

2012 SUB-ZERO | WOLF CLASSIC THUNDER CHAMPIONSHIP *incorporating* THE PRO-DRIVER BLUE OVAL SALOON SERIES

5. TECHNICAL REGULATIONS:

5.1 Introduction:

The following technical regulations are set out in accordance with MSA specified format and it should be clearly understood that if the following texts do not clearly state that you can do it, you should adopt the principle that you cannot. If in doubt on any of the above seek the advice of the CTCRC Committee.

5.2 Description:

5.2.1 Classic Thunder Cars are Saloon, Coupe, Hatchbacks and Estate cars based on the standard fibreglass or steel production shell and designed to carry at least four people which were marketed before 1st January 2005 (1st January 2011 for the Blue Oval category). Cars marketed after this date or not complying with these criteria may be eligible, subject to CTCRC Committee approval. ALL cars are subject to approval by the CTCRC Committee.

The responsibility to prove eligibility is that of the entrant at all times. All entrants must produce HTP / Homologation papers stamped by the ASN where issued for that vehicle. Where no such paperwork is available, the entrant must produce written confirmation from the CTCRC Committee as to the permitted eligibility of the vehicle model in question. The CTCRC Committee in conjunction with the Championship Eligibility Scrutineer thereof shall determine matters as to the eligibility and the implementation of which may involve photographing any part of the vehicle and performing electrical diagnostics at the scrutineer's discretion.

5.2.2 Unless specifically permitted in these regulations all components must be to original specification.

5.2.3 Classes

5.2.3.1 Classic Thunder category

Cars will run in eight classes based on actual capacity plus equivalency factor, plus various modification based penalties and bonuses.

Class A2	Classic Thunder - 3,601cc and over
Class A4	All four-wheel drive cars
Class B	Classic Thunder - 2,901cc to 3,600cc
Class C	Classic Thunder - 2,151cc to 2,900cc
Class D	Classic Thunder - 1,701cc to 2,150cc
Class E	Classic Thunder - 1,401cc to 1,700cc
Class F	Classic Thunder - Up to 1,400cc
Class G	Invitation Class

Invitation Class – The invitation class is designed to allow cars that, whilst not strictly adhering to the regulations, have been prepared sympathetically to the spirit of the championship and with committee approval may race under observation.

Entrants wishing to run in the invitation class must submit a written specification of the car detailing all areas where the car does not comply with these regulations.

This specification will be made available to the eligibility scrutineers for post event checks. Cars will be approved each season on an individual vehicle basis by the CTCRC Committee and the car must not deviate from the submitted specification unless such changes are approved by the CTCRC committee. Any approval may be withdrawn at any time by the CTCRC committee. Invitation class cars are not eligible for overall championship awards.

The following rules also apply cumulatively;

- Forced induction is subject to an equivalency factor of 1.7
- Rotary engines are subject to an equivalency factor of 1.8
- Cars on List 1a or 1b tyres move down one class.
- Cars running sequential gearboxes move up one class.
- Cars with any original suspension mounts not visible (see section 5.8) move up one class.
- Cars using engine block AND cylinder head AND transmission casings AND number of forward gears AND original suspension pickup points AND glass windscreen AND has the engine in the original location (+-15mm) AND, if using forced induction, uses the original inlet AND exhaust manifolds AND original capacity supercharger/turbocharger unit as the original car move down one class

Note that class moves are cumulative. eg a car with a sequential gearbox AND where the original suspension pickup points aren't visible moves up TWO classes.

Please also be advised to check section 5.15 for any additional weight penalties that may also be incurred.

5.2.3.2 Blue Oval category

Ford Cars only will run in six classes based on actual capacity plus equivalency factor and level of modification.

Classes 1,2, 3 and 5 are modified.

- Class 1 Over 2150cc and includes ALL Cosworth models and ANY vehicle using the Cosworth turbo unit except cars with four wheel drive.
- Class 2 1,701cc to 2,149cc and ALL Escort and Fiesta RS Turbo models.
- Class 3 1,299cc to 1,700cc
- Class 4 1,299cc to 1,700cc running to Group N specification in accordance with the technical regulations set out in the FIA Yearbook (Yellow Book). Cars must comply with all aspects of Group N except for modifications specifically allowed by these regulations.
- Class 5 All four-wheel drive cars
- Class 6 Invitation Class - By Invitation only of the CTCRC committee.

