

# 2021 - 5 Hour Vintage Enduro Guidelines

1. Teams / Salary cap / Bonus points
2. Driver time / Allowed Buggies - Trucks
3. Track / Transponders / Qualifying / Batteries / Motor
4. Pit stops / Marshals / Scrutineering / Judges of Fact
5. Gearing and Tyre advice

## Teams

Teams will be made up of 3 or 4 drivers, 1 car per driver.

## Salary Cap

Each team will submit their list of drivers and cars to me via pm. Each 4 car team is allocated a 12 point "salary cap" (9 points for 3 drivers) which their list of cars must equal or be less than. Each car has been allocated a points value that it brings to the team, for example a yokomo 870c is worth 4.5 points, if you have 2 870c's in your team then you've used up 9 points so you have 3 more points to spend on the remaining 2 cars for the 4 driver team. Any combination of buggies/trucks is allowed as long as you meet the salary cap requirement.

## Bonus points to add to Salary cap

## Driver Grading

We have produced a driver grading list which lists drivers from previous enduros and festivals and groups them into a classification based on the best lap time achieved taking into account the car being driven. Other vintage drivers have been added to the list based on their skill level based on previous festival results. The aim was to grade in the most objective way possible and the list is not meant to offend anyone, the lower the ranking the more points you bring to a team so bronze drivers will be highly sought after as teams start to form and starts to run out of points. The points added to the team salary cap are listed below. If you had a 4 driver team with all bronze drivers, your points cap would be increased to 20. Team captains can pm me with your email address if you'd like a copy of the 2021 driver points list

Platinum:	0
Gold:	0.5
Silver:	1
Silver/Bronze:	1.5
Bronze:	2

## Non- vintage racer / Junior point bonus

Teams will earn themselves 0.5 bonus to their salary cap for including 1 or more drivers in their team that have never competed at a Castle Hill vintage event.

Teams will earn themselves a 0.5 bonus to the salary cap for including 1 or more Junior driver in the line up.

## Minimum time / Laps

Each driver must complete the minimum time / lap requirement. For a 3 driver team that's 1hr 30 minutes, 4 driver team is 1 hour minimum. In the case that driver time is not available from the lap scoring, the minimum laps chart will be used. Minimum laps are based on your car value and driver rating, for example a silver driver in a 3 car team driving a 4 point car must complete a minimum of 156 laps

<b>Minimum laps per car</b>											
<b>4 Car Team</b>						<b>3 Car Team</b>					
<b>Driver rating</b>						<b>Driver rating</b>					
<b>Car points</b>	<b>Plat.</b>	<b>Gold</b>	<b>Silver</b>	<b>S/Bronze</b>	<b>Bronze</b>	<b>Car points</b>	<b>Plat.</b>	<b>Gold</b>	<b>Silver</b>	<b>S/Bronze</b>	<b>Bronze</b>
5	114	110	108	105	103	5	170	165	161	156	154
4.5	112	109	106	103	102	4.5	167	162	158	154	152
4	110	107	104	102	100	4	164	160	156	152	150
3.5	108	105	103	100	99	3.5	161	157	153	150	147
3	106	104	101	99	97	3	159	155	151	147	145
2.5	105	102	100	97	96	2.5	156	153	149	145	143
2	103	101	98	96	95	2	154	150	147	143	141
1.5	102	99	97	95	93	1.5	152	148	145	141	139
1	100	98	95	93	92	1	150	146	143	139	137
0.5	99	96	94	92	91	0.5	147	144	141	137	136

Drivers falling under the minimum time limit will result in a lap being deducted from the team result for every minute (or part-thereof) a car falls short of its minimum time. If total time for a car is not available as can happen with Alycat, minimum laps will be used. For every 2 laps a car falls under the minimum lap requirement 1 lap will be deducted from the team result. If a car falls an odd number of laps short of the requirement, that shortfall will be rounded up.

## Eligible buggies and Trucks

All vintage and classic legal buggies and trucks are eligible, if your car is not on the attached list, please contact me for a points allocation. When submitting the team list, please let us know of any big upgrades made to the car eg, a gold pan rc10 with a stealth and long arms is classed as a normal rc10 not a purist spec car, likewise, a madcap running an astute chassis will be classed as an astute. All cars must fall within the allowed modifications for the Vintage Festival and all must meet the standard minimum weight limits 2wd=1500, 4wd=1600g and Truck=1700g except for plastic fantastic buggies. Please see the list of buggies with points allocation on separate document.

Vehicles that are presented with upgrades that move it up to a different grading will be asked to have the upgrades removed or 5 minute stop go penalty will be applied for every 0.5 variance in the rating of the car. Using the above example, if the car listed for the team was a purist spec rc10 but a worlds spec rc10 turns up on the grid, the difference in rating is 1.5 points, so the team would have a 15 minute stop go penalty. If the discrepancy is found post-race, the team will lose 12 laps per 0.5 variance

## Track

For the main race the standard circuit running in an anti-clockwise direction will be used

## Transponders

All cars must have their own personal transponder for enduros

## Qualifying

There will be a 10 minute open qualifying session prior to the race. Teams must nominate 1 car / driver to qualify. The single fastest lap recorded by the driver will be used to determine qualifying order. The team who qualifies first will have first preference of marshalling position and 2<sup>nd</sup> fastest qualifier will have 2<sup>nd</sup> choice of marshalling position and so on. The grid will be a reverse grid, so the fastest qualifier will start last on the grid and the slowest qualifier will start on TQ for the race

## Batteries

2s lipo 7.4v 6000mah max, hard case or 6 cell ni-cd/nimh packs max 6000mah . Max charge voltage 8.4v. Voltages will be checked during the race

