



## SCHEDULE P65<sup>©</sup>

# Kumho Tyres Pre 65 Race Series TECHNICAL REGULATIONS 2019 - 2020

### PREAMBLE

**Basic premise:**

- All cars to remain standard.
- The only modifications permitted are those contained in these regulations.
- Any effort to accommodate any secondary modification, to permit those modifications allowed to function, is not permitted.

**Spirit of the Regulations:** It should also be noted that these specifications would be interpreted on the basis that if a modification is not specifically permitted; then it is not allowed. Efforts to bend, find or take advantage of loopholes in the rules will be deemed not to be in the spirit of the regulations.

### COMPETITOR RECORD OF AMENDMENTS ISSUED TO THIS SCHEDULE

Use this table to keep a record of all official 'Manual / Championship Amendments' issued during the season relative to this Schedule;

Amendment Number	Issue/Effective date	Regulation reference	Subject / Notes

## 1.0 GENERAL INFORMATION RELATIVE TO THIS SCHEDULE

- 1.1** This Schedule shall be read in its entirety and shall take precedence over Appendix Two Schedule A of the 'National Sporting Code' excepting where an item is not specifically covered within Schedule P65, in which case Appendix Two Schedule A will apply.
- 1.2** All text changes from the previous issue of this Schedule are highlighted such. Text changes for grammatical and/or formatting reasons are not highlighted.
- 1.3** All cars competing in Events to which these regulations apply shall have a valid MotorSport NZ logbook.
- 1.4** **TECHNICAL ELIGIBILITY AND SAFETY EQUIPMENT ENQUIRY:** Where any doubt may exist in understanding any regulation contained within this Schedule it will be understood that it is the Competitors obligation to enquire as to the correct interpretation. All technical eligibility and/or safety equipment enquiry shall be submitted in writing to:
- (1) The Series Scrutineer, as detailed in the Series Articles, or in their absence to
  - (2) The MotorSport NZ Technical Manager
- All enquiries should detail the article in question and the specific subject matter.
  - A written reply will always be given to a written enquiry.
  - On matters of technical eligibility and/or safety compliance, a verbal statement will have no validity.

## 2.0 DEFINITIONS

- 2.1** Definition of terms used within this Schedule shall be referenced from the National Sporting Code, Appendix Two Schedule A, and as detailed below:
- **"Saloon"** means a two(2) or four(4) door vehicle including the hatchback, fast back and station-wagon variants of the same with a fixed roof with factory seating for four(4) occupants
  - **GT** means a performance derived two (2) door closed vehicle with a 2 + 2 configuration.
  - **"Engine"** means the cylinder block, the cylinder head(s), the crankshaft and the camshaft, which must be based on a pre-1965 Series Production saloon car engine.
  - **"Original"** means the factory fitted part for that make, model and year.

## 3.0 ELIGIBLE VEHICLES

- 3.1** For Series Production Vehicles that were in mass production (and available on general catalogue sale) prior to the 31<sup>st</sup> December 1965, of which a minimum of 1000 units were produced.

- 3.2 The Engine castings shall have been in Series Production prior to 31<sup>st</sup> December 1965, or a post 1965 cylinder block and/or crankshaft from the same generic engine family as the pre 1965 cylinder block and/or crankshaft (retaining the same cylinder configuration and the same number of cylinders) produced by the same manufacturer as the car, from the same country of origin as the car and fitted within the confines of the original engine compartment.

**Note:** All post 1965 cylinder blocks and/or crankshafts are to be as per list, refer Article 8.12.

- 3.2.1 A Post-1965 engine block from the same vehicle manufacturer may be used in compliance with Article 8.12 below. These engines shall have seals applied in accordance with Article 4.1.
- 3.2.2 Vehicles with existing 0.060inch/1.5mm over-bore (or greater) engines shall be permitted to compete until the engine block is replaced.
- 3.3 Any cylinder head (as fitted to the subject Series Production Vehicle) that was in series production prior to 31 December 1965 or a direct replacement cylinder head of the same design configuration and material as listed in Article 8.12.

#### 4.0 GENERAL CONDITIONS

- 4.1 All engines may be checked and/or sealed prior to competition. (Refer Series Articles)
- 4.2 The engine, gearbox and rear axle/final drive (differential) shall remain in the confines of their original compartments within the bodyshell.
- 4.3 Cars must be presentable in workmanship and appearance.

