

IRISH SUPERCAR TECHNICAL REGULATIONS 2019

1. INTRODUCTION

1.1 The following Technical Regulations are set out by The Promotor and may be amended by same. Amendments become effective when published on the Motorsport Ireland website or in a Motorsport Ireland bulletin. It should be understood that if the following text does not clearly specify that you can do it you should work on the principal that you cannot.

1.2 For Clarity – These technical regulations should be considered as completely new for 2019. Therefore no comparison to previous years is provided.

2. DESCRIPTION

2.1 The Supercar championship is for competitors participating in the vehicles as designed by SHP Motorsport limited Model PJ20 Wildcat / RT2000 / T CAR / Ask Supercars and built expressly to comply with the championship regulations.

2.2 Class 1 cars maximum B.H.P @ flywheel 280.

2.3 Class 2 cars Maximum B.H.P @ flywheel 240.

2.4 Both classes are subject to power test/ on class designated rolling road at any stage and may be sealed and held in Parc Ferme conditions until test completed at competitor's expense. Refusal to comply is automatic exclusion from championship and loss of all championship points.

2.5 If it is deemed that a competitor in Class 2 can win overall races or compete with Class 1 cars, they will be moved to Class 1.

2.6 The class of the car shall be recorded in the logbook for the car.

3. SAFETY REQUIREMENTS

3.1 As per current Motorsport Ireland Yearbook, Appendix 2.

4. GENERAL TECHNICAL REQUIREMENTS

4.1 Fuel tanks will be free but must comply with Motorsport Ireland safety regulations.

4.2 Batteries must be confined to within the wheel base of the vehicle.

4.3 An alternator must be fitted to the engine and must be operational at all times. The pulleys may be changed to vary speeds and different belt configurations may be used.

4.4 LED / digital dashes and data logging systems are acceptable.

4.5 A facility to record lap times is permitted to be fitted to the car.

4.6 The use of any two- or one-way radios to communicate between the pits and the car is expressly forbidden.

4.7 The car must be fitted with the two front headlights and indicator lamps as fitted to Ford Mondeo 2002 to 2008 model. In the case of Ford Focus Style bodywork, the Ford Focus lamps must be fitted. It must be fitted with two rear light clusters as fitted to Ford Mondeo 2002 to 2008 model or Ford Focus Model, the brake lights must be working. The rain light must work and be on the rear lamp cluster.

4.8 The E.C.U make is free but it cannot have dual mapping or Launch control, Traction control or A.B.S activated or programmed at any time during the season and may be sealed by Class

Eligibility Officer/ Scrutineer and tested by the appointed tuners (Westward engineering or TDR Performance).

4.9 The use of air jacks is permitted.

4.10 At the start of each event practice or race, each car shall be well presented.

4.11 In the case of the Ford / Mazda Duratec Engines the engine shall be a controlled unit. All components must comply with the controlled parts list. All parts must be as supplied by The Promotor and all parts must be as listed and as per sample provided to the appointed Eligibility officer/ Scrutineer.

4.12 Base Engine Ford / Mazda Duratec 2 litre

Duratec controlled parts list.

Inlet Valve size 36.00 mm Max.

Exhaust Valve size 31.00 mm Max.

Stem Diameter max. 5.48mm.

Cam followers standard solid original ford item.

Uprated Double valve springs allowed.

Uprated valve spring retainers are allowed.

Camshaft kit part number DURBP300 manufactured by Piper cams with no modifications.

Vernier style camshaft pulleys are allowed.

Head porting as per sample.

Pistons Supertec part number (Supertec P4-DU875 / P4-DU880) max diameter 88mm

Con Rods I Beam steel uprated items are permitted but must be as supplied by The Promotor.

Crankshaft standard Ford / Mazda original item and crankshaft modified to take keyway to match Modified front pulley.

Front crankshaft pulley can be standard OEM original item with keyway modification to suit modified standard pulley as per sample or aftermarket modified pulley as per sample.

