeding from sometimes gruesome wounds taxes the presence of mind and self-control. The ability to think clearly, act calmly and keep a tight rein on emotions is most important. The methods of controlling external bleeding will be discussed in the order of priority.

4. DIRECT PRESSURE

The most effective method of controlling external bleeding is by pressure applied directly over the wound and then elevation of the site if possible. This should then be followed by the application of a suitable dressing pad and bandage.

5. PRESSURE POINTS

If bleeding cannot be controlled using direct pressure in conjunction with elevation, especially when an extremity is involved, pressure on a strategic pressure point may be required

A pressure point is a site where the main artery to the injury lies near the surface of the skin and directly over a bone.

6. CONSTRICTIVE BANDAGE

If direct pressure and the use of pressure points do not effectively control external bleeding, a constrictive bandage should be used, but only as a last resort Such situations are rare and usually involve traumatic amputations. If a constrictive bandage is applied to a limb, **it must only be removed by a medical officer.**

7. REMEMBER

A constrictive bandage must be at least 3 cms in width and should be used only to control life threatening bleeding that cannot be controlled by other means.

Even then it should be used only with the complete understanding that it may mean the loss of the limb to which it is applied.

8. NOTE

External Bleeding from the ear canal **must not be stopped** under any circumstances.

Given this situation the blood and or clear fluid should be allowed to drain freely from the ear.

ANNEX C TO
CHAPTER 6

COMMUNICABLE DISEASES

1. INTRODUCTION

Communicable Diseases (also called contagious or infectious diseases) are those diseases which may be transmitted from one individual to another

There are several ways diseases can be transmitted:

- DIRECT - From the infected person.
- INDIRECT - From dressings, linens or surfaces.
- AIRBORNE - From the infected person, coughing or sneezing.
- VEHICLE - Via ingestion or contaminated food, drugs or blood.
- VECTOR - Via animals, eg ticks.

Communicable Diseases have always existed, but only a small number should concern the rescuer.

This Annex will cover the two Communicable Diseases (AIDS and Hepatitis) where the rescuer is considered to be most at risk in managing a casualty involved in a road accident rescue.

2. HEPATITIS

Hepatitis is an inflammatory disease of the liver, the major causes of which are Type A, B and C Viruses.

The following sections describe the three types of Hepatitis:

a. TYPE A HEPATITIS

Type A Hepatitis is caused by a virus. It is spread primarily via the Fecal-Oral Route.

Blood and other body secretions are infectious. Type A Hepatitis is generally mild in severity and has an excellent prognosis.

b. TYPE B HEPATITIS

Type B Hepatitis is caused by a virus. It is usually transmitted by injection, or sexual contact.

The injected route may involve transmission of contaminated blood or blood products.

The Type B virus is present in blood, saliva, semen and urine of infected persons

Sexual partners of Type B Hepatitis patients are at risk of infection.

Among the at-risk population are intravenous drug abusers, homosexual or bisexual males and medical personnel. Rescuers may become infected from the blood or saliva of an infected casualty, from contact with body fluids that enter the rescuer's body or from contaminated or soiled clothing.

Type B Hepatitis is a serious illness and is often life-threatening.

c. TYPE C HEPATITIS

Type C Hepatitis is caused by at least two different viruses that are unlike those involved with either Types A or B.

Transmission of this type of Hepatitis is usually related to a blood transfusion or contaminated needle puncture.

d. SIGNS AND SYMPTOMS OF HEPATITIS

Hepatitis may vary from a minor flu-like illness to fatal liver failure. The usual signs and symptoms are.

- loss of appetite;
- weakness, exhaustion;
- nausea;
- vomiting;
- fever;
- skin rash;
- dark urine; and
- jaundice.

e. PRECAUTIONS

Precautions with managing casualties with Hepatitis, especially those with Type B are similar to those identified for suspected or identified AIDS patients.

If a rescuer is exposed to Type B Hepatitis or work in a high-risk environment, vaccination should be considered. Vaccination will provide active immunity against Type B Hepatitis infection.

3. ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)

a. DEFINITION

AIDS is caused by a virus that attacks the immune system of the body and damages a persons ability to fight other diseases and ultimately causes death.

There is presently no cure for AIDS.

b. RISK GROUPS

Ninety-eight percent of reported cases of AIDS in Australia fall into the following categories

Homosexual or bisexual men

Intravenous drug users

Recipients of blood or blood products

Sex partners or persons in these groups

Children born to infected mothers

c. HOW IS AIDS TRANSMITTED?

AIDS is transmitted mainly by blood, body fluids or sexual contact.

Rescue personnel are often involved in critical trauma situations that may expose them to casualties who may be in the above mentioned high risk groups.

These situations may involve direct person to person contact when C.P.R. is being performed, or by coming into contact with an infected person's blood or body fluids during rescue attempts.

Although the AIDS virus is found in several body fluids, eg saliva and tears, there have been no reported cases of emergency service personnel contracting the virus by the application of mouth to mouth resuscitation.

d. PRECAUTIONS

It is important that the rescuer takes precautions to prevent or reduce the transmission of AIDS.

The following is recommended for all road rescue personnel who manage the extrication of casualties from motor vehicles:

- Wear latex rubber gloves if hand contact with body fluids is likely to occur.
- In addition to gloves, if the casualties environment involves high risk or a high blood profile, additional protective measures may be necessary. The use of eye goggles, and face masks may be prudent protective measures.
- If the casualty requires respiratory resuscitation, use a face mask and avoid mouth to mouth contact if possible.
- The rescuer should wash hands and any affected skin areas thoroughly with soap and running water.
- If the rescuer has been exposed to the blood or other body fluids of a suspected AIDS infected casualty, for example, blood that has entered a cut on the finger or the splashing of another body fluid into the mouth or eyes, a doctor should be contacted without delay.

e. SUMMARY

Rescue personnel when managing the extrication and treatment of road accident casualties will in general not be aware if those persons are infected with the Hepatitis or AIDS virus.

Therefore all precautions should be taken to minimise the risk of contamination and infection.

Hepatitis is a much easier virus to contract and is more prevalent than AIDS.

The AIDS virus is a very fragile virus and is more difficult to contract.

f. **NOTE:**

When extricating a deceased person who is a known or suspected AIDS carrier, it is possible to contract the virus while the deceased still has a recordable body temperature.

ANNEX D TO
CHAPTER 6

COMPRESSION (CRUSH) INJURY

1. GENERAL

Crush injury results from the application of a crushing force to any part of the body. A major crush injury may lead to the development of 'crush syndrome' following release of the crushing force

2. CRUSH SYNDROME

Crush syndrome is a complication which may occur following the release of a compressive force which has compressed a major muscle mass for a period exceeding thirty (30) minutes. The crush syndrome may lead to sudden death, shock or other heart and lung emergencies.

The syndrome occurs as a result of harmful chemicals being released from the damaged muscles and the reabsorption of these chemicals back into the blood stream following removal of the crushing force.