5.2.4 Cars must be presented to a high standard.

5.2.5 Presentation for a vehicle for scrutineering is a declaration by the entrant that the vehicle is eligible for that event.

5.3 Safety Requirements:

5.3.1 All vehicles must be fitted with a safety roll-over structure as defined in the MSA Competitors' and Officials' Yearbook - Section K.

5.3.2 Cars running non-steel doors must be fitted with double door bars on the drivers side, either crossed or parallel.

5.3.3 All vehicles must comply with the minimum prevailing safety requirements as defined in the MSA Competitors' and Officials' Yearbook.

5.4 Miscellaneous

5.4.1 Where original materials are unobtainable, local repairs of adequate strength may be made using modern equivalents.

5.4.2 Vehicles may be brought up to any series production specification for that model prior to the final date of manufacture. For the avoidance of doubt, 'model' shall mean a vehicle of the same bodysell shape, size, specification and silhouette.

5.4.3 Where these regulations call for original components or pattern parts, these must be to the manufacturers original specifications for that model as catalogued by the manufacturer, or importer, prior to the final date of that particular models manufacture.

- 5.4.4 Advertising on vehicles is subject to requirements set out in MSA Yearbook H29.1.2 & 3.
- 5.4.5 All vehicles must comply with MSA General Technical Regulations and the relevant parts of sections J & Q of the MSA Yearbook except where specified below..
- 5.4.6 Nuts, bolts, washers and locking devices are free.
- 5.4.7 Vehicles must be fitted with at least one externally mounted rear view mirror.
- 5.4.8 To allow for scrutineer's wire seals, every installed engine must have 1.6mm (1/16in) holes drilled in at least two adjacent sump bolts and two adjacent rocker/cam cover bolts.
- 5.4.9 Engines may be sealed at any time by a Licensed Eligibility Scrutineer and only by written permission in advance from the CTCRC Committee or a Licensed Eligibility Scrutineer may seals be broken.
- 5.4.10 Deleted
- 5.4.11 Competition numbers as allocated by the CTCRC shall be displayed in accordance with MSA Regulation J.4.1 and shall remain as allocated until the end of the season in question.
- 5.4.12 All vehicles must display the current CTCRC issued number roundels without modification, the BARC Shield and any other advertising material associated with a Championship sponsor as required by the CTCRC.
- 5.4.13 Unless specifically permitted in these regulations, all components must be to original specification. Any component listed on the MSA, FIA/FISA (or national equivalent for foreign cars) homologation papers for use in Group N, Group 1, Group A and Group 2 during the series production of that model may be substituted for the original component provided that the substitute part was in production or homologated prior to **the final date of that particular models manufacture**. The responsibility to prove eligibility is that of the entrant at all times.
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5.5 to 5.16 - "CLASSIC THUNDER" category

The following regulations are specific to cars competing in the "Classic Thunder" category

5.5 Chassis:

- 5.5.1 The standard floorpan, sills, bulkheads and roof must remain exactly as produced by the manufacturer in construction, dimension and material.
 - 5.5.2 The standard floor pan, bulkheads, front and rear inner wings may be locally modified for the sole purpose of mounting, or giving clearance to, suspension components. Inner wings may also be modified to allow the attachment of shock absorber mountings and to provide additional wheel/tyre clearance. Inner wheel arches may only be removed if they do not form a structural part of the suspension mountings on the original car.
 - 5.5.3 It is only permitted to make holes for the passage of cables, fuel, water, oil, hydraulic, instrument or fire extinguisher line. All redundant holes must be covered with metal plates. Nothing must interfere with, conceal or negate 5.5.2.
 - 5.5.4 Reinforcing of the chassis is allowed.
 - 5.5.5 Bulkheads (subject to 5.5.2) may only be modified to permit the clearance of the induction system. This shall be understood to include air induction ducting, manifolding, trumpets, ram pipes for engine carburation or fuel injection system only. A maximum clearance dimension of 3" (75mm) is allowed.
 - 5.5.6 Engine mountings and support members may be changed for alternative units and may be chassis mounted as long as the engine remains the original side of the front and rear bulkhead.
 - 5.5.7 Transmission tunnel and tunnel apertures may be enlarged to ease the fitment of larger transmissions.
 - 5.5.8 The boot floor between the chassis rails and rear of the rear axle may be modified to accept fuel and oil systems using alternative materials.
 - 5.5.9 The rear bulkhead (habacicle to boot, Saloon/Coupe cars) may be made from an alternative material and relocated from the original.
 - 5.5.10 It is permitted to seam weld the shell.
 - 5.5.11 Ground Clearance: Under no circumstance can any part of the bodywork or of the suspended part of the car be below a horizontal plane passing 40mm above the ground.
 - 5.5.12 Wheelbase must remain as per the original car within a tolerance of +/-2" (50mm).
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5.6 Bodywork:

