

*Ballymena Raceway*  
**2018 Pro-Lites 16v SPECIFICATIONS**

# **PRO-LITES**



## **INTRODUCTION**

The Pro-Lites 16v feature cheap cars in SEMI/LIMITED CONTACT racing. The concept of the racing is lightly push the car in front, contact must take place going into the bends, side swiping and deliberate fencing is not permitted.

Cars seen to be making overzealous contact, deliberately fence, steer other cars into parked cars, follow-in or other acts of intentional wrecking will be suspended from the meeting and face a further period of suspension at the discretion of the Board of Control.

## **VIOLATIONS**

When referring to the engine, gearbox, differential, mechanical or construction, rules and regulations the principle will always be: **Unless permission is specifically granted to make modifications, or any variation, unless these rules state you can do it, you CANNOT DO IT.**

Cars, Engines and Fuel will be checked on a random basis. Violations will result in an immediate suspension of all racing facilities and any refusal will also result in an immediate suspension.

N.B. Drivers are reminded that scrutineer checks can be carried out at any time. If parts are suspected of being illegal, make sure you leave them with the promotion if you do not agree. If you refuse it will automatically make the parts illegal. It is the responsibility of the driver to prove to the Promotion that the part is legal by the way of written proof of where the part originated. This must be done within seven days, otherwise the part(s) in question will be deemed to be illegal and will result in immediate suspension from racing.

***The Promotion reserves the right to purchase a full car for up to a maximum of £1000.***

## **1. DRIVERS**

NO COMPETITOR UNDER THE AGE OF 16 WILL BE ALLOWED TO RACE.

## **2. CARS**

The only engines permitted for use in Prolites formula is 1.6i 16v Multipoint.

NO 8v engines or parts to be used for example NO Vauxhall SV blocks.

Cars can remove the Injection system and run the Weber 32/36 Carburettor & Manifold System or alternatively run with the Injection fuel system and ECU in standard form complete with the modification to the fuel tank.

No mix matching of components.

Engines must run as standard form other than skimming the head.

Engine Identification marks must be clearly visible to scrutineers.

Cars must be BRIGHTLY COLOURED. Timing Transponder not required.

## **3. ENGINES**

Note the engine must have all internal components to match engine code i.e. Pistons/valves etc.

**It is permissible to skim the head.**

**The Engine Block, Camshaft, Valve Springs, Valves and Pistons are to remain standard.**

**No re-boring of the block. No slotting of the bottom pulley.**

**No lightened flywheels.**

## **4. WEBER 32/36 CARBURETTOR**

No polishing or re-profiling is allowed. No modifications to the carburettors body or original design. The interchanging of the carburettor top from other Weber models is not allowed. All gaskets must remain standard and original. A single original spec insulator block must be fitted between carburettor and inlet manifold, with two gaskets; approximate total thickness = 5mm.

Main jets, primary and secondary jets, auxiliary venturi and emulsion tubes may be changed but must face downwards towards the butterflies. Accelerator pump jets may be changed but face downwards towards butterflies. Chokes may be modified to open together, and replacement spindles may be fitted with standard screws. Cold starting devices may be removed with retaining lugs and subsequent holes blanked off. Air and fuel galleries may not be enlarged or modified, and fuel may enter on either side. Floats may not be modified or weighted and must control the fuel flow.

Needle valves may not be larger than 200, and not enlarged or modified. The power valve must be fitted in the base of the bowl, but may be sealed off, and the diaphragm may be removed. No trumpets are allowed. It is permitted to use a grub screw or similar device to fix the auxiliary venturi to the carburettor body. Top end enrichment devices may be blanked off or modified.

A secondary fixing on the fuel inlet feed line is required. The Inlet manifold must be standard & not faced to alter the angle of the manifold to the carburettor.

INLET MANIFOLD for injection engine: A driver may modify a manifold to suit and to run on the Weber Carb as listed above. This modification is only to suit the Weber carb on any injection engine. No fettling inside of the ports after welding is permitted. These manifolds must be subject to the promoter's approval.