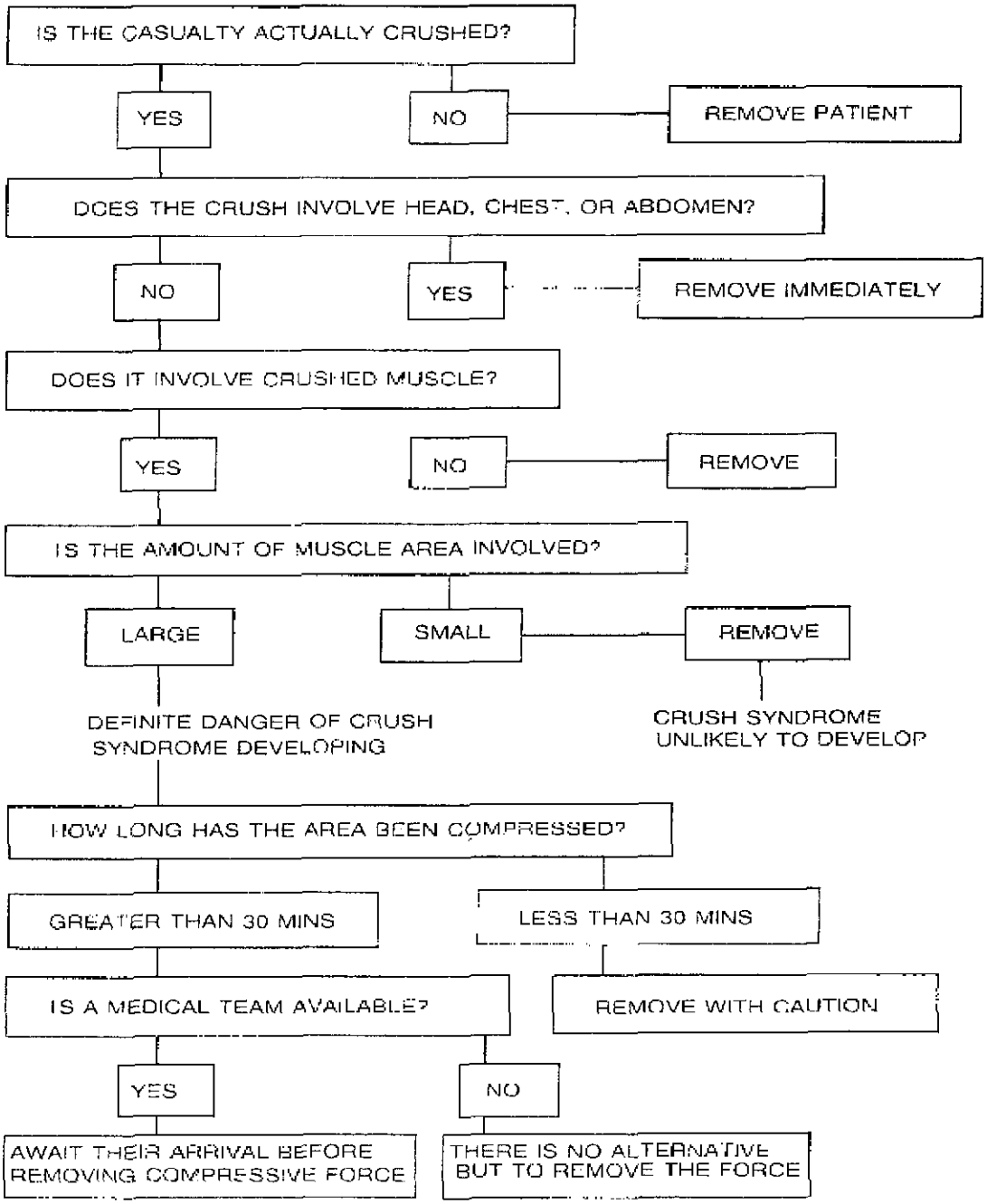
3. RECOGNITION

The syndrome may present as the sudden development of any of the following:

- giddiness;
- thirst;
- nausea;
- cold clammy pale skin,
- erratic heart beat;
- rapid shallow respirations;
- confusion, disorientation; or
- unconsciousness.

4. APPROACH TO REMOVING THE COMPRESSIVE FORCE

The following approach may help identify those situations where the patient will be most at risk of developing crush syndrome



ANNEX E TO
CHAPTER 6

SPINAL INJURY

1. INTRODUCTION

In vehicle accidents, spinal injuries are often overshadowed by more obvious and gruesome injuries like fractures, lacerations to the face and body and chest injuries. Poorly trained rescue personnel often have trouble in identifying spinal injuries and if they do find a spinal injury, it is usually after the more obvious wounds have been treated and the casualty has been moved. By this time any spinal injury caused during the accident will have been made worse, and the casualty may now have permanent and irreparable damage

For this reason it is vital that the rescuer be able to recognise a spinal injury and be able to immobilise the spine quickly and correctly, since correct immobilisation may mean the difference between complete recovery, a life long paralysis, or even death.

2. RECOGNITION

For any person who has been involved in a motor vehicle accident, the rescuer should assume a spinal injury if that person:

a. is unconscious or has a significant head injury;

b. complains of pain in the neck;

c. complains of numbness, tingling, or 'pins and needles', in any limb or limbs;

d complains of inability to move, or decreased strength in any limb or limbs;

e complains of electric shock sensation on movement;

f. has obvious deformity of the spine; or

g. is paralysed

3. MANAGEMENT

The most important thing to remember is the 'A.B.C.'(ie Airway, Breathing, Circulation) of first aid, resuscitation being the primary function

If an injury to the neck or back is suspected, the spinal column must be immobilised. It is most important not to move the spine prior to immobilisation. If it is moved, spinal cord damage may occur due to pieces of bone compressing the spinal cord.

4. NOTE

All casualties with neck pain, injury or deformity should be managed as follows

The head and neck supported by hand until other support can be arranged; this is most important if the casualty is found in a sitting position, as when trapped in a motor vehicle.

