

RACING RULE BOOK



2020

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Subscriptions

Juniors \$30 for full year subscription.

Seniors \$95 for full year subscription.

Family \$105 for full year subscription.

A Junior Member is a dependent child up to the age of 18 year unless earning a full time wage.

Juniors may apply to move up to seniors from the age of 15 years.

A Family Membership is One Senior + Partner + Dependent children not earning a full time wage.

All membership subscriptions and any other Annual charges or levies shall be due and payable in full by the first official calendar race event for the New Year.

Financial membership automatically ceases if subscriptions are unpaid two (2) calendar months after the AGM.

Anyone wishing to pay off their yearly subscription must approach the committee to arrange an appropriate time period, this cannot be approved by just one committee member.

There is no provision to pay a full year's race fees in advance.

Membership includes use of all HMMRC facilities both circuit and drag racing.

If joining the Club between the start of the financial year, 1st October and the 31st March the full years membership subscription is payable. If joining between 1st April and the 30th June two thirds of the full years membership subscription is payable. If joining between 1st July and 31st September one third of the full years membership subscription is payable.

Note – members that have been financial and regular attendees for a full season of racing are eligible for nomination at the time of the AGM to become elected officers (committee members) of the HMMRC. This eligibility is ***not*** granted to members that hold an elected officer position at any other slot car racing organisation, regardless of that organisation being incorporated or not; and therefore any elected officer taking up such a position elsewhere would be stood down from any elected HMMRC office position on the basis of protecting the club from any possible conflict of interest.

With regard to the body of HMMRC; HMMRC and/or NZSCA remits submitted on behalf of HMMRC may only be submitted and voted upon by members affiliated exclusively to HMMRC and no other body with the interest of slot cars.

The elected club delegate to NZSCA is not otherwise conflicted under these terms.

Race Fees

Junior Members: all race meetings \$2 per meeting.

Senior Members: all race meetings \$5 per meeting.

Casual Racers: all race meetings \$6 casual fee plus the normal race fee of \$5 Senior or \$2 Junior per meeting. i.e. senior \$11, Junior \$8

Race Fees are for all meetings – Circuit Racing, Drag Racing, (plus fees as specified for open race events).

Casual rates apply to all people who are not financial members and have used their free introductory nights.

People participating as Casual racers can only race for four (4) nights in the calendar year before having to join the club as a normal member.

Track usage fees (includes RTR Meetings, Practice Sessions) apply to any non-club night use of track. These are \$5 for club members and \$10 for non-club members.

A racer competing as a casual racer or a racer competing using their free introductory nights will NOT be eligible for any points in any Championship competition up to the time of becoming a financial member.

Visitors who are a member of a NZSCA affiliated club and wish to race need only pay the normal race fee applicable to the meeting and not the casual rate of \$5.

New Members

The first three (3) race nights are free. Includes car, controller, and race fees.

After the three (3) free nights, if he / she wishes to continue to race they may join the club and must pay race fees as per the current schedule. Car may be hired for \$2 per night and Controller may be hired for \$3 per night if required.

The member must after six weeks of racing have purchased his/her own car or be in the process of doing so. Controllers may still be hired at \$3.00 per night. Non-members may continue to race on a casual basis by paying the casual race fee as per the current race fees schedule.

CLUB RULES

- NO SMOKING inside the Clubrooms at any time.
- NO ALCOHOL is to be brought onto or consumed in the Clubrooms or on the grounds, as per the Council Community Lease Requirements.
- Members to be considerate of others present (age, gender, visitors etc.) at all times regarding language, manners and temperament.
- Members are to keep themselves and others away from the Railway Lines.
- Drive slowly around the Clubrooms and whilst arriving or departing along Rangeview Rd.
- It is the responsibility of all members to keep the Clubrooms tidy.
- A member may only enter the canteen with a committee member's permission.
- Soldering Iron is to be turned down when not in use.
- Members who race are not to leave until racing is finished without permission from the Race Controller or Chief Steward. (If you race, you must turn marshal! Turn marshals may be assigned to

corners by the Race Controller or Chief Steward). Failure to participate where requested may result in forfeiture of all points at the event.

- All cars, when racing, must without exception comply with HMMRC motor/chassis class rules. And in the spirit of the racing of club events must make reasonable effort to comply with all rules for the class of car being used. Cars that fail to comply may be disallowed from racing according to correct interpretation the HMMRC rules by committee members present.
- In the case of Trophy or open events hosted by HMMRC only fully compliant cars of correct class for the event may be on the track prior to racing. In an open invitation multi-class event all relevant classes may be used in an open practice session. But pre-class warm ups will be for only that class of car. If a class has already been run then cars of that class may not be operated again in any open practice session or pre-race warm up during the remainder of the event.
- Additional tyre goo may only applied directly to the car's tyres not the track surface.
- Under certain circumstances the Chief Steward or Race Controller may authorise the application of additional spray goo to the track. This is normally only done once after a full track clean.
- Full track clean and respray of goo may not be done immediately prior to a trophy event. The track must be used for at least one full club meeting prior to any trophy meeting being held on the track surface.
- The track is not a workbench. No tyre sanding, oiling etc. to be done while car is on track.
- Keep all food and drink away from the track.
- Cellular phones are not to be used by marshals or competitors while racing is in progress.
- No personal form of electronic device such as cell phones or USB may be plugged into the club computer unless a committee member is present. This is because the computers we use have no form of up to date antivirus installed and the club has no need to go online. The computer is only used to run track events.
- Any form of track maintenance including adjustments can only be undertaken with prior approval of the committee and with a committee member present.
- All racing to be run on the track in the direction of right to left standing on the driver's podium facing the track. This eliminates the need to adjust track joins and prevents 'fluffing' of the braid.