## **5. ECU & INJECTION SYSTEM**

The standard ECU must be used and unworked.

The fuel injection system must remain standard with no modifications permitted.

This will be monitored very closely by the Promotion.

## **6. EXHAUSTS**

A standard exhaust system MUST BE IN PLACE and Silencers must reduce the noise levels below 95 decibels at all times. Baffles must not be removed. They may terminate just in front of the rear axle 2" max no further forward. No Performance exhausts. If a silencer or silencers break AWAY during racing, the driver will be excluded.

## **7. TRANSMISSION**

GEARBOXES MUST be of the type originally fitted to the car, although gear ratios may be altered. The car must retain the same number of gears as original. Also, the external appearance of the gearbox must remain unchanged. NO locked or limited slip differentials allowed.

Viscous diffs are not permitted. Driveshafts fitted by within the manufacturers range.

## **8. WHEELS & TYRES**

Any standard road wheel up to 6j may be used 14" & 15". You must run the same diameter wheel on both front and back axles i.e. 14" must be 14" all round. All four wheels must be of the same diameter. Hub caps must be removed. All balance weights must be removed.

Only conventional Road tyres permitted. No racing tyres, No mud & snow compounds, No Yokohamas The cutting of tyres is not permitted.

Any tyres with buffed markings will not be accepted. Tyre price must not exceed £40 each plus vat.

Size of Tyres permitted for use 185/60/14, 185/65/14 or 195/50/15

The Promotion reserves the right to review the regulations relating to tyres at any time and to prohibit the use of any tyre not considered to be within the spirit of the regulations.

## **9. SUSPENSION**

The Suspension must remain standard except where stated. Coil springs are free in size and may be of any type other than Competition type they must fit the strut without modification to the original strut in any way. Rear coils may be cut and welded.

Camber is free on the passenger side front wheel which may only be achieved by drilling or slotting at the top or bottom of the suspension unit the strut top may also be slotted but not altered in any other way. Any Metal added e.g. Washers welded onto bottom of the strut must follow original contour and must not be used to increase overall dimensions from original.

Cross members may be drilled or locating holes elongated to achieve this.

Lead is permitted on the NSF wheel and can be achieved by extending anti-roll bars or compression struts and by re-drilling location holes to give a maximum of a 2" lead from standard.

### **NO COMPETITON SPRINGS OR SHOCKS.**

Anti-Roll bars to remain standard to the car. Back Axles must be standard to the vehicle.

## **10. STEERING WHEEL**

The use of quick release steering wheel mechanisms is permitted. Steering rack arms may only be shortened or lengthened i.e.; the nearside arm may be lengthened, and the offside arm may be shortened. The steering rack must occupy its original position, but the steering column height may be adjusted to suit the driver. It is recommended that the upper retaining bracket of the column be strengthened on some cars for safety. No quick racks or devices that act as a quick rack are allowed. Polybush on rack mounting ONLY – rack mounting may be strengthened.

## **11. BRAKES**

Must remain as manufactured in that range of the car used and must be working on all four wheels. The handbrake must be in working order.

## **12. BODYWORK & BUMPERS**

No welding for strength. Front & back doors (driver side only) may be seam welded for safety, but boots & hatches may only be tack welding. This is defined as a 2" weld with a 6" gap before the next weld. All holes in the front bulkhead must be filled to provide a firewall between the engine and driver. No panelling inside cars that is not easily removable for scrutineering. All areas must be able to be inspected. All doors and bonnets must be secured shut. DO NOT fill in head lamp or rear lamp apertures with anything other than 20-gauge aluminium with a maximum overlap of 2".

Front and rear bumpers must be removed and can be replaced with bumpers front and rear constructed from the following spec. 2" x 1" hollow section steel mounted by means of 2" x 5/16" flat bar.

Bumpers can be welded or bolted to the original mountings only no seam welding alone front panels or chassis. If flat bar is not used a 2"x1" box section bumper may be bolted (max 3 bolts) to the front or rear of the car. The flat bar cannot be more than 6" inside the chassis leg.

