



SMSA NATIONAL SPORTING REGULATIONS

Part F: Emergency and Medical Services

Scope

1. General
2. Rescue Units
3. Actions at an Incident
4. Emergency Staff Requirements
5. Medical
6. Rescue Units and Equipment

General

- 1.1 All emergency vehicles are licensed based on their suitability for the particular tasks required of them. All units should at all times be kept clean, tidy and in a hygienic condition.
- 1.2 These vehicles, when licensed, are only acceptable at Events when staffed by appropriately licensed emergency crew.

Rescue Units

- 2.1. All Licensed Rescue Units are required to carry the appropriate equipment listed in ANNEX B.
 - 2.1.1. Where possible or practicable, the recommended positioning of Emergency Vehicles will be indicated on the Track/Venue License or in the Event Regulations.
 - 2.1.2. Organizers using Emergency Vehicles should satisfy themselves that they operate with Licensed Vehicles and crews that are correct for the type and status of their events.

Purpose

- 2.2. Rescue Units are required to transport licensed crew and equipment and provide medical and extrication facilities at the scene of an accident within approximately 90 seconds of leaving the stand-by location when operating at a licensed venue (and as appropriate at other venues).
 - 2.2.1. Additional licensed vehicles can be specified on the Track License if deemed necessary.

Type of vehicle

- 2.3. The vehicle should be of a type that is safe and appropriate to drive on a competition course while competition is in progress.
 - 2.3.1. A suitably modified van capable of carrying crew and equipment in safety at speeds of 80-100 kmh is appropriate for sealed surface courses.

Identification

- 2.4. Vehicles should be clearly marked "RESCUE", "MEDICAL INTERVENTION" and "AMBULANCE" as required and carry amber flashing beacons.

Crew

- 3.1 The Minimum crew requirements are:
 - 3.1.1 Race events. Three fully licensed rescue crew members and a Doctor or Registered Paramedic.
 - 3.1.2 At no time, at any event, may the crew of a Licensed Rescue Unit include more than two trainees.

Actions at an Incident

- 4.1. Where Rescue Units are involved, once the risk of fire has been covered, medical control will be established by the Doctor or Registered Paramedic who will co-ordinate the extrication of any casualties without causing further harm or injury.
 - 4.1.1. Crew should be fully familiar with, know the location of and be capable of assembling, operating, servicing and maintaining all equipment carried.
Rescue crew to be able to assist the Doctor or Paramedic in the preparation and use of medical equipment.



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Crew Requirements

5.1. License applicant, upgrading and maintenance criteria are detailed in ANNEX A.

Training

5.2. All Emergency Vehicle Crew members should attend at least two training sessions a year, as well as several SMSA-permitted events to maintain their efficiency and status.

5.2.1. Licensed Crew Members will not be automatically re-licensed on the basis of attending assessment days only.

5.2.2. Training sessions provided by SMSA registered Rescue Trainers may be used as license signatures. Regional Rescue Trainers can be contacted via the SMSA.

Documentation and Information

5.3. Application Forms for Trainee and Full Licenses, together with signature record cards, can be obtained from the SMSA. Details of Approved Training and License Assessment will be notified to license holders.

Medical

Race Medical Centre

6.1. The circuit Medical Committee should ensure that the Medical Centre is properly equipped and maintained.

6.1.1. It is essential that proper patient records are kept and that procedures for the safe disposal of potentially hazardous waste material, including dressings, contaminated clothing, syringes, needles and sharps, are in place.

6.1.2. The risk of cross-infection must be addressed (e.g. by wearing gloves, aprons and goggles). Disposable equipment should be used where possible and sterility ensured at all times.

6.2. Records must be kept of the use of all drugs and fluids (including quantities and expiry dates) and equipment maintained according to appropriate service schedules.

6.3. The following list of equipment, fluids, drugs, dressings etc. is considered to be the minimum requirement for a Medical centre. However it is essential that individual doctors equip themselves with the drugs and equipment they judge necessary. All equipment must be checked, serviced and stored according to the manufacturer's recommendations. There should be sufficient equipment and drugs for the immediate resuscitation of a minimum of two patients.