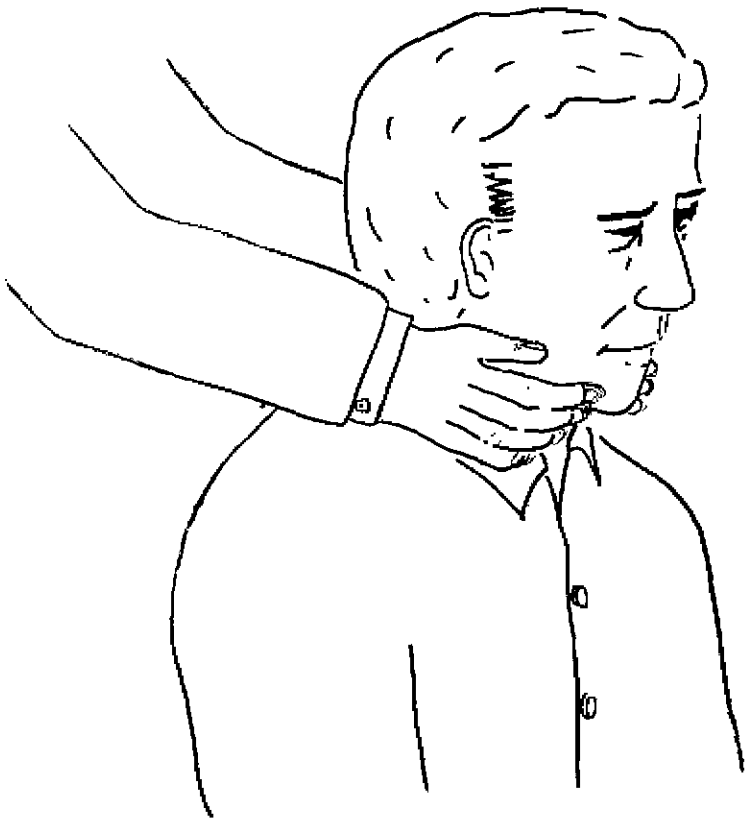


Figure 6E:1
Head and Neck Support

- The application of a cervical collar if available, or a rolled up towel placed gently around the neck (like a scarf) for support.
- The securing of a short or long back board for support prior to being moved.

5. SUMMARY

- A.B.C
- Immobilise.
- Lift casualty in position found.
- Don't move casualty unnecessarilly

6. WARNING

If you don't think about a spinal cord injury

YOU WILL MISS IT!!

CHAPTER SEVEN

DISENTANGLEMENT

INTRODUCTION

7.01 Disentanglement is the removal of wreckage from around a casualty, not the removal of a casualty from the wreckage.

7.02 DISENTANGLEMENT ACTIVITIES

There are four disentanglement activities which will result in the eventual extrication of the casualty. They are as follows:

a. **Disassembly** - The separation of components by reversing the order in which they are assembled.

b. **Distortion** - The forcible twisting of a vehicle's parts to get them out of the way

c **Displacement** - The movement of a component from one place to another or the removal of a component.

d. **Severance** - The cutting of components so that they can be removed.

7.03 CONSIDERATIONS

Prior to selecting a disentanglement activity, four points should be considered:

a. Define what is to be moved.

b. In which direction should it go?

c. How much force is required to move it?

d. What distance does it need to be moved?

Note: In all of the disentanglement techniques described in this chapter, a crew member should where possible,be positioned as a safety observer. This safety observer's task is to closely monitor the specific operation to detect at an early stage, any potential danger to the rescue operator or the casualty.

RELEASE

7.04 Freeing and removing the casualty should be completed in consultation with the casualty care officer.

7.05 USE OF HANDS

The first pieces of equipment which are most readily avialable to rescuers are their hands. They are the safest, most sensitive and most efficient in many instances. Disentanglement should not be commenced until all hidden areas which can be reached have been thoroughly explored by hand.

CAUTION: When using hands (even in gloves) around unseen areas of a vehicle, particularly when checking under seats or in glove boxes etc, be aware that syringes may have been hidden, and syringes can be the cause of HIV Hepatitis B and C infection.

7.06 Many rescues are accomplished by using the hands or simple tools rather than specialised equipment. Specialised equipment may be used at any time but may also prove to be unnecessary in the first instance if correct assessment has been carried out.

7.07 The action to be taken will depend upon the experience, training and common sense of the rescue personnel.

7.08 **HIDDEN PROTRUSIONS**

These could be penetrating the casualty's body, legs or feet. If further pressure is placed on the vehicle, considerable internal injury could occur to the casualty by either forcing the protrusion further into, or dragging it across the body. In the case of penetration to the trunk, this may open or extend the wound, with every possibility of fatal consequences.

7.09 **MINOR OBSTRUCTIONS**

A person may be trapped by minor obstructions. Some examples and actions follow:

a. An apparently free body cannot be moved - Unclip or cut the seat belts. (Individual state territory policy or operational necessity will dictate.)

b. The chest wedged against steering wheel or knees under dash:

(1) After making sure all debris is removed from around and behind the seat, depress the seat slide and at the same time firmly push the seat back.

(2) Should the seat slide or squab mechanism be immovable, the back of the seat may be bent down by one or two rescuers, with their shoulders firmly placed against the roof of the vehicle and their hands on the back of the seat pushing down firmly. This should be carried out as smoothly as possible, avoiding sudden jerks to limit the possibility of further spinal injuries, particularly in the cervical area. Normal first aid procedures should be followed prior to any movement.

(3) As a last resort, it is possible to cut the seat to remove foam rubber and other materials from under the casualty. The lowering of the casualty in this manner may sometimes permit extrication.

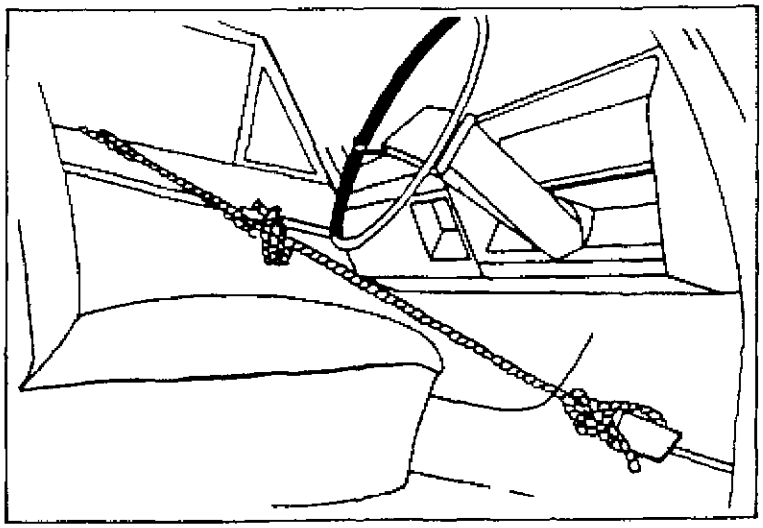
c. Casualty's feet trapped:

(1) Slide the trapped foot from the shoe (untie laces).

(2) Cut the shoe away from the foot.

(3) Sever pedal.

(4) Displace pedal by hydraulic spreader; or tie rope to a door, then swing the door open carefully.