Flywheel as per sample as supplied by The Promotor.

Clutch is single plate type.

Injectors only Magnetti Marelli part Number IWP043 allowed as per sample.

Throttle bodies Jenvey Direct to head as supplied by The Promotor.

Exhaust manifold as per sample supplied by The Promotor.

Compression ratio is free.

4.13 In the case of existing Ford Zetec Engines The engine shall be a control unit supplied to the following technical specification:

Base engine Ford Zetec 2 litre NGA Cylinder head relevant to the NGA engine casting No's 958M6090-CC 958M6090-CG Standard Ford valves or pattern part equivalent only permitted.

Single and triple groove collets valves allowed.

Inlet valve size 32.1 max.

Exhaust valve size 28.1 max.

Stem diameter 6mm max.

Cam follower bore must remain at 28mm diameter. Hydraulic followers may be modified to solid to a max diameter of 28mm.

Uprated valve springs are allowed but only single springs are permitted. Standard spring retainers must be used. Length 1.695in. Standard Retainers and cotters. Standard Ford Zetec cast iron valve guides are only allowed I.D of 6.05mm max.

Standard Ford type or pattern part valve stem seals are only allowed.

Standard cast iron valve seats are only allowed.

Uprated head bolts allowed.

Inlet camshaft Piper1323. Exhaust camshaft Piper 1324.

Cam Inlet lift 0.460 and exhaust lift 0.422.

Vernier style camshaft pulleys are allowed. No doweling of pulleys is allowed.

Head porting is allowed within the restrictions of valve sizes.

Compression ratio free.

Standard Ford crankshaft only allowed, stroke of 88mm. Regrinding of crankshaft is allowed. Balancing is allowed, this may be achieved by spot machining, either hand grind, drill or machine. Minimum weight 1360gms. Uprated rods are allowed but to standard rod specifications only. Approved steel conrods are permitted but must be replicas of the original in dimension. Only steel material is allowed.

Standard specification rod centres of 136.1mm.

Small end diameter of 13/16 inch (0.8125in), 20.6375mm.

Big end diameter of 1.9650 in, 49.910 mm.

Piston with 3 rings maximum 86mm diameter. Minimum weight for piston rod assembly 975 grams. Dry sump allowed. It is permissible to adjust pressure. Standard Ford Zetec flywheel only permitted. Lightening is allowed to a min. weight of 5.75 kg. Standard flywheel bolts are only permitted. Clutch: Single plate 215mm dia. Plate and cover otherwise free. Standard water pump only permitted and must be fully functional at all times. No electrical pumps allowed. Zetec 1.8ltr water pump part no 1317021. Throttle bodies: Jenvey 118mm DCOE part no TPS45i. 45mm dia and 118mm long only permitted.

Inlet manifold: Any DCOE pattern Dunnell and or Merlin type. Porting is permitted. Dowling of manifold to cylinder head is not allowed. Injectors: Bosch 440cc injectors only permitted. Part no.0280155830.

Trumpets of length of 40mm and diameter of 45mm are only permitted.

ECU is free.

It is permitted to externally paint the engine and all components. No other coatings are permitted on the engine unless specified. Anything that is not mentioned is not permissible unless approved by the series scrutineer. All machined dimensions are subject to the relevant manufacturing tolerances.

5. CHASSIS

5.1 The only chassis permitted to be used is that supplied under license from SHP motorsports Ltd, specifically chassis type PJ20 Wildcat chassis numbers from 01 through to 66 and S.H.P chassis plates must be fitted to chassis. The vehicle concept and design must not be changed in any way or form without written consent from The Promotor. No material may be added or removed. All relevant brackets must be retained in their original positions with no extension or adaptors to allow for different applications. The brackets are to be used as originally intended. The only exception is the engine mountings as provided by The Promotor for clearance of exhaust manifold on Duratec Engines.

