

Daihatsu Challenge NZ

Technical Regulations

CLASS VISION STATEMENT: to offer a club-level circuit racing class that is budget-oriented, accessible, and fun. Close racing with a 'chance for all to win' is paramount

This race class is based on the Daihatsu/Toyota engine models K3 and 3SZ. All chassis' that these engines are compatible with, without fabricating new mounts or engine sub-frames, are accepted.

- *All cars must comply with the requirements of Schedule A of the current Motorsport New Zealand guidelines and have a current logbook and be of sound construction, good mechanical condition and be well maintained.*
- *The Technical Committee reserves the right to refuse or cancel the entry of any car to which, in their opinion, the preparation is not to a standard expected of the race series, including its external appearance.*
- *Any car that has sustained damage must be repaired before the next race meeting and be in a presentable condition, in line with the expectations of the race series and must be approved by The Technical Committee.*
- *The eligibility of a car is the responsibility of the driver and for the Technical Committee to confirm.*

*****IMPORTANT*****

Unless a modification or change to any component is specifically detailed, including additions or deletions, and written into this specification, then it is prohibited.

Any part not mentioned herein must remain factory.

Contents

1. Eligible Models.....	3
Daihatsu.....	3
Toyota.....	3
2. Engine and Exhaust.....	3
3. Clutch and Transmission	3
4. Chassis/Body.....	4
5. Interior.....	4
6. Wheels	4
7. Tyres.....	4
8. ECU	5
9. Brakes.....	5
10. Steering and Suspension	5
11. Fuel	5
12. Other	5
13. Points.....	6

1. Eligible Models

Daihatsu

- 1.1 Mira/Cuore L7xx
- 1.2 YRV M2xx
- 1.3 Sirion/Storia M1xx
- 1.4 Sirion/BOON M3/5/7xx
- 1.5 Charade/Mira L25x
- 1.6 Copen L880

Toyota

- 1.7 Duet M1xx
- 1.8 Passo/Racy M3/5/7xx

2. Engine and Exhaust

- 2.1 K3-VE, K3-VE2 and 3SZ-VE engines only
- 2.2 Naturally aspirated only
- 2.3 OEM Daihatsu or D-Sport parts only allowed
- 2.4 Engine parts from K3-VE/2 and 3SZ-VE only – parts from K3 engines cannot be used in 3SZ engines and visa versa
- 2.5 K3 maximum capacity 1298 cc
- 2.6 3SZ maximum capacity 1494 cc
- 2.7 Engines may be rebuilt to within factory allowable limits
- 2.8 Headers must remain factory from head down to factory exhaust connection point.
- 2.9 Exhaust from headers back is open
- 2.10 Catalytic converters may be removed
- 2.11 Air filter box and intake pipe must remain standard. Air filter element is open and it is mandatory for a filter to be installed and used in its original designed intent. Air intake pipe and box may be swapped from other eligible engine models
- 2.12 Max Racing 4-1 stainless steel tube headers are eligible as a direct fit replacement on all engines
- 2.13 Upgraded engine rubbers/urethane replacements allowed
- 2.14 Oil breather and catch-can systems allowed
- 2.15 Flywheel friction face may be machined flat and to within factory thickness and weight.

3. Clutch and Transmission

- 3.1 Factory manual 5 speed gearboxes as fitted to K3 or 3SZ powered engines only
- 3.2 OEM 4.266, 4.500, 4.643, 4.933 and 5.545 final drives allowed – see section 4.1 for further details
- 3.3 Permitted factory gear ratios are as follows
1st: 3.181, 2nd: 1.842, 3rd: 1.250, 4th: 0.864, 5th: 0.750
- 3.4 Upgraded shift bushes are allowed
- 3.5 Superfinishing of gears and selectors is permitted to aid reliability and reduction of gearbox oil temperature

4. Chassis/Body

- 4.1 Minimum race weights, with driver and fluids, based on the engine used, regardless of chassis are as follows:

Table 1 - Minimum Car Weight and Final Drive Ratios

Daihatsu Challenge Car Weight, Engine and Final Drive Matrix									
Engine	K3-VE	K3-VE	K3-VE	K3-VE	K3-VE2	K3-VE2	K3-VE2	K3-VE2	3SZ-VE
Final Drive	4.266	4.5/4.643	4.933	5.545	4.266	4.5/4.643	4.933	5.545	4.266
Minimum Weight (kg)	800	820	840	890	850	890	900	930	910