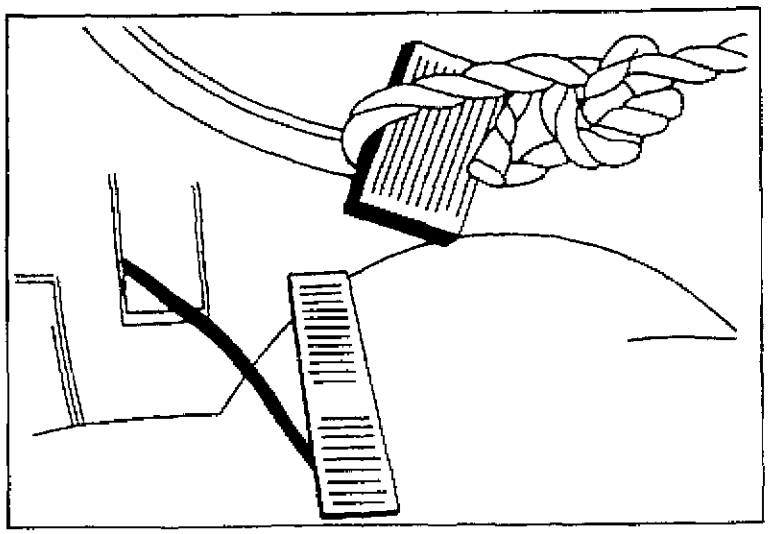


Figure 7:1
Displacing Pedal

7.10 CLEARING A PATH

Disentanglement also involves making a pathway through wreckage which facilitates the safe and easy extrication of the casualties. During this process, patients are protected from harm by the use of blankets, ear muffs, padding and eye protection as appropriate, as the rescuers remove wreckage and obstructions. Where possible, communications should be maintained with casualties to allay their fears and keep them informed.

7.11 CASUALTY PROTECTION

This is vital. To minimize patients' concerns, rescuers should ensure that there is adequate ventilation when there is a need to completely cover them. Where possible, a rescuer should be placed under the covering with the casualty. Protection such as half backboards or padding should be used to prevent the casualty coming into contact with obstructions or tools.

WIDENING OPENINGS

7.12 Vehicle doors are designed not to open a full 90 degrees and varying sized openings occur when doors are damaged. A much wider opening may be required to remove a casualty. This can be accomplished by displacement or removal of the doors.

7.13 There are various methods of widening the door opening:

a. Two or three rescuers can take hold of the door at its outer extremity. With a firm push, the door can be forced past its usual travel. Care should be taken not to rock the vehicle.

b. The use of hand tools, such as spanners, sockets, hacksaws, crowbars and hand winches, or hydraulic equipment to remove the door.

SEATS

7.14 A hand winch and chain may be used to pull the seat back. One method is to use the technique shown in Figure 7.2.

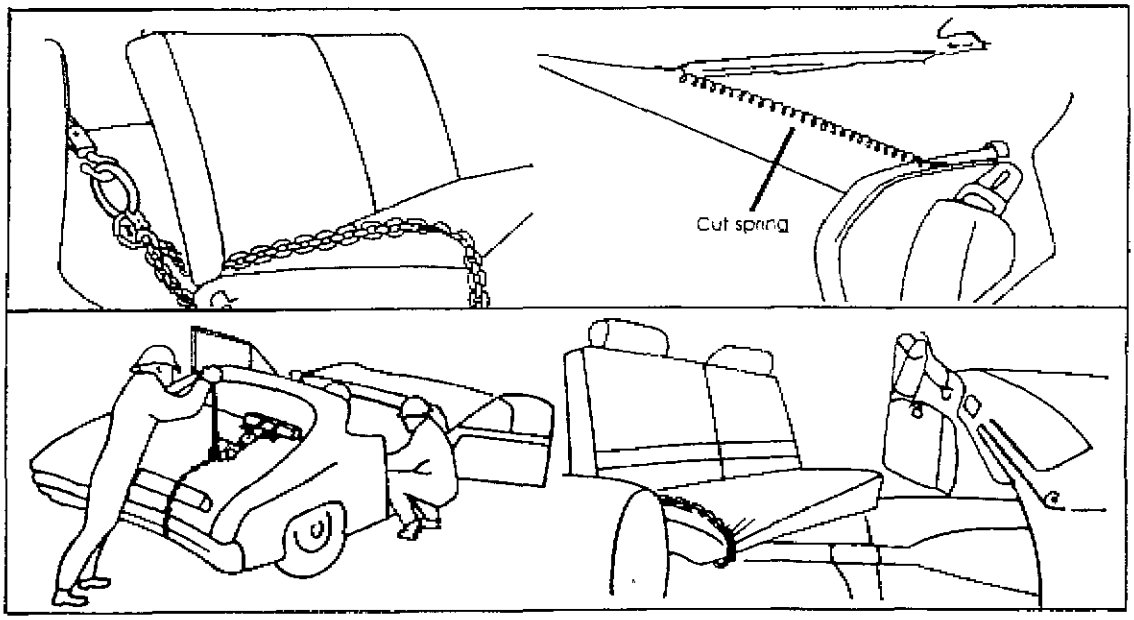


Figure 7·2
Displacing Seat (Pull)

The boot lid is removed or raised, the winch positioned in the boot and a cut made through the squab of the rear seat. The winch cable is passed through this opening. Alternatively, either the squab can be removed, or the seat removed by unbolting the seat supports using a socket and ratchet handle. Rescuers should ensure that the winch is positioned as low as possible in the boot.

CAUTION: Because of the danger to an entrapped person, only as a last resort should the chain be passed over the rear seat and through the rear window. If this procedure proves necessary, the roof should be removed first (as shown in the diagram).

7.15 Another technique is to use hydraulic equipment or a mechanical jack of high capacity (10t) to push the seat back off its rails track.

CAUTION: Extreme care should be exercised when pushing or pulling seats with casualties in position. The release of the seat from the runner may cause further injury to the casualty.

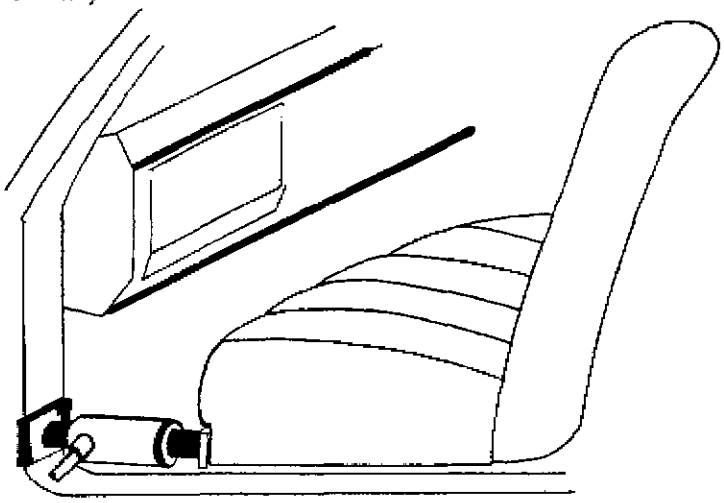


Figure 7:3
Displacing Seat (Push)

7.16 STEERING WHEEL/COLUMN

The steering column can be displaced by using existing design adjustments or by undoing bolts on the column bracket. Alternatively, hydraulic rams, power hydraulic spreaders/rams and chains or hand winches can be used.