5.6.1 With the exception of the following, no modifications allowed to external or internal body panels, chassis or unitary construction:

- a) Replacement of the front and rear wings and front body panels by lightweight material panels is permitted provided they exactly retain the standard silhouette in side elevation. Bonnet lid, boot lid and door panels may be replaced by lightweight material providing they exactly retain the original standard shape and outline except for bonnet bulges, bonnet scoops and blending to wheelarches.
 - “Front” is defined as the point forward of the baseline of the windscreen,
 - “Rear wing” is defined as being in the area below the baseline of the windows and rearward of the line of the rearmost side door opening.
- b) The removal of all exterior chrome/decorative parts is allowed.
- c) Headlights must be fitted in the original location, but not necessarily the original headlight unit for the vehicle entered.
- d) Standard wings, if retained, may be modified by working the original metal and/or fitting wing extensions which must be over the tyre in accordance with Vehicle Regulations.
- e) It is permissible to cut holes in the rear wing extensions of 6” square maximum to accommodate oil coolers. The holes must be parallel and vertical. Wheels and tyres must not be visible through the apertures.
- f) Plastic is permitted for side and rear windows. Windscreens must be either laminated or of plastic at least 4mm thick.
- g) Spoilers of standard dimensions and air dams are permitted below the level of the road wheel centres providing they do not protrude beyond the coachwork at it’s widest point in plan view including bumper, grill, etc.
- h) Rear aerofoils, excluding mounting pylons, must be able to fit through a box 310mm x 200mm. This must be contained within the maximum width of the coachwork excluding wing mirrors subject to an allowance beyond the rear of the rear bumper of 50mm and is allowed to protrude above the roofline by 30mm.
- i) Aftermarket bodykits not meeting the above regulations may be fitted provided they are validated by the CTCRC committee and the engine bonnet may be raised at the rear by a maximum of 20mm.
- j) It is prohibited to cut holes in any panels unless specifically permitted.
- k) Brake/stop lights must be operational on all cars. The stop lights must only work as a result of applying the brakes and the fitting of any other type of other switching device is prohibited.
- l) A front spoiler/splitter may be fitted to the bottom edge of the front bodywork but may not extend more than 150mm beyond the original plan view, may not exceed the width of the car across the front wheel arches and must form part a continuous part of the bodywork.

5.6.2 Interior:

- a) The driver’s seat is unrestricted but should incorporate a head restraint.
- b) It is permitted to remove the floor carpets, underfelt, sound insulation, head lining, rear seats and front passenger seats.
- c) It is permitted to carry out modifications on the window winders, instrument panel and all the driving controls.
- d) The driver must be located completely to one side of the centre line of the car.

5.7 Engine:

5.7.1 The engine block is subject to the following –

- a) It is based on a production block from a model eligible for the series.
- c) It must remain on the original side of the front and rear bulkheads and orientated as fitted in production.

5.7.2 Cylinder head/s are free and the replacement of all mechanical components is permitted. Modification to all components is permitted.

5.7.3 Oil coolers and additional water radiators are permitted provided they are located within the periphery of the bodywork.

5.7.4 Fuel injection is unrestricted and permitted whether fitted as standard or not.

5.7.5 Intake and exhaust manifolds and systems are unrestricted.

5.7.6 Forced induction:

- a) Forced induction systems are acceptable on all models. On models originally fitted with such a system it can be removed and replaced with carburettor or fuel injection and the engine re-classified.
- b) Intercoolers are free, but must fit within the periphery of the bodywork.
- c) Boost pressure is free as is water injection.

5.8 Suspension

5.8.1 Pick up points must be retained although not necessarily used. Otherwise, suspension is unrestricted except for a live axle in which case:

- a) A live axle can be replaced by a live axle from any manufacturer
- b) A live axle can be replaced by a dead axle from the same manufacturer and family of car.

If any of the original pick up points are not retained then move up one class.