#### 5.0 SAFETY EQUIPMENT REQUIREMENTS

- 5.1 The following safety equipment **shall** be fitted to the competing car:
- 5.1.1 A safety cage shall be installed, in full compliance with Schedule A requirements.
- 5.1.2 A minimum 4-strap safety harness shall be installed in full compliance with Schedule A.
- 5.1.3 A Competition Seat in full compliance with Schedule A shall be fitted.
- 5.1.4 A fire extinguisher in full compliance with Schedule A shall be fitted.
- 5.1.5 A high 'rain' light is to be mounted inside the car facing rearward on the centre line of the rear window in a position that does not restrict rearward vision. The light may double as a 'stop light' and must be a red lens LED type light. In addition to the original series production taillights or replicas as laid out in Article 6.2 that are in good working order.
- 5.2 Double intrusion bars shall be fitted adjacent to the driver's side of the vehicle and, if applicable, to the passenger's side of the vehicle.
- 5.3 The following safety equipment **may** be fitted to the competing car:
- 5.3.1 Alternative braces that form an integral part of the safety cage may only replace factory tower braces.

## 6.0 BODYSHELL, VEHICLE EXTERIOR and SUB-FRAMES

- 6.1** Lightening of the bodyshell will be confined to the bonnet, boot lid, doors and associated hinges, brackets and supports, excepting all outer door handles. Alternative materials being alloy or fibreglass may be used. The external appearance is to remain the same as original. Unused brackets and mounts may be removed.
- 6.2** Additionally, replica parts of alternative material may replace the headlights, park lights, taillights and surrounds, grilles and surrounds, bumpers, front valances, nose cones and door glass frames. (nose cones refer to technical).
- 6.3** Fibreglass replica panels may replace original bolt-on type front mudguards providing the replica panel is identical in appearance and weight to the original panel. Welded on front guards may be replaced with fibreglass guards, but they must be glued and bolted to be in line with the other model's replacement front guards. If front guards are welded from factory, they must be glued and bolted on. If front guards are only bolted on from factory they may be only bolted on.

**Note:** *All mudguards and moulds to be inspected and approved by the Committee.*

- 6.4** All windows may be replaced in compliance with Schedule A.
- 6.5** Wheel arch flares are authorised provided they cover at least 1/3 of the tyre circumference and do not exceed the production bodyshell width by more than 100mm, with the material being free.
- 6.6** The original outer mudguards must remain in their original position but can be relieved or flared (no more than 100 mm) for tyre clearance.
- 6.7** Wheel tubs may be modified from the centre-line of the tub to the outer guard, but tubs to remain sealed.
- 6.8** Rear doors may be permanently fixed but must retain their original external appearance.

## 7.0 VEHICLE INTERIOR

- 7.1** Interior trim may be removed provided a tidy appearance is maintained. Fire retardant materials are recommended. The complete dash panel may be removed in which case an alternative panel of similar dimensions to the original dashboard shall be fitted.
- 7.2** All seating shall be removed. The Competition Seat shall be mounted (to the left or to the right of the vehicle centre-line) no further rearward than the original seat.
- A front passenger seat may be fitted (to the right or left of the vehicle centre-line) no further rearward than the original seat; each must be in compliance with Articles 5.1.2, 5.1.3 and 5.2.
- 7.3** Instrument mounting panels may be fabricated.
- 7.4** The floorpan may be modified for the installation of rear suspension tramp rods. The floor and/or sill panels may be modified for exhaust installation.

- 7.5 The transmission tunnel immediately above the bellhousing / gearbox may be modified for clearance purposes provided the tunnel remains an integral part (welded) of the bodyshell.
- 7.6 The front bulkhead may be modified solely for ignition distributor and/or carburettor clearance.
- 7.7 All minor components (not the engine, gearbox and rear axle/final drive) may be relocated.
- 7.8 The fuel tank is free provided Schedule A compliance is maintained. All bodyshell openings created by these changes shall be covered with a steel/alloy panel.
- 7.9 Brake clutch and accelerator pedals and mounting systems are free.

## **8.0 ENGINE SPECIFICATIONS**

- 8.1 The engine bore size and compression ratio, are free.
- 8.2 The cylinder block may be modified for steel main bearing caps (2 or 4 bolt).
- 8.3 The crankshaft bearing journals may be machined / cross-drilled but the stroke shall remain standard. The crankshaft may be surface treated / balanced but the casting numbers must remain clearly visible.
- 8.4 Approved rev limiters to be fitted to engines with non-standard crankshafts, rev limits to be set by the committee
- 8.5 Oiling systems are free.
- 8.6 Heads may be ported and polished. Port and combustion chamber design is free.
- 8.7 Identification marks / numbers on cylinder heads, blocks, and crankshafts must not be altered.
- 8.8 Water and oil cooling systems may be modified with a minimum of bodyshell modification (excepting the water radiator, which shall remain in its original position). Alternative homologated radiator position is allowed.
- 8.9 Sump protection guards may be fitted.
- 8.10 All other engine parts are free.
- 8.11 Lotus twin cam engines can only be fitted to a genuine 2-door Cortina bodyshell.