The bumper can be folded back at an angle to meet the front panel or front wing, where it can be bolted with a single 5/16" bolt and washer at each end. If the bumper is not bolted at either end, it must terminate 2" inside the front wing.

A maximum gap of 1" is permitted between the bumper being fitted and the front/rear panel. You are not permitted to weld the box section bumper to the front panel. The rear bumper may be secured directly to the rear panel using 3 (½" max) bolts instead of being welded. Bonnets must have 6" or 10" corner plates welded or bolted to the scuttle panel/wing. Only two retaining bolts are permitted and can be a maximum of 1" dia. These are only permitted to pass through the slam panel or inner wing, or be bolted through, or welded to the chassis. Spacer/crush tubes are permitted up to 1 ½ x 1 ½ ". Washers of 4" x 4" x 1/4" are permitted. All bolts must be cut to 1 1/2" max above the washer. Shuttering bolts are permitted but the spinners/nuts must be taped for racing. A plate of a max 8" x 6" may be welded to the bonnet to take the bolts. Boots and hatch backs may be bolted down however this is not compulsory, a maximum of 4 x 1/2" bolts will be all that is permitted to accomplish this.

The maximum height of any bolt above the washer is 1 1/2". Boots are not permitted to be welded. No double skinning of panels – 2" overlap maximum permitted. No panelling inside of car i.e. doors, rear seat aperture etc. Cars that are deemed to have excessive welding repairs will fail scrutineering. Wings must remain as standard & not be welded around the arch.

### Door Plates

A steel door plate must be fitted outside the driver's side front door to overlap the A & B posts by a minimum 2" and maximum 6". This must be a minimum 3/8" thick and 12" deep. A maximum of eight bolts can be used to secure this plate, of which two must pass through the front pillar and two through the centre pillar or through an end plate that is welded to the roll bar. All bolts must be secured using washers made from flat bar to prevent bolts pulling through. All bolts must be trimmed to prevent injury.

## 13. ROLL CAGE

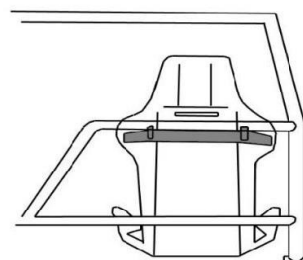
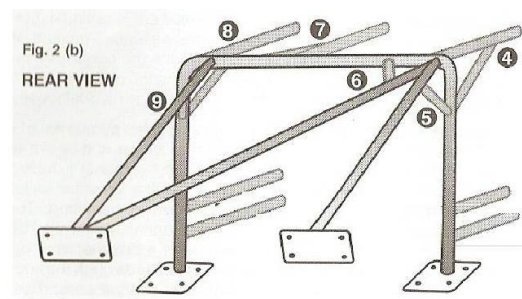
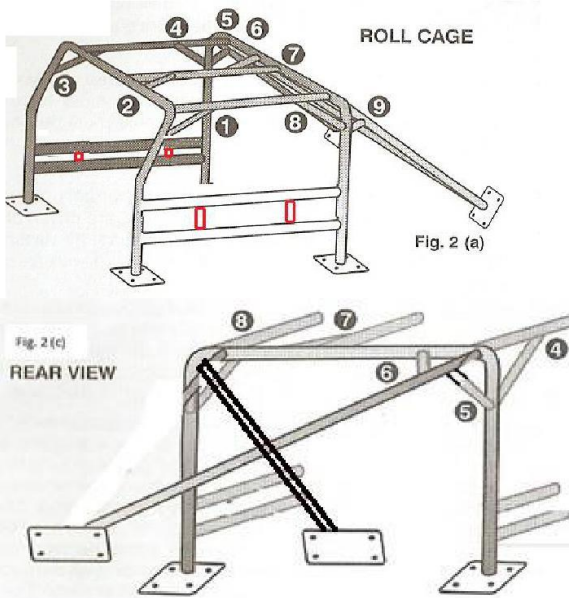
### OPTION ONE