5.9 Transmission

5.9.1 Clutch is free but must be entirely mechanically/hydraulically operated.

5.9.2 Gearbox is free. The gearbox tunnel may be modified to accommodate the gearbox.

5.9.3 Automatic gear changing mechanisms to manual gearboxes are prohibited.

5.9.4 Final drive ratio is free and a mechanical limited slip differential is permitted.

5.9.5 Transaxles are prohibited unless fitted to the original standard model.

5.9.6 Sequential gear change is permitted but moves up one class.

5.9.7 4WD cars may only run in class A4.

5.10 Electrical

5.10.1 Electrical equipment is free provided that a generator, battery and starter are fitted and in full working order at all times.

5.10.2 Headlights, tail lights, stop lights, high intensity rear light and windscreen wiper must be fitted and in full working order.

5.11 Brakes

5.11.1 Brake systems are free except that carbon disks are prohibited. Ducting for the purpose of cooling brakes or removing dust is permitted and holes may be made in inner wheel arches for the passage of brake ducts.

5.11.2 Brake lights must be operational and operated only by the brake pedal without a delay. The high intensity rear light must not be operated by the brake pedal.

5.12 Wheels and Tyres

5.12.1 Wheels and tyres must fit within the confines of the bodywork as set out in the MSA general regulations.

5.12.2 Use of tyre warmers is prohibited.

5.12.3 Tyres are unrestricted in all classes except class A4 subject to the following –

- a) For list 1b tyres and slicks the compound of tyre must be listed by the tyre manufacturer as medium, or harder, for saloon car circuit applications.

- b) For wet (non list 1b) tyres the compound of tyre must be listed by the tyre manufacture as medium, or harder, for saloon circuit wet applications.

5.12.4 Tyres for class A4 are unrestricted subject the following –

- a) For list 1b and slicks the compound of tyre must be listed by the tyre manufacturer as medium, or harder, for saloon car circuit applications.
b) For wet (non list 1b) tyres the compound of tyre must be listed by the tyre manufacture as hard, or harder, for saloon circuit wet applications.

5.15 Weights

Weights by actual capacity plus equivalency. These are true minimum weights with no tolerance and all cars must comply at all times, minus driver. Ballast is permitted to achieve these minimum weights but weight may only be removed within the limits of the modifications detailed within these regulations. Ballast must be securely attached within the habitacle and attachment bolts predrilled for the purpose of attaching scrutineers wire seals.

The total weight of ballast carried must be declared and be in position at all times during practice and racing.

Actual capacity plus equivalency factor not exceeding:

1000cc	493kg	3000cc	878kg	5000cc	1098kg
1100cc	537kg	3100cc	890kg	5100cc	1108kg
1200cc	582kg	3200cc	902kg	5200cc	1118kg
1300cc	626kg	3300cc	914kg	5300cc	1128kg
1400cc	647kg	3400cc	926kg	5400cc	1138kg
1500cc	668kg	3500cc	938kg	5500cc	1148kg
1600cc	690kg	3600cc	950kg	5600cc	1158kg
1700cc	706kg	3700cc	962kg	5700cc	1168kg
1800cc	722kg	3800cc	974kg	5800cc	1178kg
1900cc	738kg	3900cc	986kg	5900cc	1188kg
2000cc	754kg	4000cc	998kg	6000cc	1198kg
2100cc	767kg	4100cc	1008kg		
2200cc	780kg	4200cc	1018kg		
2300cc	792kg	4300cc	1028kg		
2400cc	805kg	4400cc	1038kg		
2500cc	818kg	4500cc	1048kg		
2600cc	830kg	4600cc	1058kg		
2700cc	842kg	4700cc	1068kg		
2800cc	854kg	4800cc	1078kg		
2900cc	866kg	4900cc	1088kg		

Engine capacities exceeding 6000cc:- add 10kg per 100cc. e.g. 7000cc minimum weight = 1,248kg

Multivalve cars (ie with more than two valve per cylinder) will be subject to an additional minimum weight penalty of 5%.

Cars running in Class A4 will also be subject to an additional weight penalty of 10%.