Lane Changes

The time allowed for lane changes will be 60 (Sixty) seconds. During club racing the cars will normally be lane changed by turn marshals and overseen by the race controller who may pause the timer for any reasons of difficulty completing the task. However if a driver leaves the stand to attend their own car the restart sequence does not pause for their return to the stand. It is the driver's responsibility to ensure their car is on the correct lane with the correct coloured sticker. Cars may be oiled, braids reset and bodies adjusted during lane changes.

Lane Rotation - European

WHITE ----- **RED** ----- **YELLOW** ----- **PURPLE** ----- **BLUE** ----- **GREEN** ----- **WHITE**

Track Calls

Track calls are NOT work breaks but braid may be reset and bodies straightened during track calls.

Drivers calling “TRACK” or “RIDER” as an appeal to the race controller incorrectly more than once may result in a 5 lap penalty. This is to prevent the continuity of the race being affected for others.

Track call button is operated by the race controller for the following reasons only:

- In response to “TRACK” or “RIDER” being called by anyone in the room (race controller discretion applies if they happen to witness why the appeal is being made and can see if it qualifies as a legitimate call).
- Irretrievable car(s) under the track in the infield area or any car that has left the track surface i.e. fallen to the floor.
- Rider (Car in other than assigned lane).
- Between markings in front of drivers stand.
- From marking In front of race controller to bridge.
- Under the bridge.
- On top of the bridge.
- Braid up.
- Power failure (one or more lanes).
- Debris in slot.
- Lap counter or track equipment failure.

As soon as a marshal has possession of an irretrievable car racing will resume immediately. i.e. normal marshalling can now take place, the track call will be cleared and the restart sequence will occur. If a car(s) has been retrieved from under the track some time may be taken to ensure that they are returned to the correct part of the track before clearing the track call.

Controllers

- A controller may only draw power from a single driver stand controller point.
- A controller may not boost the voltage available from a single driver stand controller point.
- Internal components that require standby battery (or any power storage) must have that power source isolated from delivering power to track wiring and / or car.

Track Records

Any race in which the track record is claimed must have been contended for by a minimum of four drivers (legitimate mechanical retirements will not affect this criteria). Exceptions to this minimum number will be qualifying records and other such events that normally have a reduced number. The claim to the record will then be verified by confirming the eligibility of the driver (membership of a club) and the car in contention shall be fully scrutineered (it must be found to be fully compliant to the class rules for track records to be verified, even if on a club night) by both the Chief Steward and the Race Controller. (One of which, minimum, must be a committee member or a committee member will be appointed to check the car).

Track Damage

Any car deemed to be at risk of damaging the track during a race will be immediately black flagged. The car may re-join the race after inspection by scrutineer, steward or race controller; whichever is appropriate for the race event.

1/24th FK FLEXI LMP

Chassis - Any commercially manufactured two or three piece stamped and pressed steel 4" chassis is allowed; such chassis when new to market must be presented to the committee for approval prior to use (or points will not be scored). No wire cut EDM or laser cut chassis are allowed. Lightweight pans are allowed. Must use all parts as supplied in full chassis kit. Any replacement parts must be manufacturer original parts, no alternative or home made parts. For example the "J" bars used with the JK C43 chassis must be JK original or JK optional parts. Bite bar style, straight wire elements are free.

Body Type & Height – Any commercially available LMP body may be used. *Minimum thickness 0.005"*. 44mm is the maximum height when measured on a recessed level board whilst fully fitted to the car. Side plates of the rear wing area may not exceed 30mm in length. This is measured from in front of the uppermost front facing edge of the rear spoiler, in a forward direction along the top edge - but does not include any radius or blend from that edge downward to the rest of the body. When viewed from the side the body must retain significant, recognisable profile of the body shape i.e. flat sides of the body may not extend upward to form an additional side dam/plate along the length of the body.

Motors - No unspecified modifications allowed. May use the following motors:

Proslot PS4002FK (Copper hard ware "Proslot PS641" may be used, brushes and springs free, no shunts)

End bell retaining tabs must be intact and show no signs of tamper. i.e. motors must not have been opened.

Excessive wear and tear of seal or damage to end bell retaining tabs may fail to give confidence of motor having remained unopened and can be rejected by a scrutineer, steward or race controller.

For club racing only;

The PS4002FK motor may be dismantled for the purposes of reconditioning the armature i.e. commutator truing and cleaning only (no balancing) and the marking of such activity by etch/tag/die as approved by the tech inspector must be clear.

The JK Hawk 6 armature may also be used as a replacement in these serviced motors. Unsealed motors may be inspected for the purposes of club racing but in all types of competitive trophy or open meetings must be presented as original fully sealed PS4002FK.

The JK Hawk 6 motor and any of the parts that can be purchased to rebuild the Hawk 6 motor may compete with parity against the PS4002FK.

These options for servicing the PS4002FK and the use of JK Hawk 6 motors and their parts are a trial for the 2020 race calendar and apply to club night points racing only. Only original fully sealed PS4002Fk motors are eligible for trophy or open invitation events.

Armature - shafts may be shortened (both ends) and can may be notched to allow for axle clearance.

Brushes & Springs – In only the case of PS4002FK may be changed. Brushes cannot be fitted with shunts. Brush hoods may not have material removed and must remain mounted in the standard horizontal position and be perpendicular to all axis of the armature.

Maximum Width - 83mm, measured across any part of the chassis, body and the front and rear axles. Excludes the heads of the body pins.

Clearance - Minimum clearance is 0.6mm under the rear axle uprights at the beginning of each race (this does not apply to club racing). The spur or crown gear may not protrude below the chassis.

Chassis Ballast - Tape and Lead may be applied only to the upper faces of chassis in all classes.

Front Wheels - Physical or stick on of 12.7mm diameter minimum, must be run. They do not have to touch the track. Wheels are to be an accurate representation of a wheel and tyre and they must represent the scale of the car with a clear archway around them. Wheels must appear to be predominately aligned with a vertical face and in the correct position for front wheels on the body.

Front Axle - If used, front axle must be fitted to the front wheel tower uprights through the original manufactured holes for the front axle.

Rear Wheels – The maximum allowed width of the rear tyres is 20.5mm.