No Alloy roll cage or part cages are allowed. The minimum steel roll cage protection you must have is one front hoop, one rear hoop, one rear hoop cross bar at shoulder height to mount seat support or a seat brace hoop as a seat support, three roof connecting bars, one dash cross bar, two D/S chicken bars plus two connecting bars, & two P/S chicken bars plus two connecting bars, & minimum 2 rear stay bars to the rear shock towers or floor but must terminate at least 4" from the rear panel (must be either Fig 2(b) or 2(c)). The lower bar on the driver's side (if horizontal) should be a minimum of 3" (76mm) above the sill. The roll cage hoop feet must be on four welded 23cm square plate 3mm (min.) thick, or a piece of 38 x 38 mm box section, 2.5mm minimum thickness, connecting front and rear hoop feet welded to sill or floor. This bar will not be classed as a chicken bar.

All joints must be welded over 90% of the joint unless as approved RACMSA cage is used. The cage must not protrude through the bulkhead with the following exception.

It is permitted to support both turrets from the roll cage with the maximum material and gauge as the roll cage, but the shock absorber must not connect to it. All bars connected to the cage must be steel. The minimum thickness of the roll cage are 1 1/4" OD 10swg (3mm) tube 1 1/2" OD 12swg (2.5mm) tube 1 1/2" x 1 1/2" 10swg (3mm) box iron.

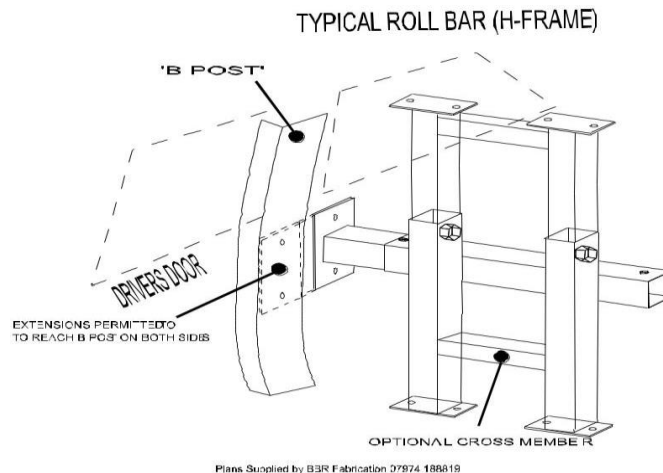
### ROLL CAGE DIAGRAM



## OPTION TWO

You must fit as a minimum a single "hoop" roll bar in support of the door pillars, securely bolted to the roof and floor with a minimum size bolt of 3/8" (8mm) and suitable washers. • The hoop must be one piece or two uprights on one top bar of a welded construction. • One cross bar is compulsory, a second is optional; these must be welded or bolted to the uprights and must support the driver's seat to stop it twisting. • THE ROLL BAR MUST NOT HAVE ANY REAR SUPPORTS but may have extensions no further forward than the B post (see diagram below).

## H FRAME DIAGRAM



If used, these must be bolted through the B post. • The minimum size for roll bar is 1 1/2" (40mm), maximum size 4" (100mm), minimum thickness 3mm(75mm). • Crossbars must have a 5" (125mm) square end plate fitted. • The roll bar cross bars must be straight, and no protrusion of cross bars must exist.

- Each upright must have a maximum of two bolts on each side to the floor and one each side at the top.
- No scaffold clamps allowed, all adjustable feet must be welded to the cage.
- The seat must be supported and secured at shoulder level to the cage, you may fit the 2nd cross bar in support of the seat just below the window aperture or weld a frame on the cage to support the seat at the top.
- A rear Strut brace must be fitted.

## 14. SCREENS & MIRRORS

ALL GLASS MUST BE REMOVED before the car is brought to the Raceway. All cars must be ready for racing before they are brought to the Stadium. Any driver found dumping seats, smashing windows etc. will be suspended from racing. You must fit a rear-view mirror inside the car with a maximum surface area of 24" inches.