5.5 to 5.16 - "BLUE OVAL" category

The following regulations are specific to cars competing in the "Blue Oval" category

5.5 Chassis:

- 5.5.1 The standard floorpan, sills, bulkheads and roof must remain exactly as produced by the manufacturer in construction, dimension and material.
- 5.5.2 It is prohibited to remove or relocate any fixed panels from the standard floor pan, front or rear inner wings, front bulkheads (engine to habitacle) but they may be locally modified for the sole purpose of mounting or giving clearance to suspension components. Inner wings may also be modified to allow the attachment of shock absorber mountings and to provide additional wheel/tyre clearance, but may not be removed.
- 5.5.3 It is only permitted to make holes for the passage of cables, fuel, water, oil, hydraulic, instrument or fire extinguisher line. All redundant holes must be covered with metal plates. Nothing must interfere with, conceal or negate 5.5.2.
- 5.5.4 Reinforcing of the chassis is allowed.
- 5.5.5 Bulkheads and inner wings (subject to 5.5.2) may only be modified to permit the clearance of the induction system. This shall be understood to include air induction ducting, manifolding, trumpets, ram pipes for engine carburation or fuel injection system only. A maximum clearance dimension of 3" (75mm) is allowed.
- 5.5.6 Engine mountings and support members may be changed for alternative units and may be Chassis mounted as long as the engine remains in its original position plus or minus 3" (75mm).
- 5.5.7 Transmission tunnel and tunnel apertures may be enlarged to ease the fitment of larger transmissions.
- 5.5.8 The boot floor between the chassis rails and rear of the rear axle maybe modified to accept fuel and oil systems using alternative materials.
- 5.5.9 The rear bulkhead (habaticle to boot, Saloon/Coupe cars) may be made from an alternative material and relocated from the original.
- 5.5.10 It is permitted to seam weld the shell.
- 5.5.11 Ground Clearance: Under no circumstance can any part of the bodywork or of the suspended part of the car be below a horizontal plane passing 40mm above the ground.
- 5.5.12 Wheelbase must remain as per the original car within a tolerance of +/-2" (50mm).

5.6 Bodywork

5.6.1 Exterior Bodywork - CLASSES 1,2, 3 and 5

- 5.6.1.1 With the exception of the following, no modifications allowed to external or internal body panels, chassis or unitary construction:
- 5.6.1.2 Replacement of the front and rear wings and front body panels by lightweight material panels is permitted provided they exactly retain the standard silhouette in side elevation and don't extend the production (not homologated) wheel arch by more than 4". Bonnet and tailgate/boot lid may be replaced by lightweight material providing they exactly retain the original standard shape and outline except for bonnet bulges, bonnet scoops and blending to wheel arches. Bonnet apertures are permitted to relieve under bonnet heat. Louvre must be fitted in the aperture and only two are allowed in any bonnet. One piece front end assemblies are prohibited.
- "Front" is defined as the point forward of the baseline of the windscreen,
 - "Rear wing" is defined as being in the area below the baseline of the windows and rearward of the line of the rearmost side door opening.

- 5.6.1.3 The removal of all exterior chrome/decorative parts is allowed with exception of the complete radiator grill and front and rear bumpers which may be made from alternative materials providing the basic size and shape are retained.
- 5.6.1.4 Headlights must be fitted in the original location, but not necessarily the original headlight unit for the vehicle entered.
- 5.6.1.5 Standard wings, if retained, may be modified by working the original metal and/or fitting wing extensions which must be over the tyre in accordance with Vehicle Regulations.
- 5.6.1.6 Not used
- 5.6.1.7 Plastic is permitted for side and rear windows. Holes may be cut in the rear or side window for de-misting. Ducts may only be fitted to side window for cooling the driver and de-misting purposes so long as they do not impede the sight line between the competitor and the rear view mirror and nor shall they impede the competitors vision of flag signals, etc. Windscreens must be of a laminated type.
- 5.6.1.8 A horizontal front spoiler/splitter may be fitted to the bottom edge of the front bodywork but may not extend more than 50mm beyond the original plan view including bumper and may not exceed the width of the car across the front wheel arches. The splitter may be a separate item but must be securely attached to the vehicle.
- 5.6.1.9 Non standard side skirts are allowed to be fitted to Class 1 and Class 5 cars only. Minimum ground clearance must be maintained at all times. Side skirts must not impede the opening of the door/s and must remain below the centre line of the wheels, they may be no wider than the wheel arches as defined in regulation 5.6.2 and must not extend underneath the car beyond the joint of the sills and floor plan. Side Skirts are to be regulated by the CTCRC. All other classes may run side skirts provided they are fitted as standard to the original vehicle or made available by Ford for that model.
- 5.6.1.10 Fitment of aerofoils is prohibited unless fitted as standard to the original vehicle or made available by Ford for that model. With the exception of Class 1 and Class 5 where the aerofoils, (excluding mounting pylons) must be able to fit through a box 9" X 5"(230mm x 125mm) and be contained within the original production plan view of the car. Non standard aerofoils may not extend above the roofline.
- 5.6.1.11 It is prohibited to cut holes in any panels unless specifically permitted.
- 5.6.1.12 Brake/stop lights must be operational on all cars. The stop lights must only work as a result of applying the brakes and the fitting of any other type of other switching device is prohibited.
- 5.6.1.13 The silhouette of the vehicle above the centre line of the wheels must remain as original for that model with the exception of rear spoilers and roof mounted air vents.
- 5.6.1.14 Roof mounted air vents are permitted.
- 5.6.1.15 Ground clearance to the chassis, cross members or gearbox mounting shall be no less than 90m/m.
- 5.6.2 Exterior Bodywork – CLASS 4**
- 5.6.2.1 No modifications to the exterior bodywork are permitted except that the original bonnet and tailgate /boot fasteners maybe replaced and the hinges maybe removed. The bonnet and boot shut lines must be as in production.
- 5.6.2.2 Window material for side and rear windows is free subject to prevailing MSA regulations. Holes may be cut in the rear or side window for de-misting. Ducts may only be fitted to side window for cooling the driver and de-misting purposes so long as they do not impede the sight line between the competitor and the rear view mirror and nor shall they impede the competitors vision of flag signals, etc. Windscreens must be of a laminated type.
- 5.6.3 Interior Bodywork – All Classes**
- 5.6.3.1 The driver's seat is unrestricted but should incorporate a head restraint. (not mandatory)