Axle Bushings – Rear axle bushes/ball race bearings are free and may be soldered or glued into place in the original manufactured position. The original holes may be adjusted to facilitate gear mesh, alignment of axle and ride height.

Gears - Any 48 or 64 pitch gears allowed. Spur or crown gears may not protrude below chassis.

Bracing Rear Axle - May be added to support only the rear axle uprights. This bracing of uprights may not incorporate a connection to the motor or any of the motor's allowable bracing (i.e. is to be a separate brace for bracing the rear axle uprights only).

Guide Flag - No projections capable of guiding the car are allowed beneath it, other than the actual guide and two typical braid. Only one guide flag allowed, with a blade not more than 30mm long.

Guide Tongue Brace - Any guide tongue brace allowed.

Miscellaneous Parts - Guide nut, washers, spacers, clips, lead-wire, solder, and earring backs (that retain and route lead wire) are free.

Blueprinting - Pressed steel chassis may be flattened and straightened, wheel towers straightened to ninety degrees, guide tongue levelled and doubled, rear bearing holes enlarged to enable rear axle to be set level and at ninety degrees to direction of movement, sharp edges rounded to avoid track damage, and chassis assembled to allow pans to move freely. Chassis may not be altered by removing chassis material except as specified above. The articulation of the chassis may not be altered by removing material. The original manufacturer's method of joining the chassis pieces together and articulating their movement must be retained. Tape, packing etc. is allowable to restrict movement but may not be applied to the underside of the chassis.

Motor Mounting - Motor must be mounted in the original as manufactured position, fixed to the chassis by screws or soldering, or a combination of both and must use original parts supplied by the chassis manufacturer for this purpose and in the position intended. It may not protrude below the chassis underside. One additional piece of tube of 1/8" maximum outside diameter and of 10mm maximum length may be added to bridge the solder joint on either the forward or rear of motor can to act as a removable joint aiding in release of motor from chassis. *Note – if the chassis includes a lower rear motor bracket, such as with the JK C43, then this may still be incorporated in the intended position on the chassis. No other home-made brackets may be used.*

Motor Upright Bracket - The existing motor can bearing slot may be enlarged to allow for a proper motor fit and gear mesh. But the full bracket outline must remain.

Pin Tubes - Floating pin tubes may be used but pins must be affixed in tubes so as to remain with their head flush with face of body. This is a matter of safety and loose pins will be rejected when scrutinized or if found to be so during any race may be requested to be removed from the track and must be corrected and checked by race controller before returning to the track.

Body - Body must be a reasonable representation of a full size LMP car and must be available commercially and be available to all club members. Body shape is to remain as manufactured apart from necessary alterations needed to clear the wheels. The front of the body may not be cut so high as to lose the shape and detail of the front. Cutting out the rear of the body is allowed. Body must be fully painted and the paint sufficiently opaque so that no chassis or components can be seen through the body. Windscreens and windows must be left clear. A clear strip may separate the wing from the main body.

Body Mounting - Bodies may be fixed to the chassis by any combination of tape, clips or pin tubes. Where pin tubes are used they must be located in the existing body fixing chassis holes. Body must be cut and mounted high enough to allow for the minimum front wheel diameter to be visible as an upright wheel mounted to a predominately vertical face or, if used, high enough to allow for the free rotation of physical front wheels under the body.

Trimming & Cut Outs - Cars are to have only portions cut out from the body which are normally cut out on the full sized cars i.e. air intakes, engine grilles etc. The windows may not be cut out unless proof is provided that the car raced in such a form. No mechanical components may protrude through the bodywork (with exception of guide flag).

Wheel Arches - Front wheel arches must be clear, or cut to at least the horizontal centre line of the front wheels. Trimming for front or rear wheel clearance may not extend into the top surface of the body.

Cover Chassis - The chassis and guide must be completely covered by the body when viewed from above.

Driver - A non-transparent three (3) dimensional driver, consisting of at least head / shoulders / arms and steering wheel, with at least two (2) colours is to be securely fixed in the driving position of the car at the commencement of every race.

Numbers - All cars must have at least two (2) readable numbers, of the same numeral. Cars shall have those numerals visible in two (2) different locations.

1/24th FK F1 / INDY GRAND PRIX

Chassis – Either of the following JK products chassis may be used:

JK 4” Indy / F1 Cheetah 7 chassis kit Part No JK25117

OR

JK 4” Indy / F1 Cheetah 21 chassis. Part No. JK 251171.

Chassis must use all parts as supplied in full chassis kit. Any replacement parts must be original parts, no alternative or home made parts. Bite bar style, straight wire elements are free.

Body – Any commercially available F1 / Indy Grand Prix body may be used. *Minimum thickness 0.007”*.

Motors - No unspecified modifications allowed. May use the following Falcon class motors:

Proslot PS4002FK (Copper hard ware “Proslot PS641” may be used, brushes and springs free, no shunts)

End bell retaining tabs must be intact and show no signs of tamper. i.e. motors must not have been opened.

Excessive wear and tear of seal or damage to end bell retaining tabs may fail to give confidence of motor having remained unopened and can be rejected by a scrutineer, steward or race controller.

For club racing only;

The PS4002FK motor may be dismantled for the purposes of reconditioning the armature i.e. commutator truing and cleaning only (no balancing) and the marking of such activity by etch/tag/die as approved by the tech inspector must be clear.

The JK Hawk 6 armature may also be used as a replacement in these serviced motors. Unsealed motors may be inspected for the purposes of club racing but in all types of competitive trophy or open meetings must be presented as original fully sealed PS4002FK.

The JK Hawk 6 motor and any of the parts that can be purchased to rebuild the Hawk 6 motor may compete with parity against the PS4002FK.

These options for servicing the PS4002FK and the use of JK Hawk 6 motors and their parts are a trial for the 2020 race calendar and apply to club night points racing only. Only original fully sealed PS4002Fk motors are eligible for trophy or open invitation events.