CAUTION:1 Air lift bags should not be used for this task due to possible sudden release of stored energy

CAUTION·2 Care needs to be taken not to overstress the pull. The columns must only be moved as far as necessary. Moving the column too far can cause equipment column failure eg a column can enter the passenger compartment due to the failure of universal joints at floor level

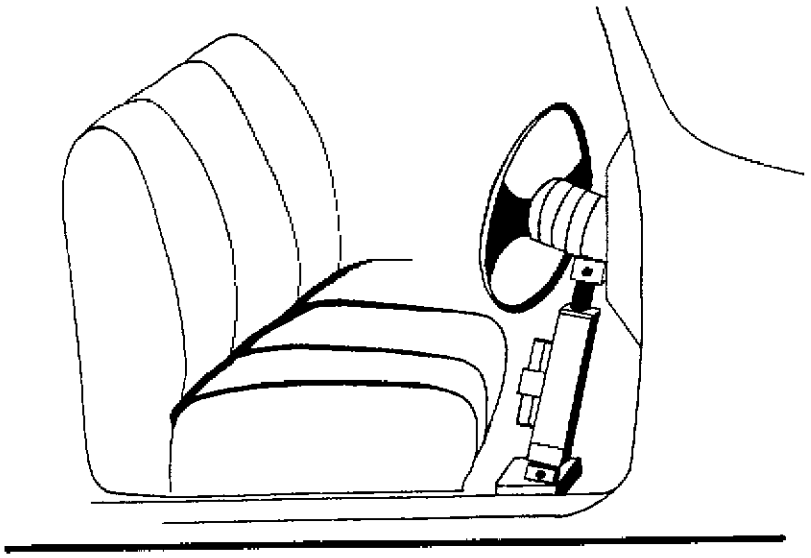


Figure 7:4
Displacing Steering Column (Push)

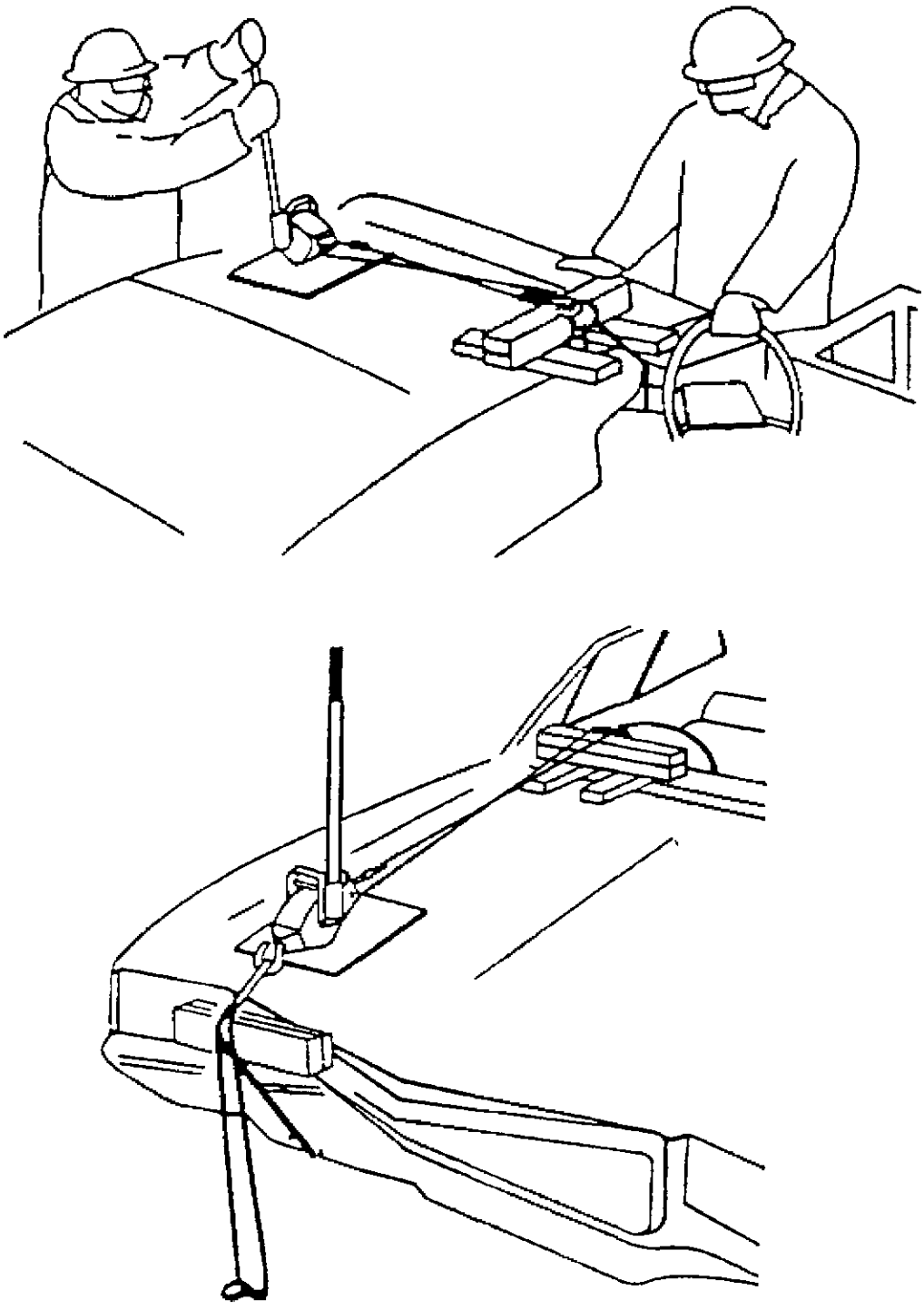


Figure 7:5
Displacing Steering Column (Pull)

7.17 STEERING WHEELS

Most steering wheels, regardless of their cosmetics, are simply a circle of 8mm round steel and may be cut by large bolt cutters or hacksaw.

CAUTION: Some steering wheel rings are formed under tension and when cut, may spring out with considerable force.

Figure 7.6
Severing Steering Wheel

7.18 STEERING COLUMNS

Severing the column may be accomplished by the use of a hacksaw or by reciprocating saw. Hydraulic shears may be used, but this technique can be hazardous to personnel and damage equipment.

7.19 AIR BAGS

Rescuers must make themselves aware of air bag restraint systems and the methods by which they can be de-energised. Accidental activation of these systems may cause injury to the casualty or rescuer.

PANEL METAL ENTRAPMENT

7.20 Sometimes persons involved in vehicle accidents become trapped by panel metal. This 'wrapping' presents the rescuers with a special problem in disentanglement. There usually is no quick way of removing the panel metal. Spreaders used carefully can progressively open the entrapment. A reciprocating saw may be used when space permits but extreme caution should be exercised to avoid further injury to the casualty.