## 15. DRIVER'S SEAT

A seat complete with a secure head restraint must be fitted. Competition seats may be used though no seat featuring a rib protector is permitted. The seat must be securely mounted at shoulder height to the cross bar or to the rollover bar and bolted securely to floor. When the driver is securely belted in the car, i.e. ready for racing, there must be a minimum gap of 4" between the top of the driver's crash helmet and the roof of the car.

## **16. SEAT BELTS**

A full 4 or 5-point safety harness comprising separate shoulder and lap straps must be used. All belts must connect to the quick release buckle. In the case of NASCAR lever latch buckles, it is advisable to fit a secondary means of detent to prevent overall sleeves accidentally unhooking buckles during racing. A small section of tube grip elasticated bandage slid over the hooked buckle serves this purpose. Special attention must be paid to the condition of seat belts and fixings once fitted. An extra bar is to be fitted to the roll cage behind driver's seat, approximately 4" below shoulder height of driver. Seat belts may be fixed to this bar or allow the belts to lever over it. Information is available from your promotion on the correct procedure to follow when fitting seat belts - remember, your life depends on them.

## **17. RADIATORS**

Any radiator may be used but it must be fitted in original position. Brackets may be used to secure radiator but must originate from engine block or engine mountings and must not be considered offensive. No extra cooling is permitted other than the radiator and header tank. Heater matrixes must be removed. Extra rubber hosing may be used to accommodate a different radiator to the standard fitment.

## **18. BATTERY & ELECTRICAL**

Must be securely fitted to, or as close as possible to, the roll bar and covered with a leak proof material. It must be isolated from fuel tank. Batteries must not sit forward of the driver (preferably they should be mounted on the roll bar). All wiring must be fully insulated, and an electrical cut-off switch must be fitted. Electrical starters must be fitted and be in working order. Ignition barrels must be situated well away from driver's knee.

## **19. FUEL TANK**

Fuel tanks must be metal, or FIA approved with a maximum capacity of 4 gallons or less are permitted. Suitable metal or braided fuel lines must be used between the fuel pump and the injection system.

Extra care must be taken on how to fit them correctly. A shut off tap must be fitted and kept within easy reach of the driver.

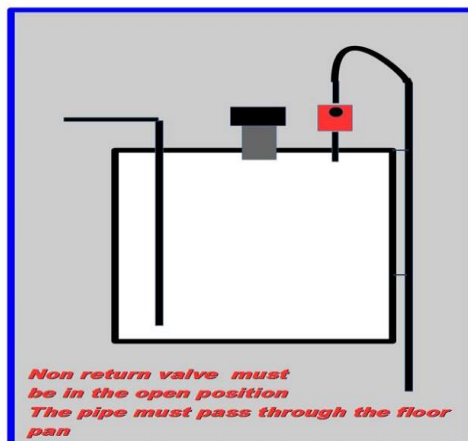
Please note the original fuel tank must be removed. The fuel tank must be fitted rear of the driver but in front of the rear axle centre line and be securely mounted, they must also be 6" away from the battery, i.e. they are no longer allowed to be fitted in the boot area. All tanks must be fitted with a breather system which prevents spillage if the car overturns.

All petrol pick up pipes must draw through a stand pipe from the top of the fuel tank. Four 2" holes must be drilled at the lowest point under tanks to allow spilled petrol to drain. You may use an Electric pump.

A firewall between fuel tank including filler cap/pump and driver must be fitted.

If using an electric fuel pump, the cut-off switch must be positioned before the pump.

**A non-return valve to the tank must be fitted** (see diagram below). The electrical isolation switch (cut off switch) must be fitted in the R/S/N window area, for easy access of Safety Marshals. All tank filler caps must be of secure leak proof metal with a screw fitting.