Armature - shafts may be shortened (both ends) and can may be notched to allow for axle clearance.

Brushes & Springs – In only the case of PS4002FK may be changed. Brushes cannot be fitted with shunts. Brush hoods may not have material removed and must remain mounted in the standard horizontal position and be perpendicular to all axis of the armature.

Maximum Width - 83mm, measured across the front and rear axles. Excludes the heads of the body pins. Original pans must be used and not altered in width. Front width checked at full extension of play (maximum measureable width) and the overall sideward play of the front axle assembly must not exceed 0.5mm.

Clearance - Minimum clearance is 0.6mm under the rear axle uprights at the beginning of each race (this does not apply to club racing). The spur or crown gear may not protrude below the chassis.

Chassis Ballast - Tape and Lead may be applied only to the upper faces of chassis in all classes.

Front Wheels – JK F1/Indy Plastic Rim Part No JK8745PF. May be trued and trimmed to minimum tyre width of 9mm. May also be arranged to allow independent rotation on the 3/32” axle. The front wheels must touch and roll on track surface if gently depressed to flatten braid.

Front Axle – A single 3/32” front axle must be fitted through bushes (no ball race bearings) in the front wheel tower uprights through the original manufactured holes for the front axle. Minimum height from underside of chassis to the uppermost of the 3/32” axle is 9.45mm.

Rear Wheels – The maximum allowed width of the rear tyres is 20.5mm.

Axle Bushings – Rear axle bushes/ball race bearings are free and may be soldered or glued into place in the original manufactured position. The original holes may be adjusted to facilitate gear mesh, alignment of axle and ride height.

Gears - Any 48 or 64 pitch gears allowed. Spur or crown gears may not protrude below chassis.

Bracing - May be added to support only the rear axle uprights and may incorporate a connection to the motor for additional bracing.

Guide Flag - No projections capable of guiding the car are allowed beneath it, other than the actual guide and two typical braid. Only one guide flag allowed, with a blade not more than 30mm long.

Guide Tongue Brace - Any guide tongue brace allowed.

Miscellaneous Parts - Guide nut, washers, spacers, clips, lead-wire, solder, and earring backs (that retain and route lead wire) are free.

Blueprinting - Pressed steel chassis may be flattened and straightened, wheel towers straightened to ninety degrees, guide tongue levelled and doubled, rear bearing holes enlarged to enable rear axle to be set level and at ninety degrees to direction of movement, sharp edges rounded to avoid track damage, and chassis assembled to allow pans to move freely. Chassis may not be altered by removing chassis material except as specified above. The articulation of the chassis may not be altered by removing material. The original manufacturer’s method of joining the chassis pieces together and articulating their movement must be retained. Tape, packing etc. is allowable to restrict movement but may not be applied to the underside of the chassis.

Motor Mounting - Motor must be mounted in the original as manufactured position, fixed to the chassis by screws or soldering, or a combination of both. It may not protrude below the chassis underside. An additional piece of tube of 1/8” maximum outside diameter and of 10mm maximum length may be added to bridge the solder joint to both the forward and rear of motor can to act as a removable joints aiding in release of motor from chassis. *Note – if the chassis includes a lower rear motor bracket, such as with the JK C43, then this may still be incorporated in the intended position on the chassis. No other home-made brackets may be used.*

Motor Upright Bracket - The existing motor can bearing slot may be enlarged to allow for a proper motor fit and gear mesh. But the full bracket outline must remain.

Pin Tubes - Floating pin tubes may be used but pins must be affixed in tubes so as to remain with their head flush with face of body. This is a matter of safety and loose pins will be rejected when scrutinized or if found to be so during any race may be requested to be removed from the track and must be corrected and checked by race controller before returning to the track.

Body - Minimum body thickness is 0.007". Body must be a reasonable representation of a full size F1 / Indy car and must be available commercially and be available to all club members. Body shape is to remain as manufactured apart from necessary alterations needed to clear the guide and wheels. The front of the body may not be cut so high as to lose the shape and detail of the front. Body must be fully painted and the paint sufficiently opaque so that no chassis or components can be seen through the body. A clear strip may separate the wing from the main body.

Body Mounting - Bodies may be fixed to the chassis by any combination of tape, clips or pin tubes. Where pin tubes are used they must be located in the existing body fixing chassis holes. Body must be cut and mounted un-raked, i.e. with the lower side door and sill lines parallel with the track surface and to a minimum height of the manufactured body line at the base of the body. It cannot be cut above this (i.e. lowering the cut of body is not allowed).

Cover Chassis - The chassis and guide must be completely covered by the body when viewed from directly above; the only exception to this is front suspension arms and lead wires. This consideration is given specifically for F1 / Indy class.

Trimming & Cut Outs - Cars are to have only portions cut out from the body which are normally cut out on the full sized cars i.e. air intakes, engine grilles etc.

Driver - A non-transparent three (3) dimensional driver, consisting of at least head / shoulders / arms and steering wheel, with at least two (2) colours is to be securely fixed in the driving position of the car at the commencement of every race.

Numbers - All cars must have at least one (1) readable number

1/24th FK FLEXI SALOON

Chassis - Any commercially manufactured two or three piece stamped and pressed steel 4" chassis is allowed; such chassis when new to market must be presented to the committee for approval prior to use (or points will not be scored). No wire cut EDM or laser cut chassis are allowed. Lightweight pans are allowed. Must use all parts as supplied in full chassis kit. Any replacement parts must be manufacturer original parts, no alternative or home made parts. For example the "J" bars used with the JK C43 chassis must be JK original or JK optional parts. Bite bar style, straight wire elements are free.

Body Type & Height – Any commercially available Saloon style body may be used. *Minimum thickness 0.007"*. Whilst fully fitted to the car and properly positioned on a recessed level board and measured from the top surface of the board, 41mm is the maximum allowed height of any part of the car and the rear bumper area of the body may not be cut higher than 15mm.