Equipment and Drugs

6.3.1. Resuscitation

- Oropharyngeal airways (eight assorted sizes 2, 3 and 4)
- Pocket mask or similar device with non re-breathing valve and O2 inlet
- Suction apparatus mains, battery, hand or foot operated capable of **300mm Hg suction** with reservoir not less than 350ml or overflow system with catheters and wide bore suction
- Self-inflating manual resuscitator with facemask and O2 reservoir
- O2 supply (min size F1360 litres) and spare with reducing valves, flowmeters as necessary
- O2 tubing and masks
- Laryngoscopes x 2 with spare batteries and bulbs
- Endotracheal tubes cuffed x 6 (sizes 6.0mm to 9.0mm)
- Nasopharyngeal tubes x 3 (assorted sizes)
- IV cannulae (six assorted sizes 1.0 to 2.0mm)
- IV administration sets x 6
- Hartmanns Solution (or equivalent) (1000ml x 6): under the direction of a Medical Officer
- Haemaccel or equivalent (500ml x 8): under the direction of a Medical Officer
- Pressure infusor
- Assorted syringes and needles.

6.3.2. Monitoring and diagnostic

- Sphygmomanometer aneroid/mercury (for latter consider regulations re Hg spillage)
- Non-invasive Blood Pressure Monitor
- Pulse oximeter
- Defibrillator with leads, electrodes pads/gel
- ECG



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- Thermometer
 - Blood glucose estimation kit.
- 6.3.3. Splints and Dressings
- Large field dressings x 10
 - Bandages and adhesive tape in assorted sizes
 - Sterile non-adhesive and adhesive wound dressings
 - Burn dressings and supply of sterile transparent bags assorted sizes
 - Semi rigid cervical collars (assorted x 4)
 - Splints.
- 6.3.4. Drugs: it is mandatory that the following be available as a minimum requirement.
- Cardiac arrest drugs according to National Resuscitation Council Guidelines
 - A supply of parenteral analgesics.
- 6.3.5. Surgical
- Chest drainage kit
 - Cricothyrotomy/Cricothyroidotomy kit
 - Minor op sterile pack with needle holder, scissors, artery forceps, scalpel and blades
 - Suture materials
 - Skin Antiseptic
 - Small autoclave (recommended).
- 6.3.6. Miscellaneous
- Scoop stretcher
 - Casualty immobilizer (vacuum mattress)
 - Stretcher for ambulance.

Medical Response Unit (Race Meetings)

6.4.1. A suitable saloon or estate car identified both sides with 'Medical Intervention' and equipped with roof mounted flashing blue light(s) equipped as follows:

- Beacons, to be visible 360° (with low mounted units if appropriate)
- **Spring centre punch or similar**
- Oropharyngeal airways (2 x size 4, 1 x 3, 1 x size 2)
- Pocket mask or similar device with non-breathing valve and O2 inlet
- Portable suction apparatus (battery, manual or foot operated capable of 300 Hg vacuum) with a selection of catheters and wide bore suction
- Self inflating manual resuscitator with facemask with O2 reservoir
- Laryngoscope with spare battery and bulb
- Endotracheal tube cuffed (7.0mm x 1, 8.0mm x 1)
- Nasopharyngeal tubes (6.0mm and 7.0mm)
- A cylinder with oxygen with reducing valves and flowmeter (equivalent to size D in volume)
- O2 tubing and facemask
- Hartmanns Solution (or equivalent) (500ml x 2)
- IV cannulae (1.4mm, 1.7mm and 2.0mm x 2)
- IV administration sets x 2
- Adhesive tape
- Needles and syringes assorted
- Disposable sharps container and plastic bag (for clinical waste)
- Rigid cervical collar, adjustable x 2
- **Burns dressings x 3 (large, leg and arm size).** Large field dressings x 5. Non absorbent wound dressings x 5
- Heavy duty scissors
- Chest drain kit
- Sphygmomanometer
- Stethoscope
- Surgical gloves.

6.4.2. Drugs are not listed, however it is essential that resuscitation drugs conforming to Resuscitation Council Guidelines and a supply of parenteral analgesics be available. Any further drugs and equipment that may be deemed appropriate by way of a specialist expertise is the responsibility of the individual doctor.



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- All equipment must be regularly checked, serviced as necessary and stored according to the manufacturer's recommendations
- 6.4.3. Minimum Crew Requirements: One Doctor, plus either, one paramedic, or one fully licensed Rescue Crew member, or a second Doctor.

