

Appendix 4 Apparel Requirements

For AASA sanctioned events V1.0

Background

Risk management principles follow a hierarchy of actions, designed to reduce or eliminate hazards to health and safety. High priority actions are always more effective in managing risk and must always be implemented where possible and practical to do so. Where a higher priority action is assessed as being impractical or further action is required, actions at a lower level must be implemented. The generally accepted hierarchy is:

- Eliminate: Don't do the activity (e.g. Stop Motor Sport altogether, don't race)
- Isolate: Separate people from the hazard (e.g. Remote controlled lights, not flags)
- Substitute: Find a safer alternative to the hazard (e.g. ceramic brake pads, not asbestos)
- Engineer: Make things safer (e.g. safety harnesses, safety cages, fuel bladders)
- Administrate: Write rules to be followed (e.g. nobody on pit wall at starts)
- Personal Protective Equipment PPE: last line of protection (e.g. Helmets, apparel)

As can be seen from the above, apparel represents the last line of protection when all other risk management actions have failed. It is the last line of protection, not the first.

Apparel can also be used in a secondary safety role, by enhancing visibility (Hi-Vis) or providing a visual clue as to an official's role to ensure smooth management of both normal and critical operations.

Hazards

We must assess protective apparel globally, including not just drivers, co-drivers and riders, but also crew and officials. In doing so we must consider what the hazards are against which protective apparel can provide some level of protection.

- Fire (Flame and smoke)
- Heat, both radiant and conducted (e.g. hot exhausts, cockpit floor, oil pipes)
- Cold (e.g. refrigerated fuel or intercoolers, exposure to cold wind and rain)
- Explosion (mostly off track activities e.g. during tyre fitting, welding operations)
- Blunt object impact (e.g. hitting the dash, steering wheel, safety cage)
- Sharp object impact (e.g. sharp edged brackets, brake mater cylinders)
- Crushing (e.g. falling objects or rolling vehicles)
- Abrasive impact (e.g. contact with bitumen at speed)
- Chemical exposure (e.g. fuel, oils, acid)
- Dust and fumes (e.g. exhaust gas, engine fumes, off road and rally dust)
- Noise (e.g. exhaust, induction and gearing, PA systems)
- UV light (Sunlight)
- Poor visibility (i.e. the wearer can't be seen easily)

Wearing protective apparel can also introduce or exaggerate hazards under certain circumstances. These must also be taken into consideration when deciding on the appropriate levels of protection required for a particular activity.

What are the hazards that can be introduced or exaggerated by the wearing of protective apparel?

- Heat retention (leading to dehydration, heat exhaustion, fatigue)
- Loss of vision (peripheral vision)
- Restriction of bulk movement (e.g. arms, legs, neck)
- Loss of dexterity
- Breathing restrictions
- Financial viability of events due to cost of personal protective equipment (PPE).

Pit/Service Crew

General

Each person associated with a motorsport activity, whether as a driver or co-driver, a member of a pit or service crew, supplier or event official, acknowledges that they operate within an environment of elevated risk, and that they shall be required to comply with each requirement specified in event regulations.

Unsafe, inappropriate or offensive apparel

Event Organisers have the right to require any person associated with the event to comply with these apparel requirements. Should event organisers deem that the apparel worn by any person associated with the event is unsafe (either due to its condition or design), inappropriate, or likely to cause offence to a reasonable person, they can ask for the offending apparel to be rectified. Failure to comply with any such request may result in the person or team being excluded from the event.

Uniforms

In many cases, teams may require their pit/service crew to wear a team uniform. Team managers must take into account the prescriptions of the present Appendix when specifying a particular set of apparel for their team, including the roles each member may possibly be directed to do.

Hi-Vis apparel

The wearing of “Hi-Vis’ apparel, including vests, is frequently a risk management requirement in workplaces. Nonetheless, in a crowded pit lane, having hundreds of people wearing such apparel defeats the purpose of ensuring that each individual can be seen. Hi-Vis apparel is also generally made of synthetic material and as such prone to sustain combustion.

The wearing of Hi-Vis apparel in the Pit Lane of a circuit race event is therefore restricted to event officials to ensure that they can be readily identified. This shall not preclude teams from using reflective strips sewn into apparel where there is no specific requirement for flame resistance.

Sponsorship Requirements

Event organisers shall not require teams or drivers/co-drivers to display event promotional material on their apparel. Organisers may impose requirements that limit the display of promotional items that, in their opinion, conflict with the requirements of event sponsors. Any such requirement must be clearly specified in Event Supplementary Regulations so that teams who may be adversely affected can assess the impact on their team prior to entry.

Series Regulations may carry certain apparel requirements. Entrants into such series are bound by the relevant Series regulations. In the event of conflict, Series Regulations have priority over the requirements imposed by each Event Organiser, and the present general regulations.