Interior - All cars must have a sufficiently full interior so that no chassis or components can be seen through the windows when viewed from directly above.

Motors - No unspecified modifications allowed. May use the following Falcon class motors:

Proslot PS4002FK (Copper hard ware “Proslot PS641” may be used, brushes and springs free, no shunts)

End bell retaining tabs must be intact and show no signs of tamper. i.e. motors must not have been opened.

Excessive wear and tear of seal or damage to end bell retaining tabs may fail to give confidence of motor having remained unopened and can be rejected by a scrutineer, steward or race controller.

For club racing only;

The PS4002FK motor may be dismantled for the purposes of reconditioning the armature i.e. commutator truing and cleaning only (no balancing) and the marking of such activity by etch/tag/die as approved by the tech inspector must be clear.

The JK Hawk 6 armature may also be used as a replacement in these serviced motors. Unsealed motors may be inspected for the purposes of club racing but in all types of competitive trophy or open meetings must be presented as original fully sealed PS4002FK.

The JK Hawk 6 motor and any of the parts that can be purchased to rebuild the Hawk 6 motor may compete with parity against the PS4002FK.

These options for servicing the PS4002FK and the use of JK Hawk 6 motors and their parts are a trial for the 2020 race calendar and apply to club night points racing only. Only original fully sealed PS4002Fk motors are eligible for trophy or open invitation events.

Armature - shafts may be shortened (both ends) and can may be notched to allow for axle clearance.

Brushes & Springs – In only the case of PS4002FK may be changed. Brushes cannot be fitted with shunts. Brush hoods may not have material removed and must remain mounted in the standard horizontal position and be perpendicular to all axis of the armature.

Maximum Width - 83mm, measured across any part of the chassis, body and the front and rear axles. Excludes the heads of the body pins.

Clearance - Minimum clearance is 0.6mm under the rear axle uprights at the beginning of each race (this does not apply to club racing). The spur or crown gear may not protrude below the chassis.

Chassis Ballast - Tape and Lead may be applied only to the upper faces of chassis in all classes.

Front Wheels - Physical or stick on of 12.7mm diameter minimum, must be run. They do not have to touch the track. Wheels are to be an accurate representation of a wheel and tyre and they must represent the scale of the car with a clear archway around them. Wheels must appear to be predominately aligned with a vertical face and in the correct position for front wheels on the body.

Front Axle - If used, front axle must be fitted to the front wheel tower uprights through the original manufactured holes for the front axle.

Rear Wheels – The maximum allowed width of the rear tyres is 20.5mm.

Axle Bushings – Rear axle bushes/ball race bearings are free and may be soldered or glued into place in the original manufactured position. The original holes may be adjusted to facilitate gear mesh, alignment of axle and ride height.

Gears - Any 48 or 64 pitch gears allowed. Spur or crown gears may not protrude below chassis.

Bracing - May be added to support only the rear axle uprights. This bracing of uprights may not incorporate a connection to the motor or any of the motor's allowable bracing (i.e. is to be a separate brace for bracing the rear axle uprights only).

Guide Flag - No projections capable of guiding the car are allowed beneath it, other than the actual guide and two typical braid. Only one guide flag allowed, with a blade not more than 30mm long.

Guide Tongue Brace - Any guide tongue brace allowed.

Miscellaneous Parts - Guide nut, washers, spacers, clips, lead-wire, solder, and earring backs (that retain and route lead wire) are free.

Blueprinting - Pressed steel chassis may be flattened and straightened, wheel towers straightened to ninety degrees, guide tongue levelled and doubled, rear bearing holes enlarged to enable rear axle to be set level and at ninety degrees to direction of movement, sharp edges rounded to avoid track damage, and chassis assembled to allow pans to move freely. Chassis may not be altered by removing chassis material except as specified above. The articulation of the chassis may not be altered by removing material. The original manufacturer's method of joining the chassis pieces together and articulating their movement must be retained. Tape, packing etc. is allowable to restrict movement but may not be applied to the underside of the chassis.

Motor Mounting - Motor must be mounted in the original as manufactured position, fixed to the chassis by screws or soldering, or a combination of both and must use original parts supplied by the chassis manufacturer for this purpose and in the position intended. It may not protrude below the chassis underside. One additional piece of tube of 1/8" maximum outside diameter and of 10mm maximum length may be added to bridge the solder joint on either the forward or rear of motor can to act as a removable joint aiding in release of motor from chassis. *Note – if the chassis includes a lower rear motor bracket, such as with the JK C43, then this may still be incorporated in the intended position on the chassis. No other home-made brackets may be used.*

Motor Upright Bracket - The existing motor can bearing slot may be enlarged to allow for a proper motor fit and gear mesh. But the full bracket outline must remain.

Pin tubes - Floating pin tubes may be used but pins must be affixed in tubes so as to remain with their head flush with face of body. This is a matter of safety and loose pins will be rejected when scrutinized or if found to be so during any race may be requested to be removed from the track and must be corrected and checked by race controller before returning to the track.

Bodies - Minimum body thickness is 0.007". Bodies must be a reasonable representation of a full size saloon car and must be available commercially and be available to all club members. Body shape is to remain as manufactured apart from necessary alterations needed to clear the wheels. The front of the body may not be cut so high as to lose the shape and detail of the front. Bodies must be fully painted and the paint sufficiently opaque so that no chassis or components can be seen through the body. Windscreens and windows must be left clear. A clear strip may separate the wing from the main body.

Body Mounting - Bodies may be fixed to the chassis by any combination of tape, clips or pin tubes. Where pin tubes are used they must be located in the existing body fixing chassis holes. Body must be cut and mounted high enough to allow for the minimum front wheel diameter to be visible as an upright wheel mounted to a predominately vertical face or, if used, high enough to allow for the free rotation of physical front wheels under the body.

Cover Chassis - The chassis and guide must be completely covered by the body when viewed from above.