- 4.2
- 4.3 Minimum 6 point MSNZ homologated roll cage
- 4.4 Inner guard rolling allowed for purpose of tyre clearance
- 4.5 Plastic shrouds, inner guards and splash trays may be removed
- 4.6 Front, rear, and side profiles of the vehicle must remain factory. Factory option body kits and spoilers may be fitted
- 4.7 Ballast may be fitted in order to meet minimum weight requirements, but must be done according to Motorsport NZ guidelines and may only be fitted inside the front passenger seat footprint

5. Interior

- 5.1 Dash panels may be added for purposes of mounting auxiliary items such as, but not exclusive to, kill switch and gauges
- 5.2 Interior panels may be removed but complete dashboard must be retained
- 5.3 Single race seat is permitted, with rear and passenger seats removed
- 5.4 Race seat brand and type is open but seat and mounting method must comply with Schedule A
- 5.5 Door cards may be removed or trimmed to clear roll cage – if factory cards are removed, replacement panels must be fitted to comply with Motorsport New Zealand Schedule A regulations
- 5.6 Plastic windows allowed
- 5.7 Carpet may be removed
- 5.8 Air bags MUST be removed
- 5.9 Aftermarket steering wheels and boss kits are allowed, provided they comply with MSNZ Schedule A regulations

6. Wheels

- 6.1 14" OEM Daihatsu alloys or steel wheels only – any style
- 6.2 Specified size is 14x5J +40

7. Tyres

- 7.1 Zestino 07RK tyres in 165/55r14 [control item]

8. ECU

- 8.1 Factory non-turbo ECUs from eligible K3 or 3SZ equipped cars only – ECUs must be closed with anti-tamper tape, applied by persons from The Technical Committee – no chip re-flashing or modifications to the ECU tune are permitted in any way

9. Brakes

- 9.1 Front brake rotors must be either 232mm or 246mm diameter only (standard fitment brakes from Sirion M101S/M301S, YRV M201S and Copen L880K)
- 9.2 Front brake calipers from corresponding models listed in 9.1 only
- 9.3 Rear brake drums must be standard fitment item on the chassis entered
- 9.4 Front brake rotor and rear brake drum brand open
- 9.5 Winmax W3 or W5 compound front brake pads only [control item]
- 9.6 2x sets of tyres permitted per car per season only
- 9.7 Standard rear brake shoes only
- 9.8 Replacement steel braided brake lines are allowed provided they meet MSNZ regulations

10. Steering and Suspension

- 10.1 GAZ racing suspension kit only, with supplied 6kg/mm spring rates front and rear [control item]
- 10.2 Slotted front lower suspension brackets for camber adjustment are allowed
- 10.3 Rubber bushings may be replaced with urethane equivalents
- 10.4 Standard OEM steering rack must be used but power steer racks can be converted to non-power steer and vice versa

11. Fuel

- 11.1 The only fuel allowed is petrol as commercially available from retail service station forecourt pumps throughout New Zealand and that comply with the Fuel Specification Chart detailed in Schedule A
- 11.2 Blended fuels are not permitted
- 11.3 No fuel additives allowed

12. Other

- 12.1 Air conditioning systems may be removed
- 12.2 ABS may be removed
- 12.3 Aftermarket dash displays allowed
- 12.4 An operational in-car camera is mandatory and must clearly show the driver steering input and front view from the cockpit
- 12.5 Any battery may be used and also may be relocated to any position in the car, provided it is done so according to Schedule A regulations

13. Points

- 13.1 Points will be allocated as per Table 2 below. Points will be allocated in this manner for each individual race, for both the scratch/grid race and handicap races:

Table 2 - Points allocated per race result

Position	Points
1st	20
2nd	18
3rd	16
4th	15
5th	14
6th	13
7th	12
8th	11
9th	10
10th	9
11th	8
12th	7

- 13.2 The 3 worst race results will not be included in the final points tally. Note, these races are selected from across the season individually and do not have to be from the same race meeting.