Normal preparatory/maintenance/repair work at an event. (Cold Work)

The risks associated with normal preparatory/maintenance/repair work at an event, other than during competitive sessions, are not considered significantly elevated above those experienced during such work conducted away from the competition environment. The only mandated requirement for each person is the use of fully enclosed footwear, as sharp objects such as screws and cut cable ties are likely to be present in significant quantities in the work area at an event. PPE such as gloves, safety footwear and safety glasses are strongly encouraged.

Protective eyewear and neck to wrist to ankle clothing must be used during each refuelling operation that involves exposure to uncontained fuel (e.g. pouring fuel from a drum into a funnel or directly into the tank opening).

Where the event regulations specify a timed pit stop or service interval of duration not less than ten minutes, such pit stop or service interval will be regarded as Cold Work for the purposes of apparel requirements.

Untimed Pit/Service Area work (Hot Work), other than re-fuelling operations

Working on an automobile in a pit or service area under competition conditions introduces time pressure, and the consequences of having to work with hot components. Gloves must be worn whilst working on hot components including tyres, and persons actively working on the automobile must have long trousers and fully enclosed footwear. Persons working under an automobile and those working with or near fluids under pressure must wear safety eyewear.

Where designated in the Event Regulations, or by a Steward's Bulletin as a Hot Weather Event, those working in a Pit Lane/Service Area in roles other than directly on the automobile (e.g. those on the pit wall, car controllers etc.) may wear short pants.

Untimed Pit/Service Area re-fuelling operations

Refuelling an automobile under competition conditions introduces time pressures to the activity. This consequently increases exposure to hazards such as chemical contact from spills/overflows, and exposure fire/explosion from resulting fuel contact with very hot components.

Pressurised refuelling[§] is defined as occurring whenever refuelling is conducted with the fuel in any part of the refuelling system at any time subjected to a pressure equivalent to a head of 600mm or more. In the case of pressurised refuelling, all those involved in the refuelling activity and any persons within one metre of the refuelling or vent location must be attired as follows:

- Overalls to SFI 3.2A Grade 5 (min.), or equivalent international standard
- Gloves to SFI 3.3 Grade 5 (min.), or equivalent international standard
- Shoes/boots, socks, balaclavas (hoods) to SFI 3.3, or equivalent international standard
- Fully enclosed safety goggles, or protective helmet with full-face shielding.

[§] Refuelling operations that utilise a "forecourt style" 19mm unleaded nozzle with an automatic cut-off shall not be regarded as pressurised refuelling.

Where other than pressurised refuelling is conducted, all those involved in the refuelling activity and any persons within one metre of the refuelling or vent location must be attired as follows:

- Neck to wrist to ankle clothing of non-flammable material (e.g. wool, cotton)
- Fully enclosed footwear with chemical resistant soles
- Fully enclosed safety goggles. or full face protective helmet

Drivers and Riders

General

The diversity of competition types, relative risk profiles, automobile design and environmental factors makes it difficult to define a specific apparel requirement to a particular event or automobile. The AASA therefore defines a series of categories of personal protective equipment that work in conjunction with each other to provide an appropriate level of protection. Some of these categories may have differing levels of protective capability to which event organisers and competitor groups may refer.

Suit

In the present context, the term “suit” refers to the items of external apparel that cover the torso and limbs of the occupant. Embroidery in Level H2 to H4 suits must only be in the outer layer and utilise flame resistant thread. Badges must be of flame resistant material and be sewn into the outer layer

Level H1 Non-flammable[#] apparel that covers the person from mid-neck to wrist to ankles.

Level H2 Single or two-piece suits to SFI 3.2A Grade 1 (min.).

Level H3 Single piece suits to SFI 3.2A Grade 5 (min.) or recognised international equivalent.

Level H4 Single or two-piece suits to SFI 3.2A Grade 10, or higher if specified in event regulations.

Level A1 Single or two-piece suits of leather, Cordura[®] or other abrasion resistant material. Fastenings must be by buttons or zippers, not press together couplings.

Level A2 Single or two-piece suits to SFI 40.1 Type I or above, or recognised international equivalent.

Level A3 Single or two-piece suits to SFI 40.1 Type II, or recognised international equivalent.

Underwear

Level U1 Single or two-piece underwear from lower neck to wrist to ankles. It is strongly advised that the material should be of non-flammable material (e.g. cotton).

Level U2 Single or two-piece underwear to SFI 3.3, or recognised international equivalent. This shall not apply to intimate apparel worn under the protective underwear. Where appropriate, a sports bra to SFI 3.3 is strongly recommended.

Socks

Level S1 Non-flammable[#] socks of sufficient length to cover the ankles.

Level S2 Socks to the SFI 3.3 standard, or recognised international equivalent.

