

## CHALLENGE CATEGORY TECHNICAL SPECIFICATION V1.0

This is the initial release of the proposed Technical Specification for the Challenge Category - This is not a final set of regulations, the intention is that this will allow potential competitors to assess whether the category will be for them and to allow those who want to build or convert cars to make a start. While it is all technically subject to change it is, on the most part, decided. There is no reason to expect anything major to change. Any changes will be released under new versions and circulated accordingly.

As always with technical specification if it is not specifically allowed then assume it is prohibited. If you are unsure of anything please send email queries to..

[the.third.chapter205@gmail.com](mailto:the.third.chapter205@gmail.com)

While Ph1 BE1 cars will be allowed, we recommend using a ph1.5 or ph2 car with BE3 gearbox as this is where our spares support will be focussed. Very late CAT model cars with MOTEC management/ABS etc will not be permitted.

Items with a \* are mandatory items that will be marked or tagged to ensure compliance.

Text in italics are explanations behind decisions mainly on mandatory parts/suppliers or limitations.

### **Engine**

\*Built and sealed by Retro Race and Rally in conjunction with Brett Simms Motorsport. 1.9 GTi engine, approx 140BHP  
Built from almost entirely standard components.  
Competitor must supply a suitable engine for reworking.

*The idea is to keep costs sensible and supply a reliable engine with great driveability across the rev range with absolute parity between competitors.*

Original yellow Bosch fuel injectors must be used

SAD valve and piping may be removed/blanked

Oil breather system may be rerouted to a catch tank

Coolant circulation to the throttle body may be removed/blanked

Fuel pump may be replaced or updated but must remain inside the fuel tank

Fuel hoses and filtration is free

Adjustable fuel pressure regulator supplied with engine build must be used, max fuel pressure at any time - 4.5 Bar

Engine oil cooler, sandwich plate and lines are free.

Radiator must be standard dimensions.

Exhaust manifold and system is free providing it uses 2 silencers, no pipe may exceed 2" in diameter (standard manifold downpipes will be treated as 2 separate pipes) and is, or was at some time, available for general purchase

*Standard systems are nearly impossible to get hold of and many people already have aftermarket exhausts. All current available options will provide similar gains on the fixed engine spec so this allows the use of peoples existing parts however, we want to prevent the option to 'buy performance' with custom parts. Be warned if some extortionately expensive options suddenly appear on the market we will likely outlaw them!*

## **Transmission**

\*Gearbox built and sealed by Retro, Race and Rally

Choice of standard 205 GTi ratios and final drives from 1.6GTi or 1.9GTi gearboxes

\*Control Helical LSD sealed into gearbox. Supplier to be announced.

Competitor must supply the gearbox and internals they intend to use.

*This is a balance between keeping costs down while maintaining parity and not putting a barrier to entry by allowing more people to use what they have. The helical differential was chosen as it requires no maintenance keeping running costs down and also allows it to be sealed into the gearbox.*

\*Control clutch - supplier to be announced

Gear linkage rods and joints may be updated for ball sockets or rose joints but rods must retain original pathways.

An extended L Bracket on the subframe may be used to shorten the throw on the gear lever.

Standard 1.9 GTi driveshafts and CV joints must be used.

1.9 GTi steering knuckles must be used. Due to growing scarcity we may allow the use of re-angled 306 hubs with 16mm ball joint holes to standard GTi geometry - this is currently under discussion.

### **Brakes**

Standard 1.9GTi front and rear brake set up with control  
\*Discs and control \*Pads - supplier to be announced

Servo must be retained (but may have vacuum disconnected) with a single 3 or 4 port master cylinder - choice of 20.3mm or 23mm

Brake lines are free, hydraulics may be converted to front/rear split

The standard restrictors to the rear lines may be retained or replaced by an adjustable restrictor valve.

Horizontal Hydraulic handbrake may be fitted but cable handbrake must remain in its original position and must function correctly with the cables. A hydraulic cylinder can be added to the standard handbrake.

Vertical handbrakes may not be fitted.

*Again the key here is cost limitation and parity while respecting period modifications.*

## **Wheels**

Standard 1.9 GTi 15" and 1.6 Gti 14" wheels will be allowed. We will likely nominate a single supplier to provide an alternative \*14" and \*15" wheel as an option.