- 5.6.3.2 It is permitted to remove the floor carpets, underfelt, sound insulation, head lining, kick panels, parcel shelves, rear seats and front passenger seats.
- 5.6.3.3 It is permitted to carry out modifications on the window winders, instrument panel and all the driving controls. Additional instruments may be added. Steering wheels may be changed.
- 5.6.3.4 The driver must be located completely to one side of the centre line of the car.
- 5.6.3.5 Door and rear quarter trims must be retained but may be made from an alternative material.
- 5.6.3.6 The removal of the heater, heater controls and audio systems is permitted.
- 5.6.3.7 It is permitted to remove material from the dashboard for the fitment of the roll cage.

5.7a Engine - CLASSES 1,2,3 and 5

- 5.7a.1.1 The engine block and cylinder head must be manufactured by the Ford Motor Company or by another company to copy the original Ford unit. Material is free.
- 5.7a.1.2 The engine block must be externally identifiable as one fitted to a Ford and must remain on the original side of the front and rear bulkheads and orientated as fitted in production for the car you are driving.
- 5.7a.1.3 The engine must remain in its original position plus or minus 3" (75mm) in the vertical or horizontal plane.
- 5.7a.1.4 Cylinder head/s are free and the replacement of all mechanical components is permitted. Modification to all components is permitted.
- 5.7a.1.5 All internal engine components are free from the standard item.
- 5.7a.1.6 The 16 valve Cosworth head, used in normally aspirated form may be utilised on class 2, 3 and 5 vehicles.
- 5.7a.1.7 Oil coolers and additional water radiators are permitted provided they are located within the periphery of the bodywork.
- 5.7a.1.8 Fuel injection is unrestricted and permitted whether fitted as standard or not.
- 5.7a.1.9 Carburettors are free as are air filters.
- 5.7a.1.10 Intake and exhaust manifolds are free but must be of a bolt on type unless cast by the manufacturer.
- 5.7a.1.11 Radiators are free providing it remains in the original location.
- 5.7a.1.12 Water injection is permitted.
- 5.7a.1.13 Ignition systems are free.
- 5.7a.1.14 Intercoolers are free provided they remain within the periphery of the vehicle.
- 5.7a.1.15 'Dry' sump oil systems are permitted.
- 5.7a.1.16 It is prohibited to pass any part of the exhaust system through the habacicle.
- 5.7a.1.17 The application of any other media into the engine is prohibited.

5.7b Engine - CLASS 4

- 5.7b.1.1 The engine block may be rebored up to maximum of plus 1.5mm. Pistons must remain as standard except that the piston diameter may be up to plus 1.5mm.