## **8.12 POST 1965 ENGINE LIST**

- 8.12 The following engine blocks and/or crankshafts have been approved for use in this Series:
- Ford 302 Windsor cylinder block only, (excludes the BOSS, SVO & MEXICO blocks)
  - Chrysler LA 318 (cylinder block only)
  - Rootes 930 Sunbeam Imp cylinder block & crankshaft

- Ford pre-crossflow 1300 5 bearing standard production cylinder block and crankshaft.
- Ford pre-crossflow 1500 standard production cylinder block.
- Ford crossflow 1600 cylinder block only.
- Ford 1600cc cross flow cylinder head
- Ford 1600cc crankshaft.
- Ford 7 main bearing 200ci low deck block and crankshaft restricted to 7000rpm with an approved rev limiter.
- BMC/BLMC 1300cc A Series block and crankshaft.
- Triumph 2500cc block and crankshaft.
- D Class cars are permitted engines as manufactured prior to 31 December 1967. (Refer also to Article 2.1 and Article 3.1 above).
- Ford 302 crankshaft

**8.12.1** In addition to the engines authorised in Article 8.12 above, a Post-1965 engine block from the same vehicle manufacturer, or an after-market block, of the same capacity and constructed from the same material may be used provided the original 1965 stroke is retained. A maximum over-bore of 0.060inch from the original standard 1965 bore is permitted.

## 9.0 INDUCTION / EXHAUST SYSTEM

- 9.1** Carburettors and fuel delivery systems are free, provided no forced induction (by mechanical means) and/or injection systems are used.
- 9.2** The exhaust system is free, provided Schedule A compliance is maintained.

## 10.0 FUEL SYSTEM

- 10.1** The fuel system is free, provided Schedule A compliance is maintained.
- 10.2 Fuel:** The only fuels authorised for use in competing vehicles at any Round of this Series is as detailed in Appendix Two, Schedule A, Article 3.9 Fuel, excepting all Pre65 vehicles that have been issued with a MotorSport NZ exemption may use leaded avgas / racegas, until such time as an alternative unleaded fuel which meets the requirements of the class.

## 11.0 TRANSMISSION

- 11.1** The gearbox casing and tail-shaft housing must have been in series production prior to 31/12/65, although the internal components are free. Any post 1965 Gearboxes and tail-shafts with 'H' pattern shift utilizing four forward gears are permitted.

- 11.2 The axle/differential must be the same type and material as fitted standard to the car, the internal components are free, excepting as detailed in Article 11.3 below.
- 11.3 Locked, limited-slip and/or traction control devices are not authorised in the differential or any part of the vehicle. Including mechanical, electronic and launch control devices. Oversize or extra shims or thrust washers fitted for the sole purpose of reducing the free movement of the differential or spider gears is prohibited. The unloaded wheel must spin freely at all times.
- 11.4 A steel driveshaft safety hoop must be fitted under the front section of the driveshaft of rear wheel drive cars.
- 11.5 The clutch and bell housing are free.
- 11.6 No manual sequential gearboxes, sequential gear kits or sequential gear shifting mechanisms are permitted.
- 11.7 The gearbox cross member may be strengthened, altered or replaced

## 12.0 IGNITION and ELECTRICAL SYSTEMS

- 12.1 **Ignition:** The type of ignition system is free.
- 12.2 An operational electric starter motor must be fitted, capable of starting the engine.
- 12.3 Charging systems are optional.
- 12.4 The battery shall comply with the fixation requirements of Schedule A and may be relocated.

## 13.0 SUSPENSION

- 13.1 The front and rear suspension must be of the same design as per the original vehicle.
- 13.2 Each suspension mounting point may be strengthened and/or moved a maximum of 50mm (the mounting point being the attachment bolt) from its original position in relation to the chassis, excepting the shock absorber mounts.
- 13.3 Additional suspension components such as turret braces, anti-roll bars, panhard rods, watts linkage and tramp bars may be fitted provided that they are really additional, meaning the vehicle will drive / operate safely when the additional component is removed.
- 13.4 Anti tramp devices may be fitted with a maximum of two forward links and one lateral link only. (An 'A' frame is considered one link provided it is a one-piece rigid assembly. Watts linkages are considered one link). Only these additional linkages as described may be mounted with bushes or self-aligning bearings.
- 13.5 The vehicles ride height, spring rate, shock absorbers and their mountings and mounting points are free, excepting that no self-aligning and/or spherical joints/bearings are permitted. Fabricated shock absorber towers are authorised provided they do not require any modification of the chassis.