HEAD THROUGH WINDSCREEN

7.21 This situation may occur when an unrestrained occupant of the vehicle is thrown forward into the windscreen. If the head is pulled back, shards of glass may be driven into the head or neck.

7.22 SHARD REMOVAL

When satisfied that the casualty is properly stabilised, the rescuer should look for long shards that are hinged to the windowshield pressing against the skin. These are bent away from the casualty and the point of a sharp knife is run in the fracture line to cut the plastic sheeting that holds the layers of glass together. This will allow the removal of the shards.

7.23 COLLAR FITTING

When all the shards have been removed from direct contact with the casualty's neck, a collar can be fashioned from a trauma dressing. The collar is then placed between the victim's chin and the glass surface, and worked until it is between the neck and the glass.

7.24 Before the casualty's head can be guided back through the windshield, it is necessary to enlarge the opening in the glass. Broken glass segments should be removed continually.

7.25 ALTERNATIVE METHOD

An alternative method of freeing the casualty involves removing the top of the windscreen. After first aid and stabilization have been completed, the roof is cut just forward of the B pillars, followed by cutting the A pillars at the windscreen edges parallel to the hole. The glass is then chipped gently with a ballpein hammer working in a straight line from the hole to the outer cuts. The sheeting plastic can then be cut with a sharp knife and the top of the windscreen lifted clear, by creasing the roof and folding backwards and clear.

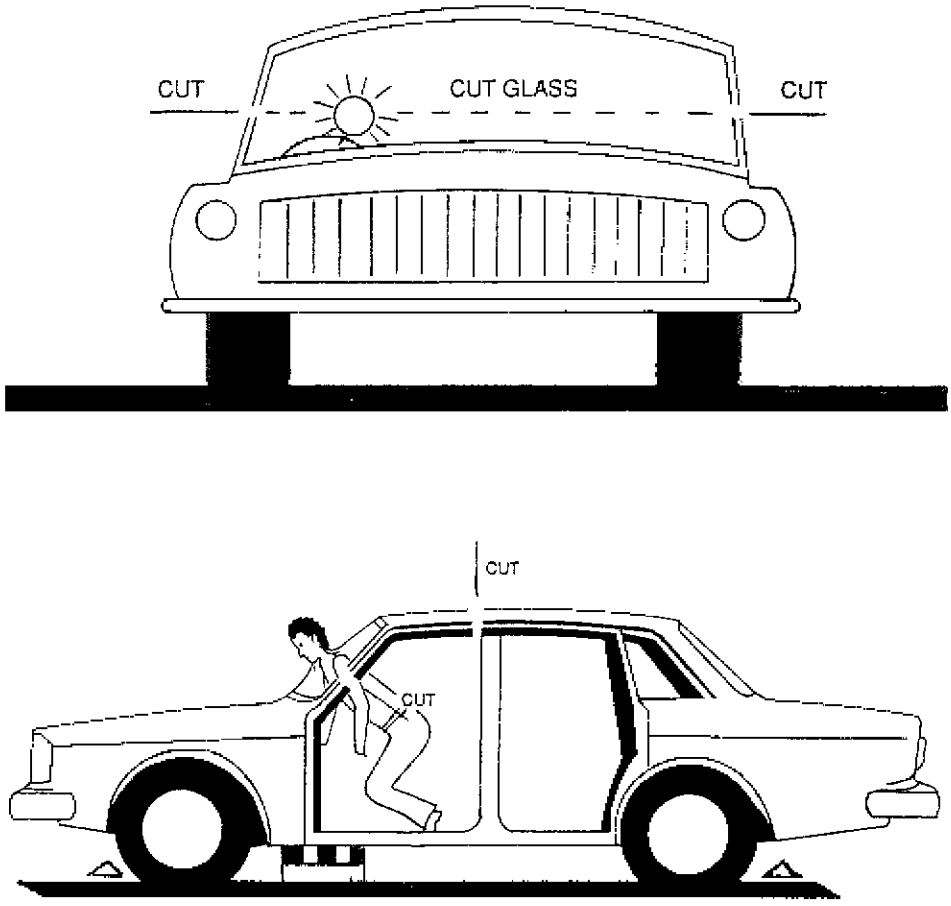


Figure 7:7
Extrication of Casualty with Head Through Windscreen

7.26 IMPALEMENT

Vehicle collisions may result in the casualty being impaled by pipes, reinforcing rods, tree limbs, guard rails or parts of the vehicle. Impalements may be to any part of the casualties body and must not be removed by the rescuer. If possible, the object should be cut about 100 - 300mm from the casualty's body

CAUTIONS: Rescuers need to be aware of:

1 the compression or tension forces which may be released when the object is cut, and

2.the casualties must be protected from heat transfer during cutting and vibrations

DASH HINGE TECHNIQUE

7.27 The dash hinge technique relies on correct placement of cuts, particularly at the firewall and junctions. This ensures that the hinging occurs through the light metal panel at the front of the vehicle. During this operation, it is important that a safety observer monitor the movement of the floor pan and pedals for the protection of the operator and casualty.

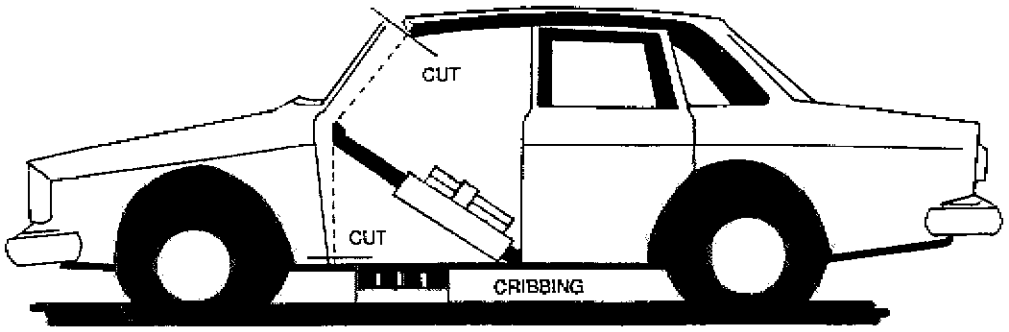


Figure 7:8
Dash Hinge (Sedan)

Note: A push or pull operation may be employed (ram or winch).