Duties of the Chief Medical Officer

7.1. Chief Medical Officers at all events will:

- 7.1.1. Prepare a duty roster in liaison with the Clerk of the Course, deploying their team so that principal danger areas are under supervision, and particularly ensuring that at least one doctor is always on call in the pit or paddock area.
- 7.1.2. Allocate duties to all available doctors after ensuring that each is adequately equipped with oropharyngeal airway, large field dressings or the equivalent, and is familiar with the venue, the means of access to all points in the area under their charge, and the method of summoning assistance and of disposing of casualties.
- 7.1.3. Each doctor should make a point of introducing themselves to adjacent Marshals, and in particular to those through whom Race Control will be informed of ambulance movements.
- 7.1.4. Identify with the Clerk of the Course the locations specified for ambulances at the venue.
- 7.1.5. Settle with the leader of first-aid personnel the locations of their team, and the arrangements for relief.
- 7.1.6. Satisfy themselves that all first-aid posts and ambulances are adequately equipped.
- 7.1.7. Ensure that all first-aid personnel are aware of the method of calling aid and of disposing of casualties, and that an ambulance may depart from the meeting only on the instructions of the CMO in consultation with the Clerk of the Course.
- 7.1.8. Ensure that the Drivers of ambulances and rescue units are fully aware of the need at all times to preserve free access for their vehicles to the track and/or internal roads; that the latter should always be preferred except in dire emergency; that an ambulance may not cross or proceed on to the track until instructed to do so by a doctor with the approval of the Clerk of the Course.
- 7.1.9. When on the track, an ambulance must always obey Marshals' signals and travel only in the direction in which the event is being run; and that the ambulance Drivers know the appropriate route to the hospital chosen for that meeting (Drivers should be instructed to return to the circuit as quickly as possible after delivering a casualty).
- 7.1.10. Assure themselves in conjunction with the Clerk of the Course that at points where ambulances may have to cross the track all personnel concerned are prepared to handle such a situation safely and efficiently.
- 7.1.11. If appropriate, see that the Medical HQ is open and staffed as a casualty station.
- 7.1.12. Provide themselves with the necessary telephone numbers of the hospital in use and of the ambulance pool if known.
- 7.1.13. Report to the Clerk of the Course when the above points have received attention and they are satisfied that the medical organization is adequate for practice or competition to begin.
- 7.2.1. In the event of an accident involving a Competitor receiving injuries such that, or it otherwise being considered that, the competitor no longer meets the necessary medical requirements, the Chief Medical Officer in consultation with the Clerk of the Course shall withdraw the competitor's license and advise the SMSA of details of the injuries/medical condition suffered. The SMSA will hold such a license as suspended until such times as the Driver has been cleared medically.
- 7.2.2. Medical examinations leading to the issue of an SMSA Medical Certificate are not permitted at an event
- 7.2.3. The appropriate local hospital authorities must be notified by the Organisers of a meeting as to the time and date of the meeting, including practice.
- 7.2.4. Where regulations call for an Ambulance, the vehicle should be large enough so that the Doctor, SMSA-registered Paramedic or Crew Member to operate equipment without restriction of movement.
- 7.2.5. The Chief Medical Officer at Kart Race Events should satisfy themselves that they have available adequate equipment and materials to enable them to carry out duties within their training and experience.



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Eligible Medical Staff (Doctors)

7.3. Eligible medical, may be used as detailed in the Specific Regulations.

7.3.1. Any doctor registered with the Singapore Medical Council (SMC) attending a motor sport meeting as a result of a commercial contract between the meeting Organisers and their employers, will be considered as being an SMSA Registered Doctor for the duration of that specific meeting.

7.3.2. To be SMSA registered, applicants must be currently certified by the Singapore Medical Council (SMC) as being a doctor and be in possession of adequate valid malpractice insurance.

7.3.3. Anyone who ceases to be certified as a doctor with the SMC will be removed from the register.

7.4. All registered Doctors must carry a malpractice insurance.

7.4.1. They must 'sign-on' and where appropriate (7.3.2) produce their Medical Registration card at any event at which they are officiating.

7.4.2. They shall remain under the control of the Clerk of the Course at all times.

7.5. An SMSA accident form must be completed for each and every incident treated.

ANNEX A: Crew Requirements – Systems of acceptance and upgrading

Acceptance for Training

- Race/Trackside experience
- Attend one approved Marshal training day including fire training and radio procedure training
- Possession of a valid First Aid Certificate is recommended
- Gain endorsement of Crew Chief on existing Rescue Unit
- Minimum age 18

Trainee period & Requirements

- Hold a Trainee License, complete modular training programme detailed on the training record card, with signatures.
- Collect 10 signatures from an Instructor or Crew Chief for attendance at 8 Race Events and 2 Training Days within 2 years

License Acceptance

- Attend Approved SMSA Rescue License Assessment.
- Demonstrate to assessors full familiarity and competence in the operation of all equipment also identification and preparation of medical equipment.