Trimming & Cut Outs - Cars are to have only portions cut out from the body which are normally cut out on the full sized cars i.e. air intakes, engine grilles etc. The windows may not be cut out unless proof is provided that the car raced in such a form. No mechanical components may protrude through the bodywork (with exception of guide flag).

Wheel Arches - Front wheel arches must be clear, or cut to at least the horizontal centre line of the front wheels. Trimming for front or rear wheel clearance may not extend into the top surface of the body.

Driver - A non-transparent full interior with a three (3) dimensional driver, consisting of at least head / shoulders / arms and steering wheel, with at least two (2) colours is to be securely fixed in the driving position of the car at the commencement of every race.

Numbers - All cars must have at least two readable numbers, of the same numeral. Cars shall have those numerals visible in two (2) different locations.

1/24th FK FLEXI PHOENIX GTP & WING CLASS (fixed gear ratio racing)

Motor - MAR602 Phoenix Motor

End bell retaining tabs must be intact and show no signs of tamper. i.e. motors must not have been opened. Excessive damage to end bell retaining tabs may fail to give confidence of motor having remained unopened and can be rejected by a scrutineer, steward or race controller. Armature shafts may be shortened (both ends) and can may be notched to allow for axle clearance.

Gear Ratio Fixed - 11/35 64 pitch gears allowed. Spur gear may not protrude below chassis.

Chassis - Any two or three piece stamped and pressed steel 4" chassis commercially manufactured prior to October 2016 (the release date of the JK C43) is allowed. *i.e. JK C43 or newer chassis are excluded.* No wire cut EDM or laser cut chassis are allowed. Lightweight pans are allowed. Must use all parts as supplied in full chassis kit. Any replacement parts must be manufacturer original parts, no alternative or home made parts. Bite bar style, straight wire elements are free.

Body Type & Height - Any commercially available **GTP** (44mm high) or **Wing** body may be used for the specified class.

Maximum Width - 83mm, measured across any part of the chassis, body and the front and rear axles. Excludes the heads of the body pins.

Clearance - Minimum clearance is 0.6mm under the rear axle uprights at the beginning of each race (this does not apply to club racing). The spur or crown gear may not protrude below the chassis.

Chassis Ballast - Tape and Lead may be applied only to the upper faces of chassis in all classes.

Front Wheels - Physical or stick on of 12.7mm diameter minimum, must be run. They do not have to touch the track. Wheels are to be an accurate representation of a wheel and tyre and they must represent the scale of the car with a clear archway around them. Wheels must appear to be predominately aligned with a vertical face and in the correct position for front wheels on the body.

Front Axle - If used, front axle must be fitted to the front wheel tower uprights through the original manufactured holes for the front axle.

Rear Wheels – The maximum allowed width of the rear tyres is 20.5mm.

Axle Bushings (no ball races) - Oilite or brass only may be soldered or glued into place in the original manufactured position. The original holes may be adjusted to facilitate gear mesh, alignment of axle and ride height.

Bracing Rear Axle - May be added to support only the rear axle uprights. This bracing of uprights may not incorporate a connection to the motor or any of the motor's allowable bracing (i.e. is to be a separate brace for bracing the rear axle uprights only).

Guide Flag - No projections capable of guiding the car are allowed beneath it, other than the actual guide and two typical braid. Only one guide flag allowed, with a blade not more than 30mm long.

Guide Tongue Brace - Any guide tongue brace allowed.

Miscellaneous Parts - Guide nut, washers, spacers, clips, lead-wire, solder, and earring backs (that retain and route lead wire) are free.

Blueprinting - Pressed steel chassis may be flattened and straightened, wheel towers straightened to ninety degrees, guide tongue levelled and doubled, rear bearing holes enlarged to enable rear axle to be set level and at ninety degrees to direction of movement, sharp edges rounded to avoid track damage, and chassis assembled to allow pans to move freely. Chassis may not be altered by removing chassis material except as specified above. The articulation of the chassis may not be altered by removing material. The original manufacturer's method of joining the chassis pieces together and articulating their movement must be retained. Tape, packing etc. is allowable to restrict movement but may not be applied to the underside of the chassis.

Motor Mounting - Motor must be mounted in the original as manufactured position, fixed to the chassis by screws or soldering, or a combination of both and must use original parts supplied by the chassis manufacturer for this purpose and in the position intended. It may not protrude below the chassis underside. One additional piece of tube of 1/8" maximum outside diameter and of 10mm maximum length may be added to bridge the solder joint on either the forward or rear of motor can to act as a removable joint aiding in release of motor from chassis. *Note – if the chassis includes a lower rear motor bracket, such as with the JK X25, then this may still be incorporated in the intended position on the chassis. No other home-made brackets may be used.*

Motor Upright Bracket - The existing motor can bearing slot may be enlarged to allow for a proper motor fit and gear mesh. But the full bracket outline must remain.

Pin Tubes - Floating pin tubes may be used but pins must be affixed in tubes so as to remain with their head flush with face of body. This is a matter of safety and loose pins will be rejected when scrutinized or if found to be so during any race may be requested to be removed from the track and must be corrected and checked by race controller before returning to the track.

Body - Body must be a reasonable representation of a full size car and must be available commercially and be available to all club members. Body shape is to remain as manufactured apart from necessary alterations needed to clear the wheels. The front of the body may not be cut so high as to lose the shape and detail of the

front. Cutting out the rear of the body is allowed. Body must be fully painted and the paint sufficiently opaque so that no chassis or components can be seen through the body. Windscreens and windows must be left clear. A clear strip may separate the wing from the main body.

Body Mounting - Bodies may be fixed to the chassis by any combination of tape, clips or pin tubes. Where pin tubes are used they must be located in the existing body fixing chassis holes. GTP bodies must be cut and mounted high enough to allow for the minimum front wheel diameter to be visible as an upright wheel mounted to a predominately vertical face or, if used, high enough to allow for the free rotation of physical front wheels under the body.