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Footwear

- Level B1* Fully enclosed footwear with non-synthetic upper and low heels. Footwear shall not extend above the general ankle area (i.e. no long boots). Boots for drivers should be close fitting.
- Level B2* Fully enclosed flat-soled and close fitting footwear with abrasion protection of the toe, ankle and heel area. They must be intended for motorsport use and be sourced from a widely distributed catalogue.
- Level B3* Footwear to SFI 3.3 or recognised international equivalent.
- Level B4* Footwear to SFI 3.3/15.

Helmet

Each helmet should be chosen to fit the user's head and the intended use. Each helmet tends to mould to the shape of the user's head over time, and should not be repeatedly shared. Helmets must not be modified, except in accordance with the manufacturer's guidelines. Painting of helmets, particularly those with a polycarbonate shell, may weaken the structure, as may the application of non-approved stickers. If air vents or communication equipment are required, consideration should be given to purchasing a helmet to meet those requirements. The use of speakers mounted in helmets, other than those supplied by the helmet manufacturer, is prohibited.

Helmets must extend to cover the complete ear. "Skull Cap" style helmets must not be used.

- Level T1* A helmet to one or more of the following standards:
- Australian or NZ standard AS/NZS1698
 - European ECE 022 with 04 or 05 amendments
 - Snell SA2000 (Expires 12/2018)
 - Any Level T2 or T3 helmet
- Level T2* An Open Face helmet to one or more of the following standards:
- Snell SA2005 (Become T1 as of 01/19), Snell SA2010, Snell SA2010H, Snell SA2015
 - British Standard BS6658 A/FR
 - SFI 31.1
- Level T3* A Closed Face helmet to one or more of the following standards:
- Snell SA2005 (Becomes T1 as of 01/19), Snell SA2010, Snell SA2010H, Snell SA2015
 - British Standard BS6658 A/FR
 - SFI 31.1
 - SFI 24.1 Youth Helmet (for competitors generally under 16 years of age)
- Level K1* A Full Face helmet to one or more of the following standards:
- Snell M2000, Snell M2005, Snell M2010, Snell M2015
 - SFI 24.1 Youth Helmet
 - Australian or NZ standard AS/NZS1698

Helmet Skirt

Where mandated, helmet skirts must comply with SFI 3.3.

Balaclava/Hood

Where specified, the balaclava or hood must comply with the SFI 3.3 standard, or recognised international equivalent. Where an SFI certified helmet skirt is used, the balaclava is optional.

Eye protection

Each occupant of an automobile not fitted with a full windscreen must use eye protection. This may be incorporated into the helmet in the form of a visor fitted by the helmet manufacturer. This visor comply with AS1609 or equivalent, and shall cover the complete eye opening of a full-face helmet, or extend to the level of the chin in an open face helmet. Alternatively, each occupant may choose to use close fitting goggles with non-glass lenses to AS/NZS 1377 or similar. The goggles shall be securely held in place by an elastic strap.

Open face helmets provide limited protection against head strikes by larger objects. It is strongly recommended that a full-face helmet with a shield provided by the manufacturer of the helmet be utilised in all open automobiles.

Gloves

Where specified, gloves must comply with SFI 3.3 Grade 5 (min.), or recognised international equivalent. Unless specified in event regulations, co-drivers in events that require the use of pace notes do not require gloves.

Head and Neck Protection

A collar style protective device can reduce the likelihood of neck injury due to compression or flexion. A frontal head restraint (FHR), acting in conjunction with a properly mounted safety harness also offers a level of protection against severe head and neck trauma under tension. It is strongly recommended that a FHR system be used whenever the automobile is equipped with a four-strap harness.

Level R1 A collar type head restraint designed to limit neck flexion, sourced from a widely distributed catalogue.

Level R2 A Frontal Head Restraint in compliance with the SFI 38.1 standard or internationally recognised equivalent.

The use of an R2 FHR necessitates the use of a helmet pre-drilled by the manufacturer for FHR tether anchor points. The use of helmets bearing only the AS/NZS 1698 standard is not permitted with a FHR, as they require modification to fit the FHR tether anchor points.

Chest Protector

Level C1 A Chest/Rib Protector with rigid shell and padding sourced from a widely distributed catalogue.

Level C2 A Chest/Rib Protector to one of the following standards:

- SFI 20.1/1 5-8 Year old (approx. ages)
- SFI 20.1/2 9-12 Year old (approx. ages)

upon request by event officials, the competitor must be able to provide evidence that the material is non-flammable.

Appendix 4

Application

Hierarchy

In the event of a conflict, each requirement specified in Event and Series Regulations shall take priority over the general requirements of the present Appendix.