Maintenance of License

- Attend and pass 3 yearly Assessments.
- Satisfy Crew Chief that Training attendance and updates have been completed between assessments.

ANNEX B: Rescue Equipment

General

- Beacons (to be visible 360° with low mounted units if appropriate)
- (the supply of equipment using alternative radio frequencies is the responsibility of the organising club) * * *
- Personal protective equipment for each crew member * * *
- Fire resistant blanket (1m x 1m minimum) * *
- 1 x 6kg dry powder extinguisher * * *
- 1 x 6 litre light water/AFFF fire extinguisher * * *
- survival blankets * * *
- 1 Warning triangle * * *
- Vehicle powered lighting and torches * * *
- Suitable cutters for harness, straps, etc * * *
- 1 gallon (5 litre) clean, fresh tap water * * *
- Environmental Spill Kit – Medium * * *



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Tools

- 1 spill kits * * *
- hacksaws and supply of blades * * *
- 1 small bow saw * * *
- 1 small axe * *
- 1 pair tin snips *
- 1 1m crowbar * * *
- 1 pair bolt croppers (minimum 18in) * *
- 1 pair mole grips * *
- 1 general tool kit to include AF and metric spanners, sockets, allen keys, "Torex" and other drivers etc to aid access to vehicle.
- 1 glass breaker (ie, Spring Centre Punch) * *
- hammers, large and small * * *
- Selection of flat, Phillips and Pozidrive screwdrivers * *
- suitable ropes or strops (1500kg SWL) *
- 1 spade *
- Cold chisels/Bolster chisels *
- Selection of coupling hardware *
- Equipment suitable for securing/stabilising and towing vehicles * * *
- 1 opaque sheet suitable for covering vehicle * * *

Powered Tools

- 1 powered metal cutting saw with an adequate selection of blades *
- 1 cutting saw, oscillating (electric, air or hydraulic) *
- 1 pedal cutter 3cm minimum jaw opening *
- 1 large spreader 750kg (may be combined with large shear) *
- 1 large shear to cut A, B, C pillars (may be combined with large spreader) *
- 1 crash rescue kit (expansion) 8/10 ton capacity/powered hydraulic equipment *
- 1 trolley jack 1015kg or air jack system. * *
- 1 trolley jack, minimum capacity 2000kg, or high lift jack, or air jack system. *
- Note: For all categories of unit there should be adequate compressed air supply (bottled or from compressor) and hydraulic power supply for powering the range of equipment carried on the vehicle. Where equipment power source is electrical battery an adequate supply of charged batteries to be available.

ANNEX C: Medical Equipment

- 1 Automated external defibrillator with monitoring capability
- 1 Resuscitator with Oxygen Reservoir and Mask
- 4 oropharyngeal airways to include nos. 2, 3, 4
- Note: it is strongly recommended that some device is carried which allows the operator to perform resuscitation whilst isolated from the casualty's oral secretions
- 1 laryngoscope plus spare batteries and bulb * *
- 6 cuffed endotracheal tubes (2 x 7.0, 2 x 8.0, 2 x 9.0) with syringes to inflate * *
- 1 portable suction machine (able to obtain 300mm Mercury vacuum) * *
- Full selection of suction catheters including yankeurs * *
- 1 portable entonox set (1 spare entonox cylinder) *
- 1 portable oxygen set (900 litres in not more than 3 cylinders). Regulator to be capable of delivering 15l/min * *
- Supply of non re-breathing masks * *
- adult sets of extrication collars or 2 adult adjustable extrication collars * *
- Spinal Immobilizers (eg, KED, RED, TED) *
- 1 chest drain kit *
- 1 pair heavy duty scissors * *
- Scalpels, blades and artery forceps *



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- Cricothyrotomy/Cricothyroidotomy kit (or “mini track”) *
- 1 sphygmomanometer *
- 1 stethoscope **
- 6 intravenous giving sets **
- 9 intravenous cannulae (three each 14, 16, 18) **
- 4x 500ml hartmann’s solution or equivalent **
- A comprehensive selection of dressings including large sizes (eg 20cm x 40cm) and bandages **
- A supply of burn dressings (including ‘watergel’ type dressings) which should include unused clean plastic bags ***
- A sterile solution for eye irrigation ***
- Selection of splints **
- 1 stretcher (ambulance cot type) *
- 1 scoop stretcher *
- 1 Long Board c/w head immobilisation system and straps *
- Disposable surgical gloves **
- Disposable sharps container and plastic bag for clinical waste **
- Report cards