### **Cars running fuel injection system**

Multipoint injection systems must have a return to the petrol tank. If using an electric fuel pump the cut-off switch must be positioned before the pump. Injection petrol pumps must be fitted under the bonnet. Cars can run the normal 4-gallon Aluminium fuel tank with an Automotive Plumbing Solutions in Line High Pressure Fuel Injection Pump 250BHP installed or an equivalent pump which is widely available from all good Motorsport Dealers.

### **20. FUEL SHUT OFF**

A manual shut off tap must be fitted within easy reach of the driver. Fuel pipes must be metal, or metal covered when in car and securely clipped to prevent leakage. A 12" section of flexible pipe is permitted to fix line to carb, pump and tank.

### **21. NUMBERS**

A fin plate fitted to the roof with your racing number clearly painted on is required. Fin plates MUST be painted White with Black numbers thereon. Fin numbers to have 1 ½" stroke and be 9" at least high. It is emphasised that cutting of the roof to make Fin Plate is NOT PERMITTED. Door numbers must be 12" high, with a minimum 2" stroke in contrasting colours. Any Driver who has not proper numbering may not be scored.

### **22. ROOF COLOURS**

When notified of your grading, driver will paint at least 90% of the roof to their appropriate grading colour. White, Yellow, Blue, Red & Superstar – Red & White Stripe with flashing lights.

Race car numbers can be painted on the top of the roof but will not be used as an excuse to have the incorrect roof grading. If you win a race at a meeting; you will start the remaining races from the rear of your grade.

### **GRADINGS**

World Cup Gold, Gold Rush Series Gold & Black Chequered, National Gold Stripe  
Points Champion Silver Stripe, Irish Champion – Green & White Chequered  
Superstar – Red & White Stripe with Flashing lights, Red, Blue, Yellow & White

### **23. SIGN WRITING**

Only Racing Number, name of driver, sponsors and Mechanics names may be written on the car and must have the approval of the Promotion at all times.



## **24. SAFETY EQUIPMENT**

General - All safety equipment specification rules apply to all competitors in all ORCi and ORCi affiliated formulas unless otherwise stated. All safety equipment must be worn/engaged at all times when on track during racing, practice or test sessions, and at ANY other time when moving at a speed greater than walking pace (4mph).

Clothing that does not conform to the standards below may only be worn underneath the mandated safety equipment. For example, hooded tops must only be worn underneath a race suit/overall, and the hood MUST be tucked inside.

### **HELMETS & GOGGLES/VISORS**

HELMETS- Helmets must be a minimum standard as directed by British Oval Racing Safety Executive (B.O.R.S.E).

A helmet conforming to at least one of the approved standards MUST be worn. 901.1.2 Helmets MUST meet or exceed the MINIMUM standard as directed by BORSE. The current approved standards permitted for all drivers are: • FIA 8860-2004 • FIA 8860-2010 • FIA 8859-2015 • Snell SA2005 (This standard will be reviewed at the end of the 2017 season) • Snell SA2010 • Snell SAH2010 • Snell SA2015 • Snell EA2016 • SFI Foundation 31.1A • SFI Foundation 31.2A • SFI

Foundation 31.1 • ECE R22.05 (in Fibreglass, Carbon or Tri-Composite form ONLY)

The use of polycarbonate helmets is NOT permitted.

The helmet MUST fit the competitor correctly, according to the manufacturer's sizing/fitting guidelines.

All helmets MUST display the current "Orcin Approved" helmet sticker.

Goggles/Visors - Shatterproof goggles or a shatterproof visor MUST be worn with the helmet at all times. The use of tinted visors is NOT advisable.

### **WINDOW NET**

Requirement - A quick-release fabric window net MUST be fitted in the driver's side door window aperture of all saloon car formulas.

Specification/Installation The width of the netting holes must NOT exceed a MAXIMUM size of 3in/75mm wide. The window net MUST be fitted such that it hangs down level with the steering wheel.

The window net MUST be flexible and easily removable, independent of any movement of the driver's-side door.