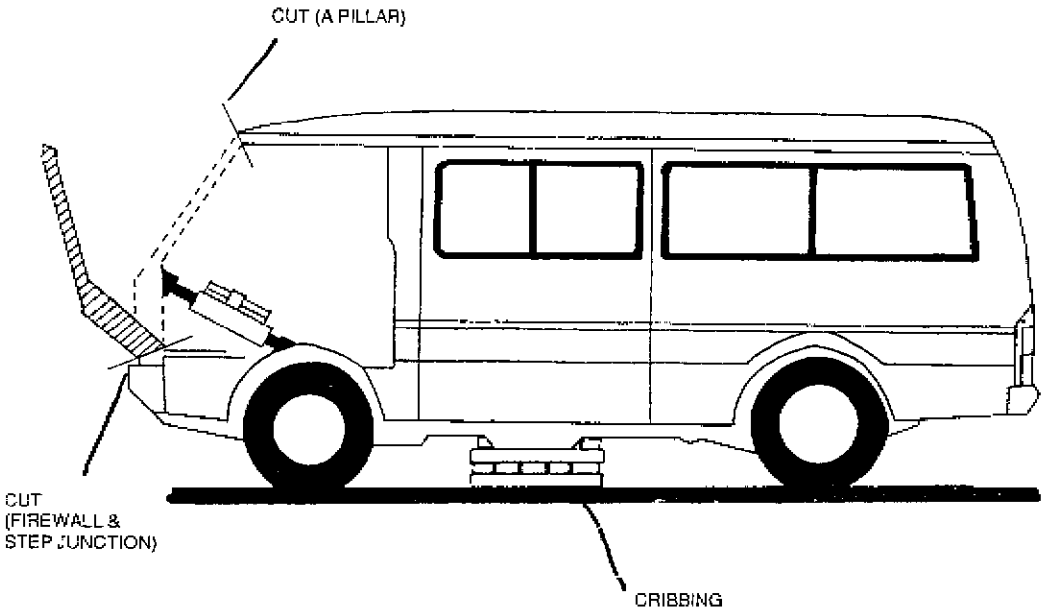


Figure 7:9
Dash Hinge (Van)

CHAPTER EIGHT

REMOVAL AND TRANSFER

INTRODUCTION

8.01 Patient removal and transfer involves two distinct operations These are defined as follows:

a. **Removal** - The movement of a casualty from the wreckage to a location outside the vehicle.

b. **Transfer** - The movement of a casualty from that location to an ambulance or other transportation mode.

REMOVAL

8.02 There will be occasions when removal may be a simple operation, whereas the transfer may be over difficult terrain and involve the use of special techniques and equipment.

8.03 **PERSONNEL LIAISON**

To prevent further injury during removal, the patient must be fully supported and protected. Close liaison is essential between the rescuers and the person responsible for casualty care.

8.04 **TECHNIQUES**

Various techniques for casualty removal may need to be employed and include the use of short or long back boards, cervical collars, rope slings, etc These techniques must always be employed in conjunction with correct casualty preparation and should be conducted under the direction of the casualty care officer.

8.05 **POST-REMOVAL**

After the removal phase has been completed, all action from this point will be to assist in the transfer of the casualty to the ambulance/transportation mode

TRANSFER

8.06 The transfer may simply be moving the casualty a short distance over level ground or it may involve a long distance over difficult terrain. Some casualties may be seriously injured or unconscious, therefore speed of transfer may be paramount, **but must** be consistent with safety and correct handling to prevent further injury.

8.07 **TECHNIQUES**

That used will depend on the condition of the casualty, injuries sustained and the availability of equipment. Frequent inter-service training and exercises should be conducted in removal and transfer techniques, using live persons as casualties to give rescuers and those responsible for casualty care understanding and confidence in the various methods.

8.08 MOVING THE CASUALTY

To move the casualty, a spine board, or other device should be used so that the patient can be immobilized and moved as one. The body of the patient should not be flexed, extended or rotated. If possible, injured parts should be immobilized in the position in which they are found. The degree of recovery of a patient will depend on the extent of the initial trauma, the prevention of further trauma during resuce operations, and the transporting of the patient to hospital.

8.09 LIFTING

If the rescuer must move the patient or assist the casualty care officer, the casualty can be moved with relative safety if lifted by three or more persons. Rescuers must make every effort to prevent all active and passive movements of the spine of the casualty. The casualty's head must be held securely. The shoulders are supported by a rescuer's hands. During the lift, the trunk and limbs must be aligned and supported by other rescuers. The casualty can then be moved slowly and carefully.

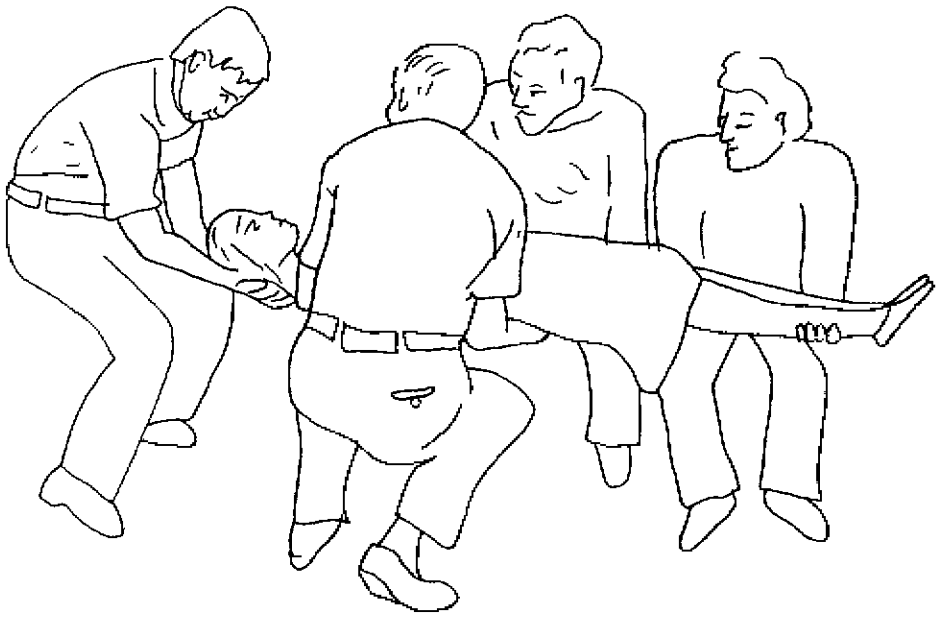


Figure 8:1
Moving the Casualty

PLANNING

8.10 Rescue and casualty care personnel must carefully plan the transfer and ensure that the casualty is constantly monitored.

8.11 TECHNIQUES AND IMPROVISATION

There are many techniques of transferring casualties under adverse circumstances. It is not enough for rescuers to have a variety of equipment and appliances at hand. They should have a wealth of ingenuity to assist in improvisation.

Note: Approval should be sought from the Police prior to moving or removing deceased persons from the wreckage unless essential to preserve life.

CHAPTER NINE

TERMINATION

INTRODUCTION

9.01 The termination phase of any road accident rescue must include the following considerations.

a. Final Check.

b. Removal of Debris.

c. Termination of Operations.

d. Clean Up and Preparation.

e. Reports.

f. Operational Debrief.

g. Critical Incident Stress Debriefing (CISD).

FINAL CHECK

9.02 A final check on the vehicle must always be carried out. There is always a possibility that a baby or small child could be left in some obscure part of the vehicle.