5.2 A sump guard may be fitted under the sump only. It must be fitted tightly to the chassis rails and have no gaps. No aerodynamic devices may be fitted to the vehicle whatsoever. This includes any areas under the line of the chassis rails.

It is not permitted to drill or cut any type of holes into any parts or the chassis or bracketing systems nor any components that are supplied under contract by the licensed supplier for any reason except with written approval from The Promotor prior to work been carried out.

5.3 It is permitted to weld a support bracket onto the rear bumper to support the new boot lid and spoiler assembly. It is permitted to fit support brackets to suit Ford Focus bodywork.

5.4 The rear bumper bar may be extended to allow for the current bodywork. The extension may be no more than 170mm from the existing bumper frames. The tubing must be 25mm thick or less with a wall thickness of no more than 2mm.

6. BODYWORK

6.1 The only body kits allowed are that approved by The Promotor. Ford Mondeo style and Ford Focus Style as supplied by The Promotor. No panels may be bonded together to form one piece either at the front or rear. It is permitted to repair damaged bodywork.

6.2 Cooling ducts are fitted into the front panels. Radiator airduct part no. CR27. These are allowed. Two Naca style ducts may be fitted to the Bonnet to allow air out from Engine bay but cannot be used to ram charge Engine intake system as per size and diagram. One Naca style duct per side can be fitted to rear side panels to cool rear brake callipers as per Diagram provided. Front brake cooling hose can be fitted to apertures already fitted in front Mondeo style bumpers as per diagram. No other holes are permitted in any other panels. It is permitted to fit openings in the windows for cooling and releasing the air pressure within the car.

6.3 The door panels must be fitted as original specification.

6.4 The rear wing and brackets must be fitted as supplied but additional holes may be drilled to facilitate adjustment.

6.5 At all times the presentation of the car must be in keeping with the image and profile to which this formula has been marketed.

6.6 The windscreen must be fitted at all times. It must be in a condition where vision is not impaired by scratches, cracking, chips etc. and is suitably clear at all times when racing. It must be laminated in the case of original Ford Sierra type and it is permissible for an electrically heated type to be used. It is also permitted to fit a polycarbonate front windscreen with anti-mist layers and fit air ducting to clear windscreen internally and the thickness must be no less than 5 mm.

6.7 The vehicle must be fitted with a windscreen wiper system which clears the required area to the front of the driver. It must be operational at all times.

6.8 The fitting of rear-view mirrors, one interior and one on each side externally, is compulsory. These should be in keeping with the presentation of the formula.

6.9 All cars must be fitted with towing eyes on the front and the rear of the car which must not protrude outside the lines of the body panels. The towing eyes MUST be bright in colour and clearly defined. They must be connected to the main chassis and be of suitable strength to stand the full weight tow of the vehicle.

6.10 Only competition seats are permitted and meet Motorsport Ireland Appendix 2.

6.11 Wheel liners are permitted to prevent condensation within the cars.

7. ENGINE / GEARBOX MOUNTINGS

7.1 The engine and gearbox mountings are fitted by licensed chassis instructor. The only exception is the modification as supplied by The Promotor to Ford Duratec engines to allow exhaust manifold clearance

7.2 Oil / water cooling:

All radiators or cooling fluid retainers must be forward of the front blockhead. The radiator may be made of steel or aluminium but must be mounted on the original production brackets welded into the chassis. This must be done without the use of adaptors. The radiator must be fitted to the cooling system or associated devices must be within the eternal of the engine bay.

7.3 Induction system:

Air filters foam type must be used at all times.

8. EXHAUST SYSTEMS

8.1 The only permitted exhaust manifold and front pipe is the one approved by The Promotor. The exhaust must have one large silencer fitted and it must exit through the rear bodywork provided and as supplied by The Promotor as per sample.