### **CLOTHING**

A flame-resistant race-suit/overall MUST be worn. Flame resistant race-suits/overalls MUST be manufactured from Proban, or material of a higher specification, e.g. Nomex. Flame resistant race-suits/overalls MUST be clearly marked with the relevant SFI, FIA or equivalent standard, or the manufacturer's statement of protection.

Race-suits/overalls MUST be maintained in a clean and tidy condition. Race-suits/overalls manufactured/certified to Karting standards, including, but not limited to, the CIK-FIA Level 1 or Level 2 standards, are NOT permitted as they do NOT provide the appropriate level of heat/flame protection.

## **GLOVES**

Flame resistant gloves MUST be worn. Flame resistant gloves MUST be clearly marked with the relevant SFI, FIA or equivalent standard, or the manufacturer's statement of protection.

## **BALACLAVAS**

A flame-resistant balaclava MUST be worn. Flame resistant balaclavas MUST be clearly marked with the relevant SFI, FIA or equivalent standard, or the manufacturer's statement of protection.

## **UNDERGARMENTS**

Flame resistant socks and undergarments provide a high degree of protection and are highly recommended to all competitors.

## **WET WEATHER PROTECTION**

Any wet-weather clothing must be worn in ADDITION to the required flame-resistant race-suit/overall specified above.

## **HEAD/NECK RESTRAINT**

Neck braces are compulsory, or a FHR/HANS type device can be used.

## **FIRE EXTINGUISHERS**

A 1Kg Dry Powder Gauge Fire Extinguisher is highly recommended and if fitted, this should be in a tube with a spring top and should be within easy reach of the driver.

Old type BCF (green) type extinguishers are not allowed. All tow vehicles, must carry a minimum of a 2kg fire extinguisher dry powder or gas, which must be within easy reach of the driver and mechanics at all times, especially when refuelling.

## **25. PETROL**

**Petrol** must only be brought to the racing in a metal (Jerry can) type containers.  
***Containers must be clearly marked "PETROLEUM SPIRIT HIGHLY IMFLAMMABLE".***

**26.** Smoking is not permitted in the Pits.

## **27. GENERAL RULES OF RACING**

Each driver is only permitted one car per meeting and each car is only permitted one driver per meeting- this will be strictly enforced. Any driver spinning the wheels or driving up and down the pits will be banned for a minimum of 4 meetings and not allowed to take part in that night's racing.

Cars must travel at 5mph in the pits. No passengers allowed in or on the car. Drivers must not push or work on their cars during a race. No outside assistance is allowed during racing. There must be no deliberate fencing or driving at a driver's door or dangerous driving.

A car pushed at (in the opinion of the Steward) unreasonable speed from the rear into a bend shall be deemed to have been deliberately 'fenced'.

## **28. FLAG SIGNALS**

GREEN - GO, All Clear to Race RED - Stop Racing Chequered Flag - Race Winner

YELLOW (Stationary) - Take care as a driver is still in a stationary car but continue to Race.

YELLOW (Waved) - Race Suspension, All Cars must remain in single file and slow to 15mph, or in exceptional circumstances stop. No Overtaking is permitted.

Blue - Driver must hold their line as faster cars are trying to overtake.

Black - Driver disqualified for an infringement - driver must leave the track immediately.

White Flag with Red Cross - Technical Disqualification Flag. This is used to signal to a driver that they have a problem with their car and must immediately retire to the infield.

Black Cross - Driver under surveillance for a rules infringement, may be penalised after race conclusion.

White flag with Blue Centre - Drivers should exercise caution as oil or other debris may be on the track.

## **29. CARS ELIGIBLE FOR USE**

Ford Escort

Ford Fiesta MK6

Ford Focus Mk1 & Mk2

Ford Puma

Ford Sierra

Peugeot 206, 207 & 307

Renault Megane Mk2

Vauxhall Astra Mk3, Mk4 & Mk5

Vauxhall Cavalier

Vauxhall Corsa C

Vauxhall Tigra

Vauxhall Vectra B & C

VW Golf

***Anyone wishing to race a car other than those listed above may request permission by contacting the BMR Promotion.***

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