Trimming & Cut Outs - Cars are to have only portions cut out from the body which are normally cut out on the full sized cars i.e. air intakes, engine grilles etc. The windows may not be cut out unless proof is provided that the car raced in such a form. No mechanical components may protrude through the bodywork (with exception of guide flag).

Wheel Arches GTP - Front wheel arches must be clear, or cut to at least the horizontal centre line of the front wheels. Trimming for front or rear wheel clearance may not extend into the top surface of the body.

Cover Chassis - The chassis and guide must be completely covered by the body when viewed from above.

Driver – For **GTP** a non-transparent three (3) dimensional driver, consisting of at least head / shoulders / arms and steering wheel, with at least two (2) colours is to be securely fixed in the driving position of the car at the commencement of every race. For **WING** a 2 dimensional stick on driver visible in the driving position is required.

Numbers - All cars must have at least two (2) readable numbers, of the same numeral. Cars shall have those numerals visible in two (2) different locations.

OTHER CLASSES

Unless specified per event, other classes not listed here will default to current published NZSCA Rules.

CLUB NIGHT RACING & POINTS ALLOCATION

Normal Wednesday night club racing format will consist of two heats of **6x2 minutes** and may include two classes. **Phoenix/LMP** or **F1/LMP** or **Saloon/LMP**, as specified on the race calendar. LMP may be run in all F1 or Saloon class races but will score points after the last placed car of the correct class.

The classes will be as per the race calendar decided by the committee and published on a calendar. Each round contended for by heats of **6x2 minutes**, lane choice issued at random by timing system, European lane rotation used.

Points are awarded no matter the number of entries on the night, but they do have to race to be awarded points. Two heats of races per night get points awarded based on the below schedule (Phoenix/LMP, F1/LMP, SALOON/LMP):

PLACING	POINTS	PLACING	POINTS
1ST	10	11TH	1
2ND	9	12TH	1
3RD	8	13TH	1
4TH	7	14TH	1
5TH	6	15TH	1
6TH	5	16TH	1
7TH	4	17TH	1
8TH	3	18TH	1
9TH	2	19TH	1
10TH	1	20TH	1

All placings after 9th shall be awarded 1 point. Seeing as the race is based on a laps per time allowed format DNF's still receive points based on lap total. DNS's do not receive points.

TROPHY / OPEN INVITATION MEETING RACE RULES

The final circuit trophy meeting for the year shall be the "Grand Final". Points in any championship gained from this meeting MUST be added to the points gained from the other trophy meetings during the year i.e. The Grand Final points CANNOT be counted as the worst round. Minimum number of drivers required for racing is eight (8).

- The Chief Steward & Race Controller are to run the meeting as they interpret the rules.
- The Chief Steward will inform those racing, prior to racing, of the format for that night.
- The Chief Steward has control of the meeting.
- The Race Controller has control over the race being currently run.
- The Chief Steward will decide on the eligibility of cars for a particular event. Only cars conforming to this specification may race.
- Entries close at 8pm sharp, the track will be turned off and cars are to be presented for scrutineering.
- Qualifying will start at 8.15 pm.
- No car may qualify if it has not been scrutineered.
- No car or driver may race if they have not qualified.
- A driver may only race a car that they have qualified.

Should the Chief Steward of the meeting consider the above format for composing heats inappropriate, they may alter it after consultation with the committee.

The track is closed between the end of qualifying and racing, and between all qualifying and finals.

During racing cars will be changed from lane to lane by the drivers themselves or if agreed by track marshals. Drivers are responsible to ensure that their car is in the correct lane and has the correct sticker on it at all times.

The maximum time between heats during finals shall be one minute. The maximum time between qualifying and finals is ten minutes.

Any car which the Race Controller or Chief Steward deems to be damaging the track or constitutes a hazard to other cars must be removed from the track immediately. The car may only be returned to the track after it has been fixed and checked by the Race Controller or Chief Steward.

The race in progress must be finished before any dispute is discussed. Disputes will be handled by the officials of the meeting (Chief Steward, Race Controller, in consultation with the committee if deemed necessary). All parties have the right to consult/appeal with the committee in writing before the start of the next committee meeting only.

The winning car will be inspected and possibly stripped if the need for further inspection is required. If the winning car is found to be illegal, the driver will be disqualified from the race and the second placed car will then be inspected and so on.

In the event that there is a tie on the total points for the meeting (points from qualifying, race one and race two), the higher place will go to the driver who has the highest points in the main race.

At the start of each final all drivers get 1 minute warm up on the lane that they have chosen to start their race, the Race Controller will switch off the red light at the commencement of the 1 minute and when the red light is switched back on each driver must line up ready to start racing. No car may pass the start/finish line while the red light is showing without the Race Controllers permission. Any driver breaking this rule may be disqualified by the Race Controller.

Note – No work may be carried out on cars after scrutineering has taken place as they are mechanically impounded from that moment (including qualifying and one minute warm up) until the start of the first race. i.e. the car must start the race exactly as it is presented for scrutineering. Cars may be oiled, braids reset and bodies adjusted during any time the driver has control of their car and track power is on i.e. qualifying, warm up, any race time or lane change time. Any changes such as tyres, gearing, replacement braid etc. may only be done after the race has commenced i.e. during race or lane change time.

Start Procedures - The starting procedure for Trophy events (includes Grand Final) shall be:

- Race controller to call “Marshals” then “Drivers ready?” If no response from drivers that they are not ready then the computer countdown will start.
- If a driver responds, “Not ready” then wait a reasonable time for driver(s) to get ready then call, “Drivers ready” and start the computer countdown. Do not wait for a second time.
- Once a final has started, drivers not at the driver’s stand at the correct time, for any reason, will not be waited for.