9. SUSPENSIONS

9.1 All suspension must be used as supplied by SHP Motorsport LTD chassis constructor. The suspension components, including the axle configuration, pick up points, mounting brackets and the design of parts, cannot be modified in any way or form. The front rose joints may be substituted for an exact copy in a different material specification. Lock nuts and suspension rubber bushes must remain a standard size. Rear suspension arm bushes, part no. Powerflex PFR 19-111 must be used. No rose joint or metal bushes allowed in rear suspension arms. Rear sub frame camber and track eccentric bolts are permitted.

9.2 Springs must be a single 2.25 ID but length and spring rates are free.

9.3 Anti roll bars must be mounted in the same position as manufactured by SHP Motorsport LTD. Using the same alloy blocks and the same adjusting system. No roll bars or shock absorbers may be adjustable from the driver's seat.

9.4 The only permitted shock absorbers are those supplied under license from Leda UK, a controlled unit built to Supercar specification. These must not be revalved, restroked, have the oil changed or be modified in any way or form and must carry class seal as supplied and fitted by Leda UK.

9.5 The only rear bump stops allowed are those supplied by Leda UK and are 50mm in length. These must be fitted, and it is not permitted to modify or to cut the bump stops in any shape or form

9.6 The front track width is 1800mm.

The rear track width 1765mm.

The total wheel base, centre to centre is 2413mm. This measurement is read from the side wall of the tyre at the point of contact to the ground.

9.7 Ride height free.

10. TRANSMISSION

10.1 The only gearbox's permitted are the Quaife 26 z 6 speed / sierra sequential gearbox or the Quaife Ford type 9 five speed manual with straight cut gears with following ratios: Drenth DG350 OR DG 400.

Quaife 6 speed sequential	Quaife/ford type 9	Drenth Dg 350	Drenth DG400
1 st 2.647	1 st 2.390	1 st 2.605	1 st 2.604
2 nd 2.12	2 nd 1.5406	2 nd 2.015	2 nd 2.015
3 rd 1.618	3 rd 1.2148	3 rd 1.620	3 rd 1.620
4 th 1.337	4 th 1.1	4 th 1.354	4 th 1.354
5 th 1.151	5 th .8715	5 th 1.153	5 th 1.136
6 th 1.0		6 th 1.0	6 th 1.0

10.2 The prop shaft must be steel type with a minimum size of 2.5" diameter and appropriate universal joints to suit.

10.3 The aluminium parts permitted in the transmission unless fitted as standard, is a thick gearbox covered top and casing to give additional strength to the gearbox.

10.4 The clutch unit will come fitted to the control engine. This can be replaced with an up rated unit.

10.5 No other additional electronics may be fitted within the engine management system, which would facilitate the engine to operate traction control. The flat shift function is allowed.

10.6 Transmission oil coolers are permitted

11. FINAL DRIVE

11.1 The only rear differential permitted is a 7" as fitted to a Ford Sierra. The differential must be located by the original links and pick ups. It is permitted to insert a removal section in the rear axel beam to facilitate prop shaft removal.

11.2 LSD's are allowed, but no drop gear type differentials are permitted.

11.3 Class 1 the only permitted final drive ratios are 3.92:1.

11.4 Class 2 final drive ratio options either 4.4 or 3.92:1 but only with manual gearbox. Class 2 with sequential must use 3.92:1

11.5 Changing the material and splines are free once this does not change the design or characteristics.

12. BRAKES

12.1 The only permitted brakes are as approved by The Promotor.

Front brake calliper is Willwood four pot Superlite part no. 120-3194 (1.38) RLH or 120-11128. Cooling of the front brakes by means of simple ducting from the front bumper hole is allowed or deflection of air from the front wishbones.

Rear brake calliper is Willwood Powerelite or Dynalite part no. 120-8724 as fitted by SHP Engineering.

It is permitted to fit 10mm thick support brackets to the rear callipers.

Rear brake disk must be solid. Lockheed part no. bg2376-8pex dsk 123 as supplied by The Promotor, no additional grooves or lightening of disk allowed.