9.03 **VEHICLE AND SURROUNDINGS**

Checks must be made in the area between the seats, and amongst debris which might indicate that children were in the vehicle. Surrounding scrub, ditches and drains need to be thoroughly searched for casualties who may have been flung from the vehicle on impact. Under the dash, under the car, the sleeper cabs of trucks, particularly if overturned, need to be examined prior to leaving the scene.

REMOVAL OF DEBRIS

9.04 Preservation of evidence and scene-integrity are vital, to ensure Police can conduct an accurate investigation. Therefore, debris is not to be moved until cleared by the Police OIC. The smallest piece of wreckage and its location may be vital in any subsequent investigation.

9.05 **RESPONSIBILITY**

The responsibility for removal of broken glass, debris etc, from roadways, varies throughout Australia. However, where this is a major task, rescuers may assist with debris removal, but only after all unit operations and requirements are complete.

TERMINATION OF OPERATIONS

9.06 The rescue leader must check with the other authorities involved prior to leaving the scene as they may still require the assistance of the rescue unit even though the casualty may have been released.

9.07 Rescuers need to be aware that it may be necessary to stand by for some time while police carry out functions such as Disaster Victim Identification (DVI) or Accident Scene Investigation (ASI).

CLEAN UP AND PREPARATION

9.08 EQUIPMENT

Equipment used is to be cleaned and serviced as adequately as possible at the scene, ensuring the vehicle inventory is complete. Safe stowage of equipment on vehicles must not be overlooked when concluding the operation. Engines on motor driven equipment must be cool, and safe to stow, and each item is secured in its correct location. Power units are to be refuelled and ready for use. The unit must maintain a continual state of readiness for immediate response.

9.09 It is imperative that crews, on return to their Station/HQ, carry out a vehicle and equipment service to maintain total operational readiness.

9.10 HYGIENE

Personal hygiene should be addressed at this stage. Body fluids which have come into contact with rescuers or equipment should be removed as indicated in the Communicable Diseases segment in Chapter 6 of this manual.

REPORTS

9.11 It is essential that incident reports are completed as soon as practical, while details are still clear.

OPERATIONAL DEBRIEF

9.12 BENEFITS

Operational debriefs are essential, as useful information may result from discussions with members who were at the incident. A properly conducted debrief can contribute to a:

a. well ordered, satisfied and disciplined team,

b clearly defined SOP;

c suitably equipped unit;

d. the relief of stress in team members: and

e review of techniques.

9.13 STRUCTURE

The senior member of the unit, or an appropriate senior person, may conduct the debrief. The debrief should be one of consultancy rather than 'third degree' and should include the following:

a. The callout - Did the SOP work well?

b Travel to the scene - Was it satisfactory?

c. Hazard assessment and briefing - Was it adequate?

d. Co-operation with statutory authorities - Was it satisfactory?

e Was conduct of the operation generally satisfactory?

f. Were tools in use adequate?

g. Were new techniques tried or discovered?

h. What were members reactions to the whole activity?

i. Were difficulties encountered?

j. Summary and undertaking to change if necessary.

k. Safety aspects of the operation from preparation to termination.

After this information has been gathered, the events should cease to be documented, and an informal discussion continue between team members to allow for a 'Wind-Down' period. A suggested Debrief Check List is included as Annex A.

CRITICAL INCIDENT STRESS DEBRIEF (CISD)

9.14 CIS can be described as any situation faced by rescue service personnel that causes them to experience unusually strong emotional reactions which have the potential to interface with their ability to function either at the scene or later.

9.15 **WHY DO WE NEED CISD?**

Rescue Officers have well developed coping mechanisms and normally handle the day to day situations well. However, from time to time there may be a job that causes rescuers to think and feel quite differently from the others that they have attended. Some of the thoughts and feelings experienced may include: not being able to stop thinking about the scene, difficulty in sleeping, flashbacks or dreams of the scene, frustration, digestive problems, becoming withdrawn, headaches, and a general feeling of pre-occupation.

9.16 A well structured operational debrief may be all that is required to maintain operational efficiency. However, an operational debrief should never be confused with, or conducted as a CIS debrief. They are separate entities. All rescuers need to be aware of changes in behavioural patterns of individuals and the symptoms relating to emotional stability and conditions. These may require a rescue team leader to encourage rescuers to seek professional counselling. Information relating to identifying symptoms and the processes of initiating counselling or CISD are identified within each organisation.

9.17 As part of pre-planning and ongoing training, existence of local Critical Incident Stress Management teams should be established. They will provide advice on types of assistance they can provide.

9.18 The Australian Critical Incident Stress Association will advise on locations of CISM teams. Local government authorities and hospitals can provide contact details, but at the time of printing of this manual, the office telephone number for the association was (08) 352 7211

ANNEX A TO
CHAPTER 9

DEBRIEF CHECK LIST

The following points should be covered in the operational debrief, with appropriate documentation and follow-up of noted deficiencies.

1. Preparation:

Was the rescue vehicle ready for service? If not, why not? What equipment was not ready for service? Why not? What can be done to improve readiness?

2. Response:

Was all necessary information received about the incident? If not, what was missing? What factors affected response? Was the primary or alternate route used? Why? What special driving skills were required? Was the rescue vehicle safely parked on arrival? If not, what was the danger and how was it handled? What can be done to improve response?

3. Assessment:

Were rescue services required? Was initial response sufficient? If not, what assistance was required? Were all victims immediately accounted for? What steps were taken to locate missing victims? Where were the victims finally found? What can be done to improve assessment?

4. Hazard Control:

What were traffic hazards? What control measures were initiated? What can be done to improve traffic control? What were non-traffic hazards? What control measures were initiated? How can control of non-traffic hazards be improved?

5. Support Operations:

Was the total operation properly coordinated? If not, why not? What support operations were required? Was support sufficient? What can be done to improve support operations?

6. Gaining Access:

Were victims trapped in vehicles? If so, what steps were taken to gain access? What might have been done to gain access more quickly?

7. Emergency Care:

Were victims injured? If so, how? Did rescuers provide first aid care? Could initial care have been improved? If so, how? Did ambulance service require ongoing first aid assistance?

8. Disentanglement:

Was disentanglement necessary? If so, how was it accomplished? How might disentanglement have been improved?

9. Removal and Transfer:

After disentanglement, was the victim ready for transfer? If not why not? Did the rescue crew assist with removal and transfer? What special equipment was used for removal and transfer? How can removal and transfer activities be improved?

10. Termination:

Was debris removal needed? If so, how was it handled? What continuing support operations were required? Did all rescuers return with the vehicle? If not, why not? Was all equipment replaced on the vehicle? If not, why not? What servicing did the vehicle require? What repairs did the vehicle need? What equipment required repair or maintenance? How was equipment cared for? Is the vehicle ready for service now? If not, why not? What additional equipment could have been carried to improve efficiency in this operation? What additional techniques should rescuers have known to improve performance in this operation?

11 General:

Any other comments relevant to the effective conduct of the rescue operation.