- 5.7b.1.2 Aftermarket pattern camshafts are permitted but must be to the original production specification including but not limited to lift and dwell.
- 5.7b.1.3 The cylinder head must remain as standard. Cleaning and decoking is permitted but porting, polishing or any other modifications are prohibited.
- 5.7b.1.4 Standard valve lifters, including hydraulic lifters must be used.
- 5.7b.1.5 Vernier timing gears are not permitted.
- 5.7b.1.6 The standard exhaust manifold must be used and may not be ported or polished.
- 5.7b.1.7 The original production type of induction must be used. No modifications are permitted to carburettors except that jetting is free. No modifications are permitted to fuel injection systems except that injectors may be replaced with uprated items. Electronic engine management systems are free on those cars originally equipped with electronic engine management systems.
- 5.7b.1.8 The original production airbox must be used but the air filter is free provided it fits within the original airbox.
- 5.7b.1.9 All other engine components must remain standard or to Group N rules.

5.7.6a Silencing - All Classes must comply with MSA Regulation J5.17 & 18

- 5.7.6.1 Exhaust systems are free.
- 5.7.6.2 Exhaust must exit at the periphery of the vehicle.
- 5.7.6.3 Side exit exhausts are permitted but must exit behind the mid point of the wheel base.

5.7.6b Silencing - Class 4

- 5.7.6b.1 The standard exhaust manifold must be used and may not be ported or polished. The downpipe and exhaust system downstream of the manifold is free.

5.8 Suspension CLASSES 1,2, 3 and 5

- 5.8.1 Modifications permitted
- 5.8.2 Adjustable replacement coil over shock absorbers of a similar character and operation are permitted
- 5.8.3 It is permitted to install 4/5/6 link rear suspension to the Mk1 & 2 Escort.
 - 5.8.3.1 The rear floor area may be re-worked to accept linkage boxes on Mk1 and Mk2 Escorts.
- 5.8.4 Panhard rod/Watts linkage/Anti-tramp bars are permitted.
- 5.8.5 Compression struts are permitted.
- 5.8.6 Bushing material is free.
- 5.8.7 Strut top braces are permitted.
- 5.8.8 Front and rear anti-roll bars free including mountings and links.
- 5.8.9 Adjustable front suspension top mountings are permitted for caster and camber
- 5.8.10 Springs are free

5.8 Suspension CLASS 4

- 5.8.11 Only the original suspension mounting points may be used.
- 5.8.12 Bushes may be replaced with uprated versions of a similar material. Rose joints or spherical bearings are not permitted unless fitted in production. If rose joints or spherical bearings were fitted in production they may only be used in the same location as they were in production.
- 5.8.13 Adjustable top mounts, adjustable track control arms and adjustable ride height spring platforms are not permitted
- 5.8.14 Adjustable shock absorbers of a similar character and operation to the original are permitted but must not incorporate a remote reservoir
- 5.8.15 Springs and spring rates are free but must use the original production spring platforms.
- 5.8.16 Anti roll bars and their mountings and linkages must remain as in production

5.9 Transmission CLASSES 1, 2, 3 and 5

- 5.9.1 Clutch is free but must be entirely mechanically/hydraulically operated.
- 5.9.2 Gearbox is free but electronic operation is prohibited unless fitted as standard. The gearbox tunnel may be modified to accommodate the gearbox.
- 5.9.3 Ratios are free but no more than six forward gears may be used.
- 5.9.4 A mechanical limited slip differential is permitted.
- 5.9.5 Only gearbox casings produced by ZF, Borg Warner, Getrag or the Ford Motor Company are permitted
- 5.9.6 H-Type gear change systems are mandatory.
- 5.9.7 It is prohibited to replace a “live” rear axle with an alternative item or vice-versa.
- 5.9.8 Sequential gearboxes are prohibited.

5.9 Transmission CLASS 4

- 5.9.9 The transmission must remain standard but the fitment of a limited slip differential is allowed. Straight cut gears are prohibited.
- 5.9.10 Clutch plate material is free but must be the same diameter as the original production part.
- 5.9.10 The fitment of the agreed up rated rear beam axle is allowed on the Fiesta MkI and MkII only.

5.10 Electrical

- 5.10.1 Electrical generators/alternators are mandatory.
- 5.10.2 Headlights, tail lights, stop lights and high intensity rear light and windscreen wiper to prevailing MSA requirements must be fitted and in full working order at all times. All other electrical equipment not previously mentioned is free.
- 5.10.3 Vehicles fitted with “twin” headlight systems must either be fitted with all light units or have two completely blanked off.
- 5.10.4 Battery type and location are free.
- 5.10.5 The rear fog light must be operational and the on/off switch be accessible to the driver when seated and ready for competition. In addition a rear high visibility rain light must be fitted unless the rear fog light is

sufficient.