12.2 The brake pad must be Ferodo as supplied by The Promotor

12.3 No form of handbrake is permitted on the vehicle

13. WHEELS / TRACK

13.1 The only permitted wheels are those manufactured by compomotive wheels and Team Dynamics specifically designed for the supercars and as supplied by The Promotor.

13.2 The dimensions of the wheels are 7" by 15" and may not be modified in any way or form.

13.3 It is permitted to fit a wheel spacer up to 10mm in size.

13.4 Track

The maximum track permitted is 1800 mm on the front and 1765 mm on the rear.

14. STEERING

14.1 The only steering rack permitted is that supplied as original equipment, there may not be any additions made to it or any modification other than shim spacers between the jack mounting blocks and the chassis mounting. The type of quick release steering wheel assembly is free and collapsible column spacers are acceptable. Electric power assisted kit can be fitted to Steering Column but must meet M.I safety requirements. The fitting of steering wheels of different types / sizes / of sets is allowed as is collapsible columns adaptation.

15. TYRES

15.1 The only tyres permitted are Pirelli Slick or Pirelli Wet supplied by and purchased from The Promotor.

15.2 These may not be cut or altered in any way from that supplied by the manufacturer. No tyre may be buffed, trimmed, faced or by any mechanical or hand-held device what so-ever. Tyre warmers, space heaters or any similar devices for heating or softening the car compound are not permitted at any time. The use of any chemical mixture that is placed in the vicinity of, or applied to the tyre that would restructure the compound of the tyre, is also prohibited.

15.3 Test tyres are limited to 4 tyres per season.

15.4 Each competitor is allowed to nominate 2 new tyres for each 2 consecutive championship counting events. If a competitor does not participate in a championship event the tyre allocation for that event is lost. Any log tyres are free to be used when chosen. Please refer to article 36.6 regarding the use of replacement of tyres. A used tyre is defined as a tyre which has been previously nominated on a tyre form at a previous round. For the first round this will be at the discretion of The Promotor or scrutineer. All other tyres are deemed to be new tyres.

15.5 Each competitor must nominate on the form provided by the Eligibility Officer/Scrutineer, the manufacturer's number of the tyres for the use of that event. This form must be handed to the Eligibility Officers/Scrutineer prior to the start of the first qualifying session. The nomination of tyres is specific to the competitor.

15.6 The replacement of tyres is subject to the prior agreement of the series eligibility officer/scrutineer.

16. WEIGHTS

16.1 The weight of Class 1 car with the driver must be a minimum of T.B.A kg.

The Minimum weight of Class 2 cars with driver T.B.A Kgs.

16.2 The weight of a car can be checked at any time during a race meeting, practice or during post race scrutineering at which time no fluids or materials may be added or taken away. Where ballast has to be added to bring the car to a regulation weight, this may only be positioned in the passenger footwell and must meet MI Yearbook appendix 2 safety criteria.

17. NUMBERS AND SERIES DECALS

17.1 Competition numbers must be fitted in accordance with MI regulations in conjunction with the Supercar requirements. The drivers name and competition number can appear on the rear side windows and the sponsor's name will appear on the top front windscreen. Additional class sponsors advertising must be fitted at all times as per direction of The Promotor.

17.2 No advertising, colouring or obstructions may be added to any clear areas or glass other than those specified.

18 ELIGIBILITY

18.1 Application of the Technical Regulations shall be made in accordance with the MI Technical and General Regulations and the instructions and directions of the Class Eligibility Officer/ Scrutineer responsible for the championship. The onus is always on the competitor to ensure that his or her car complies with the technical regulations.

Any competitor whose car is found to be ineligible at any event will forfeit championship points as per Appendix "A".

19 CONTACTS

19.1 Class/Series Promoter ('The Promotor'): Alan Kessie/ASK Racing
Class coordinator: Alan Kessie
Class Registrar Alan Kessie
Email alan@askracing.com

20 Class Eligibility

20.1 Technical Liaison: TBC

Eligibility Scrutineer: TBC