TROPHY / OPEN INVITATION MEETING FORMAT

Trophy Classes LMP

Trophy Meeting Schedule of Events:

- Open Practice.
- Scrutineering then cars impounded.
- Cars presented for Concours (still are effectively impounded).
- Qualifying lane selected and announced by Meeting Steward (all qualifiers use same lane).
- Qualifying random order list issued.
- Each qualifying driver is called and race control places their car on designated qualifying lane.
- With driver confirmed ready, track power turns on for one minute.
- Fastest recorded lap during 30 second run is qualifying time (cars may be oiled and braid reset).
- Car is impounded again until warm up of final.
- At the commencement of warm up for a final the race controller places all cars on the chosen lanes.
- 1 minute warm up time is given (cars may be oiled and braid reset).
- The 6x3 minute final is run. Laps and segments are recorded.
- Cars remain impounded again until close of meeting or class.

The top qualifier will have starting lane choice for the A final according to the qualifying times. Finals will have full lane attendance (6 racers) if competitors number in multiples of 6. Otherwise they will be split evenly between A final, B final, C final etc. The remainder, with no less than 3 racers, will occupy the lowest final.

i.e. 13 racers would split: A 5 racers - B 5 racers - C 3 racers. In the example given the 1st, 6th, and 11th qualifier will have full lane choice. Finals shall be raced from lowest to highest. E.g. C, B, A.

TROPHY / OPEN INVITATION CONCOURS POINTS ALLOCATION

Points for Concours will be awarded on the following basis:

1st	2nd	3rd
3	2	1

TROPHY / OPEN INVITATION FINAL POINTS ALLOCATION

Points for Trophy Race Finals will be awarded after 6x3 minute heats on the following basis:

PLACING	POINTS	PLACING	POINTS
1ST	10	11TH	1
2ND	9	12TH	1
3RD	8	13TH	1
4TH	7	14TH	1
5TH	6	15TH	1
6TH	5	16TH	1
7TH	4	17TH	1
8TH	3	18TH	1
9TH	2	19TH	1
10TH	1	20TH	1

All placings after 9th shall be awarded 1 point. Seeing as the race is based on a laps per time allowed format DNF's still receive points based on lap total. DNS's do not receive points.

In the event of tied points the placings will be ordered by a countback of lap and segment totals achieved in all classes. This applies to open invitation meetings with more than one class such as The North Island Championship event if an overall total points winner is to be determined. Or, if there is a tie in points for total Trophy Meeting points for the year when determining the club champion.

GRAND FINAL FORMAT

The Grand Final is to be convened in the same way as any other Trophy Event excepting that it is the only Trophy Event for which the points, whether contended or not, may not be dropped as your worst round in the Trophy Competition for that year. The allocation of points for The Grand Final are double those for a normal Trophy Event. The class of car will normally be LMP (due to it being the class of highest patronage in the club thereby encouraging participation).

Points for Concours will be awarded on the following basis:

1st	2nd	3rd
6	4	2

Points for Trophy Race Finals will be awarded after 6x3 minute heats on the following basis:

PLACING	POINTS	PLACING	POINTS
1ST	20	11TH	2
2ND	18	12TH	2
3RD	16	13TH	2
4TH	14	14TH	2
5TH	12	15TH	2
6TH	10	16TH	2
7TH	8	17TH	2
8TH	6	18TH	2
9TH	4	19TH	2
10TH	2	20TH	2

All placings after 9th shall be awarded 2 points. Seeing as the race is based on a laps per time allowed format DNF's still receive points based on lap total. DNS's do not receive points.

CLUB CHAMPIONSHIP TITLES

1/ Club Champion - is decided by the total points earned by contending Trophy Event Meetings as described above. Trophy points are counted separately to club class racing for this purpose.

The driver who gains the most points from their overall placing of all Trophy Event Meetings and The Grand Final (for which the race points are double). A driver's worst round will be dropped from the total. A round in which a driver did not enter or did not start may be counted for this purpose. However, the Grand Final *CANNOT* be counted as the worst round.

Club Class Champions – are decided by the total points earned contending club night racing in the following classes;

2/ FI/Indy Class Champion - class points winner decided by total points from that class at club racing.

3/ Saloon Class Champion - class points winner decided by total points from that class at club racing.

4/ LMP Class Champion - class points winner decided by total points from that class at club racing.

5/ Overall Class Champion - class points overall winner decided by total points from all class club racing (but does not include Trophy Events).

6/ Concours Champion - is decided by the total points earned by contending Trophy Night Concours Points plus the Grand Final Concours.

DRIVER'S RIGHTS, PROTESTS AND PENALTIES

Any protest or appeal must be made prior to the close of the meeting within which the matter has arisen.

If possible a protest should be made in the immediate instance directly to the Race Controller. Protests must be accompanied by a fee of \$10.00. The fee is refunded only if the protest or appeal is upheld.

In the event of a protest, a Protest Committee will be convened and chaired by the Chief Steward (If no Chief Steward is appointed for the event the Race Controller shall fulfil the role for the purpose of convening the Protest Committee). They will request the assistance of two committee members that are non-competing at the time. This committee of three will deliberate and determine the outcome of the protest. Competitors losing a protest have the right of appeal to the HMMRC Committee.

The Chief Steward has the right to apply penalties to competitors in the event of bad behaviour, or unsporting conduct. Penalties may also be applied in the event that a car is found to be non-compliant at post-race scrutineering. Penalties may involve the deduction of laps, or disqualification, as deemed appropriate by the Chief Steward. Competitors receiving a penalty have the right of appeal to the Protest Committee.

The Chief Steward has the right to determine how best to deal with behaviour issues for a particular race meeting. He may form a three person behaviour group to determine on any issues, or determine these matters himself, or with the Race Controller. In the event of bad behaviour problems arising, the Chief Steward will apply the following consequences:

- First instance – issue a verbal warning and a reminder of next consequence.
- Second instance – deduction of five laps from the competitor's current heat. Or if competitor is not currently racing, deduction of five laps from their most recent, or next heat.
- Third instance – the competitor must step outside for a cooling off period until the end of the current heat, and the laps lost as a result are not reinstated. Or if a competitor is not currently racing, step outside to cool off, and deduction of fifteen laps from their most recent, or next heat.

Competitors receiving a penalty have the right of appeal to the Protest Committee.