- 13.6** Suspension mountings and the method of attachment is to be as per the original vehicle, namely by bushes, ball-joints, U-bolts, shackles etc. Bushes may be of alternative material. Spherical bearings may be used on the top mount of the front struts and front sway bar only.
- 13.7** Bolt on front axle beam/front suspension cross member may be strengthened, altered or replaced.

## **14.0 BRAKING SYSTEM**

- 14.1 Front and rear brakes:** Drums can be replaced with larger drums, discs with larger discs.
- 14.2** Wheel cylinder and bore size is free.
- 14.3** Front brakes are free respecting a maximum of four(4) pistons per calliper and a maximum size of 310mm for disc diameter. Rear Brakes are free respecting a maximum of two(2) pistons and a maximum size of 310mm for disc diameter. No ABS or carbon / ceramic compounds are permitted.
- 14.4** Brake backing plates may be modified or removed.
- 14.5** No drilling of the disc or drum friction surface is authorised.
- 14.6** Brake master cylinders and there activating method is free.
- 14.7** If a single master cylinder is fitted, the vehicle must have a mechanical handbrake.
- 14.8** All friction materials (linings) are free.
- 14.9** Any air ducting for brake cooling must be confined within the original bodywork, using existing bodyshell apertures. Panels behind existing apertures may only be relieved by the minimum amount to allow ducting to pass through.
- 14.10** No mechanical or electronic anti-lock-up braking devices (ABS) are permitted.

## **15.0 STEERING**

- 15.1** The steering system must be of the same design as per the original vehicle
- 15.2** The steering box / steering rack internal components are free, provided Schedule A compliance is maintained. Additionally, the steering wheel is free.
- 15.3** Spherical ball rod ends may be used on the steering intermediate steering rod only in compliance with Schedule A and Pre65 technical requirements, type and size.

## **16.0 ROAD WHEELS and TYRES**

- 16.1** Commercially available wheels of steel or alloy shall be used. A maximum rim width of 22.86cm (9 in.) applies.



- 16.2** The wheel rim diameter is:
- Class “A” cars up to 17”
  - Class “B” cars up to 15”
  - Class “C” cars up to 14”
  - Class “D” cars up to 13”
  - Class “E” cars up to 15”

Where a car has wheels larger than the class standard wheel, size may only be increased by 1” (25mm) to a maximum of 17”.

- 16.3** The control tyre, as detailed below, is a tyre of minimum aspect ratio (profile) 45 series and maximum width of 245mm, as approved by the Committee. Additionally, the Committee may authorise ‘alternative’ tyres, at their sole discretion, provided any change is issued in writing to the Series Competitors.

<b>Dry Tyre / Wheel Size Chart</b>			
<b>Wheel Diameter</b>	<b>Tyre Make</b>	<b>Tyre Model</b>	<b>Tyre Profile</b>
16”	Kumho	V70A 225-45-R16	45
		V710 225-50-R16	50
		V710 245-45-R16	45
		V70A 245-45-R16	45
16”	Goodride	Sports RS 205-45-R16	45
15”	Kumho	V70A 225-50-R15	50
		V710 225-50-R15	50
15”	Goodride	Sports RS 205-45-R15	45
14”	Kumho	V70A 195-55-R14	55
		V70A 225-50-R14	50
14”	Yokohama	A048 185-60	60
13”	Kumho	V70A 215-50-R13	50
		Victoracer V700 205-60-R13	60
10” only	American Racer	GT	18.0/6.0-10
10” only	Dunlop	Formula R SP Sport D01J	165x70x10

- 16.4 Wet Races:** When an announcement as detailed in Appendix 4, Schedule Z, Article 10.10 of the current New Zealand MotorSport Manual is made by the Event Director or Clerk of the Course (declared ‘wet’), the Kumho V710 tyre shall not be used. The only tyres authorised for ‘wet’ use are:

<b>Wet Tyre / Wheel Size Chart</b>			
<b>Wheel Diameter</b>	<b>Tyre Make</b>	<b>Tyre Model</b>	<b>Tyre Profile</b>
16”	Kumho	V70A 225-45-R16	45
		V70A 245-45-R16	
16”	Goodride	Sports RS 205-45-R16	45
15”	Goodride	Sports RS 195-50-R15	50
15”	Kumho	V70A 225-50-R15	50
14”	Kumho	V70A 195-55-R14	55
		V70A 225-50-R14	50
13”	Kumho	W700 180-550-R13	550
		Victoracer V700 205-60-R13	60
		V70A 215-50-R13	50
10”	TBC	TBC	TBC

**16.5** The tyre tread must remain within a vertical line from the top outer edge of the guard or flare to the centreline of the axle.

## **17.0 GENERAL**

**17.1** Nuts, bolts, circlips, pins, springs, clips, paintwork, coolants and lubricants are free.