Speed Events and Drifting

PPE	National	Club	Testing
Suit	H2	H1	H1
Underwear	U1	N	N
Helmet	T1	T1	T1
Socks	S2	S1	S1
Gloves	Y	N	N
Balaclava	Y*	N	N
Helmet skirt	N	N	N
Boots	B3	B1	B1
FHR	N	N	N

Note: * A Balaclava is not required when using a T3 helmet. The use of full-face helmets is strongly advised for all automobiles without a windscreen.

Races

PPE	National	Club	Testing
Suit	H3	H2	H2
Underwear	U2	U2	N
Helmet	T2 or T3 [#]	T1	T1
Socks	S2	S2	S1
Gloves	Y	Y	Y
Balaclava	Y	Y*	N
Helmet skirt	N	N	N
Boots	B2	B2	B2
FHR	R2	N	N

Note: * A Balaclava is not required when using a T3 helmet.
[#] All open cars require a full face helmet at national level.
The use of full-face helmets is strongly advised for all automobiles without a windscreen.

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Gravel Rally

PPE	National	Club	Testing
Suit	H3	H1	H1
Underwear	U2	U1+	N
Helmet	T2 or T3	T1	T1
Socks	S2	S1	S1
Gloves #	Y	Y	Y
Balaclava	Y*	N	N
Helmet skirt	N	N	N
Boots	B3	B1	B1
FHR	R2	N	N

Note: * A Balaclava is not required when using a T3 helmet.
The use of gloves is optional for co-driver.
+ Underwear optional when H3 suit used.

Tarmac Rally

PPE	Outright	Touring	Testing
Suit	H2	H1	H1
Underwear	U2	N	N
Helmet	T2 or T3	T1	T1
Socks	S2	S1	S1
Gloves	Y	N	N
Balaclava	Y	N	N
Helmet skirt	N	N	N
Boots	B2	B1	B1
FHR	R2	N	N

Note: The use of full-face helmets is strongly advised for all automobiles without a windscreen.

Off Road

PPE	National	Club	Testing
Suit	H2	H2	H2
Underwear	N	N	N
Helmet	T2 or T3	T1	T1
Socks	S2	S1	S1
Gloves	Y	Y	Y
Balaclava	N	Y*	Y
Helmet skirt	N	N	N
Boots	B1	B1	B1
FHR	R2	N	N

Note: * A Balaclava is not required when using a T3 helmet. The use of full-face helmets is strongly advised for all automobiles without a windscreen.

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Karting

PPE	National	Club	Off Road	Testing
Suit	A2	A1	A1	A1
Underwear	N	N	N	N
Helmet #	T1 or K1	T1	T1	T1
Socks	S2	S1	S2	S1
Gloves	N	N	N	N
Balaclava	N	N	N	N
Helmet skirt	N	N	N	N
Boots	B2	B1	B2	B1
FHR	N	N	R1	N
Chest Protector	C1	N	N	N

Must be a full face helmet

Speedway

PPE	National	Club	Testing
Suit	H2	H2	H2
Underwear	U2	U2	U2
*Helmet	T3	#T1	#T1
Socks	S2	S2	S2
Gloves	Y	Y	Y
Balaclava	Y	Y	Y
Helmet skirt	N	N	N
Boots	B2	B2	B2
FHR	R2	R1	R1

Note: * Helmets to be no older than 5 years from date of manufacture. Onus on proof of compliance is on competitor.
Note: # Must be full face.

Drag Racing (For less than ET9.99, contact AASA for latest Requirements)

PPE	[§] ET	< 7.99	8.00-9.99	>10.00
Suit		H4*	H3	H1
Underwear		U2	N	N
Helmet		T3&	T1	T1
Socks		S2	S2	S1
Gloves		Y	Y	N
Balaclava		Y	Y	N
Helmet skirt		Y	N	N
Boots		B4	B3	B1
FHR		R2	N	N

Note: * Front engine cars indicate a suit to the SFI 3.2A/20 standard, others SFI 3.2A/15
& Open Face may be used with a respirator.
Note: [§] Elapsed time over 400m, pro-rata for shorter tracks

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Touring Events

PPE	National	Club	Testing
Suit	NA	*N	NA
Underwear	NA	N	NA
Helmet	NA	*N	NA
Socks	NA	*N	NA
Gloves	NA	N	NA
Balaclava	NA	N	NA
Helmet skirt	NA	N	NA
Boots	NA	*N	NA
FHR	NA	N	NA

* Where the event involves competitive activities, such as speed events, apparel requirements shall meet the minimum requirements for such event.

Extreme Events

PPE	National	Club	Testing
Suit	H1	NA	NA
Underwear	N	NA	NA
Helmet	T1	T1	T1
Socks	S1	NA	NA
Gloves	N	NA	NA
Balaclava	N	NA	NA
Helmet skirt	N	NA	NA
Boots	B1	NA	NA
FHR	N	NA	NA