5.10.6 Ignition systems are free.

5.10.7 Engine electronic control units(ECU's) are free.

5.11 Brakes - CLASSES 1, 2, 3 and 5

5.11.1 The fitment of ventilated discs is permitted but carbon disks are prohibited.

5.11.2 Brake linings are free

5.11.3 Brake disc diameter is free

5.11.4 Ducting for the purpose of cooling brakes or removing dust is permitted and holes may be made in inner wheel arches for the passage of brake ducts.

5.11.5 Brake servos may be fitted or removed.

5.11.6 Rear discs brakes may be fitted in place of rear drum units.

5.11.7 Brake lights must be operational and operated only by the brake pedal without a delay. The high intensity rear light must not be operated by the brake pedal.

5.11.8 Brake bias valves may be fitted.

5.11.9 Parking/handbrake should be operational.

5.11 Brakes – CLASS 4

5.11.10 Brakes must remain as standard except that pad or shoe friction material is free. The size and shape of the friction surface must remain as standard.

5.12 Wheels and Steering

5.12.1 Wheel width is free provided the wheel/tyre does not protrude from the wheel arches.

5.12.2 Wheel diameter and Tyre width is determined by the following (see regulation 5.13.2 regarding choice of tyres)

Class 1 – Max Diameter of wheel 18". Max width of tyre 275

Class 2 – Max Diameter of wheel 17". Max width of tyre 265

Class 3 – Max Diameter of wheel 16". Max width of tyre 245

Class 4 – Standard wheel as specified and supplied by manufacturer

Class 5 – Max Diameter of wheel 18". Max width of tyre 255

5.12.3 The front and rear wheel diameter and width may vary.

5.12.4 Wheels may be made from steel or aluminium and may be of 'split rim' or one piece construction

5.12.5 Magnesium wheels are prohibited.

5.12.7 Wheel stud/nut fixing may be replaced by wheel bolts and vice versa

5.12.8 Steering wheels are free but must comply to MSA regulation [J5.7] All classes.

5.12.9 Quick release steering wheel hubs are permitted.

5.12.10 Steering ratio is free.

5.12.11 Power assisted steering may be fitted or removed. All classes.

5.13 Tyres - All Classes

5.13.1 Use of tyre warmers is prohibited.

5.13.2 A choice of the following 'DRY' Tyres may be used:- Dunlop Formula R D01J, Dunlop Direzza 02G, Dunlop Direzza 03G, Toyo Proxes R888, Kumho ECSTA V700, Yokohama A048-R or Yokohama A032-R

5.13.3 Treaded 'Wet' tyres are free.

NOTE The organisers have the right to introduce a control tyre for the next season.

5.14 Weights

5.14.1 The minimum weight limits are as follows:-

Class 1	FWD	1025kg
Class 1	RWD	1050kg
Class 2	FWD	880kg
Class 2	RWD	945kg
Class 3	FWD	835kg
Class 3	RWD	860kg
Class 4	Group N	Minimum Homologated weight but not less than Class 3 weights
Class 5	4WD	1185kg

5.14.2 Minimum weight is the weight of the vehicle plus fuel and driver in full race clothing (including helmet). Measurements to be taken in parc ferme after completion of qualifying/race

5.14.3 Weight limits may be varied at any time at the discretion of the CTCRC Committee.

5.15 Fuel Tank/Fuel - All Classes

5.15.1 Fuel tank material is free.

5.15.2 Fuel pumps, regulators, filters and system are free.

5.15.3 It is possible to relocate the fuel tank in the 'boot area' only.

5.15.4 A maximum fuel tank capacity of 99 litres is allowed.

5.15.5 Only pump fuel as defined by the MSA Yearbook is allowed and an MSA permitted additive is allowed.

5.17 Numbers and Championship Decals:

5.17.1 Only competition numbers as allocated by the CTCRC Registrar shall be displayed in accordance with MSA regulation C(b)6 and shall remain as allocated until the end of the season in question.

5.17.2 All vehicles must display the current CTCRC branded number backgrounds without modification, the BARC shield, sponsors decals and any other advertising material associated as required by the CTCRC. Failure to display the required advertising do may result in exclusion from qualifying, race and/or results.

5.17.3 Competition numbers as allocated by the CTCRC shall be displayed in accordance with MSA Regulation J.4.1 and shall remain as allocated until the end of the season in question.