*The aftermarket option is not with performance in mind, it's more to protect the future supply of the standard wheels to the 205 community.*

Wheel spacers will not be permitted

## **\*Tyres**

We will have a single tyre supplier (to be announced). Single compounds of tarmac and gravel tyres will be available in both 14" and 15". Each competitor will be allowed 6 new tyres on their first event of the season on each surface. Then 2 new tyres for each subsequent round for the remainder of the season. More info to follow soon. *The compounds we choose will be a compromise between grip and longevity, this is for parity and cost control.*

## **Suspension**

### **Front**

Wishbone bushes may be uprated but the arms and ball joints must remain unmodified.

Group A PTS steel fixed spherical bearing top mounts or standard top mounts with uprated doughnuts may be used

Group A Adjustable platform Bilstein style damper bodies

\*Choice of gravel or tarmac damper inserts

\*Choice of tarmac or gravel 70mm dia springs

Standard anti roll bar (can be removed if you wish)

Subframes may be seam welded but no other material may be added or removed. The only exceptions are the shift tower may be fully boxed in and washers may be welded to the wishbone bolt holes to prevent or repair 'ovaling' providing the standard geometry is retained.

## **Rear**

Bushes may be uprated or replaced with solid mounts

Standard 205 rear beam and trailing arms (machining to change geometry is not prohibited)

Uprated stub axles are permitted providing they do not alter geometry.

\*Choice of 2 dampers Tarmac/gravel

Choice of 2 torsion bar dia. 19mm/21mm

Choice of 2 anti roll bar dia. 19mm/22m

*Suspension options have been chosen to allow a limited difference between tarmac and gravel set up but with the options close enough that they can be mixed and matched if desired.*

## **Steering**

Power steering may be used but must use the original hydraulic rack (3.2 turns) and pump. Lines and coolers are free. (No electric columns or pumps)

Manual steering racks may be converted to quick racks.

## **Body/Chassis**

Steel body panels cannot be replaced with those of any other material

All external GTi plastic wheel arch trims must be retained but may be fibreglass copies. (The door plastic trims may be removed in order to facilitate the fitting of door squares)

GTi front and rear valances must be used but may be fibreglass copies

Bumpers must be of original material - non GTi bumpers may be modified for use.

*The trims may be of fibreglass to protect the existing supply of original parts, likewise pattern 'non GTi' bumpers are readily available.*

Non GTi shells may be used as long as they are modified to GTi spec with regards to arches/trims etc. Subframes can be fitted with solid adaptors to make this work.

Seam/stitch welding of the shell is permitted

Strengthening in specified areas permitted (strut top plates etc) - exact details to follow.

Roll cage - free providing MSUK and historic compliant.

Group A style 5 or 6mm alloy sump guard (no tarmac skid plates)

Group A style 3mm alloy tank guards

Hubs may be converted to wheel studs.

\*Kevlar Sill, Floor, Valance and filler guards may be fitted.

All glass windows must be retained

Front windscreen may be replaced with a heated one

Sunroofs must be removed and plated over with material as strong or stronger than the roof skin.

Engine/gearbox mounts may be uprated but only with a stiffer rubber, the look, style and materials of the mounts must remain original. A third buffer may be added to the engine mount to reduce sideways movement.

The original dash board must be retained but may be cut to facilitate the fitting of a roll cage

The glove box may be removed.

On Ph1.5 models onwards the heater control panel must be retained but the area below it may be replaced with a switch panel within the original surround. For Ph1 models contact us.

The centre console/coin tray panel may be removed.

### **Electrics**

Standard BOSCH ECU must be retained (rev limiter may be removed)

*Rev limiters on these old ECU have drifted somewhat over the years and often cut in too low, we recommend*

*fitting an aftermarket rev limiter instead although the use of any form of launch control or temporary rev limit device is not permitted)*

Standard distributor must be retained

Either type of original coil may be used.

Original dash cluster must be retained

The original fuse and relay board may be removed and replaced.

The use of PDM's or any other non period electronic devices is prohibited unless stated in the regulations.

Wiring looms/relays/fuses/switches are free

In car cameras may be fitted

Co driver trip meters are free

HT Leads are free