Battery monitors / alarms are allowed to protect batteries from going under voltage minimum

## Motor

5 hour enduro - Standard 540 Johnson control motor for all cars in the 5 hour enduro (see below for exceptions allowing torque tuned motors). You can use motors already purchased from the club for the previous festivals/enduros. If you need a motor, please indicate how many are needed when submitting the team, motors are \$20 from the club and will be available from the track in the lead up to the meeting or on the morning of the race or may be purchased from Northern Beaches hobby part no. JOH683

\*Optional motor for 2021 race – Tamiya Torque tuned part number 54358

For the 2021 race we're trialling allowing a slightly more powerful motor for 4wd to help them clear some jumps on the track that 2wds are able to clear allowing them in some cases to be quicker. The provisions are below but in a nutshell, you can pick 1 fast 4wd to run the motor in and any of your low points 4wds like hotshot and thundershots can run the motor and low points trucks/2wds can run them but with a 1 point "surcharge". Any dramas, just get in touch to make sure you know you've got the right motors in the cars.

- Each team will be allowed to nominate 1 x 4wd over 2 points to run the torque tuned motor
- Any 4wd valued at 2 points or under may run the torque tuned motor and the car will still be valued at 2 points (no limit)
- Any 2wd or truck valued at 2 points or under may run the torque tuned motor, the car will have 1 point added to its total so a shotgun truck running the motor will now be worth 3 points (no limit)

Heat sinks / fans may be run and are encouraged

## Pit stops

Cars will pull off to the right up the hill towards the second last turn (we will mark out a pit lane area) there will be a table in place if teams want to make a battery change and send the same car back out again. Pit stops will have a minimum time of 1 minute. This means that the car will pull in, as soon as it has entered pit lane, the stop watch will commence, the team's car next to go out will wait at the exit of pit lane until the pit stop time has elapsed then will be allowed to leave. This is also for safety purposes so we don't have people running up and down the stairs etc

If a car breaks down on the track, it must be brought back into pit lane, the car must not pass over the timing loop as its brought back into the pit lane. The pit stop timer starts once the broken car makes it back to pit lane, the team will still wait the pit stop time then release the next car. We had an issue in a previous enduro where a car broke down very early in the lap, it was brought into the pits, the 60 seconds was waited, but the pit stop overall time came up short because the time taken to get the car back to the pits was less than a full lap of the track. In these instances it's up to the team to approximate the extra time needed to complete the lap and add it to the stop time.

It will be the team's responsibility to ensure the car does not leave pit lane too early for every pit stop. This will be checked at the end of the race by looking at the lap times, teams falling under the minimum lap time for a pitstop will lose a lap for every 3 seconds (or part thereof) under the minimum lap time. A couple of teams fell short on the pit stop time last year, luckily it didn't affect the overall result but given the close results, it could easily change the finishing order this year

## Marshals

All teams must have a marshal in their designated spot at all times during the race. On each occasion a team does not have a marshal in the designated point, they will incur a 10 second stop-go penalty.

## Scrutineering

Teams must present all cars for scrutineering prior to qualifying for the race. Each car will be checked for weight, hop ups and motor. As mentioned, we ask that when submitting the team you let us know of any major hop ups to the cars, the points allocated are based on many factors, any changes to the car may need to be reflected in the points allocation.

## Judges of fact

We will nominate a few judges of fact for the race. They will be announced at the drivers meeting. Judges of fact will be able to issue stop go penalties for driving infringements and pit lane infringements such as a car leaving pit lane too early or without the broken down car being returned to pit lane

## Gearing advice

To help those who have not geared a car for an enduro or not dealt with the Johnson 540 motor before, I offer the following starting points for gearing so you are in the ball park of how tall you may safely gear the car. Please remember when testing gearing, you should always check the motor temp at regular intervals (every few minutes) to ensure its not getting too hot, please also take into account your own car when thinking about gearing, my recommendations are for a car with a reasonably efficient gearbox and close to the weight limit, so if you're running an avante which has a million gears in it and weighs about 3 tonnes, consider dropping the pinion 1 or 2 teeth below my recommendations. Also take into account that the best way to attack an enduro is not necessarily gearing the motor to the max

Start on the higher end of the FDR and if temps are good, you can try going up on the pinion. 2wd (6.9-7.2) 4wd (7.3-7.8) Truck (8.8-9.2). If anyone needs help turning those numbers into what pinion they should run on their car, please get in touch with me. Please note that with the enduros being run in April, the ambient temp will still be warm

With regards to the torque tuned motor we have trialled it a bit and have found the following. 4wd we ran 8.0 with a tornado fan and the motor was quite warm during the enduro (thanks to the kamikazes for testing it) so I would rate that as the tallest I would run it in a 4wd and I would say 8.3 would be a happier medium between speed / temp/ runtime. In a truck I tested it geared at 9.5 in the Blitzter enduro again with a yeah racing tornado fan on it and the motor was warm but went well. 2wd we tried one geared tall at 7.25 with a fan and it got a little warmer than you'd be comfortable with at an enduro, So we're recommending 7.6-8.1. An interesting note that this motor is intended to bridge the gap between the 540 and sport tuned (which was too much of a jump) and it turns out the gearing guide is right in between the 540 ratios and the sport tuned ratios

Torque tuned recommended FDRs

4wd (8.0-8.5)

2wd (7.6-8.1)

Truck (9.4-9.9)

## Tyres

Given that there aren't any plans to change the surface in the next few months, I'd say the same tyres that worked at the festival will work again, so JConcepts 3D's, Proline – Holeshots, AKA – Rebars and other bar type tyres such as jconcepts bar codes, Jconcepts double dees are also good or if you want a long lasting tyre, proline calibers are a good choice.