

# 2024 Specifications Compliance Score Card – Cadet Class

<b>Team Name</b>	<b>School Name</b>	<b>Ballast</b>	<b>Car A Mass</b>	<b>Car B Mass</b>
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For clarification on individual regulations, refer to the 2024 Australian Technical Regulations

Regulation	Regulation Overview	Quick Guide	Penalty	Car A	Car B	Judge 1	Judge 2	Deduction	Remarks	Rectification			
<b>ARTICLE T2 – GENERAL PRINCIPLES</b>										Pass/Fail	Pass/Fail		
T2.4	Safe Construction	Visual Check	-10										
<b>ARTICLE T3 – GENERAL CAR REGULATIONS</b>										Pass/Fail	Pass/Fail		
T3.1.1	Designed and engineered using CAD / CAM	Check Portfolio	-10										
T3.1.2	Body manufactured using CNC only.	Check Portfolio	-10										
T3.1.5	Mirrored Side Machining with 6mm cutter	Visual Check	-10										
T3.1.7	No separately formed balsa parts	Check Drawings	-10										
T3.2.1	Leading Features Min Width – Foremost Extremity (FE)	3mm or R1.5mm	-10										
T3.2.2	Leading Features Min Width 6mm back from Foremost Extremity	6mm	-10										
T3.3.3	Hand Finishing permitted. Max variation to CAD Model.	3mm	-10										
T3.3.4	Hand Created Features – not permitted	Visual Check	-10										
T3.4.1	Team # Decal. Betw. LE of halo & LE of front tyres. In plan view.	Visual Check	-2 ea										
T3.4.2	REA Corporate Partner Decals (REA, DOD, F1iS)	Visual Check	-2 ea										
T3.4.3.1	REA Corporate Logo Decals Minimum Dimensions	30mm x 15mm	-2 ea										
T3.4.3.2	Positioning of F1iS A & B Decals on Side Pods	Visual Check	-2 ea										
T3.4.3.3	Positioning of other Corp. Decals visible in top or side view	Visual Check	-2 ea										
T3.5	Undefined features	Check T1.6	-4										
T3.6	Overall length	Min:170mm Max:210mm	-4										
T3.8	Track clearance	Min: 2mm	-4										
T3.9.1	REA Balsa default material for non-rotating components	Visual Check	-4										
T3.9.2	Balsa Thickness	Min 3mm	-1										
T3.10	Status during racing – no parts removed/added for racing	Visual check	-2										
<b>Points Penalty Page Total</b>									-	<b>Time Penalties Car A Page Total</b>		0.	s
<b>Points Penalty Page Total</b>									-	<b>Time Penalties Car B Page Total</b>		0.	s

**LEGEND**  Eligibility Regulations/Possible Disqualification  Critical Regulations - 0.02/0.05 Time Penalty  Critical Regulations/Time Penalty (0.05s ea)  Critical Regulations - 0.1s Time Penalty

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<b>ARTICLE T5 – BODY &amp; SIDE POD REGULATIONS</b>										<b>Pass/Fail</b>	<b>Pass/Fail</b>		
T5.1	Body construction – single continuous balsa between axles	Visual & Drawing Check	-4										
T5.2	Implants, foreign objects & voids not permitted	Visual & Drawing Check	-4										
T5.3	Width of sidepod	Min 40mm	-2										
T5.4	Side pod projected surface	Min 30mm x 15mm	-1										
T5.5	Virtual cargo – between centre line of front & rear axles	T4.5	-4										
T5.6	Virtual cargo identification on Engineering Drawings	Drawing Check	-1										
<b>ARTICLE T7 – WING REGULATIONS</b>										<b>Pass/Fail</b>	<b>Pass/Fail</b>		
T7.1.1	Car MUST have a front wing	Visual & Drawing Check	-20										
T7.1.2	Car MUST have a rear wing	Visual & Drawing Check	-20										
T7.2	Identification of wing surfaces on Engineering Drawings	Drawing Check	-1										
T7.3.1	Front wing clear airspace	Min 3mm	-4										
T7.3.2	Rear wing clear airspace	Min 3mm	-4										
T7.4	Front wing/support structure in front of centre line of axle	Visual Check	-1										
T7.6	Teams MUST manufacture the front wing from Balsa	Visual & Drawing Check	-10										
T7.8.1	Front wing span	Balsa: Min 34mm	-4										
T7.8.2	Rear wing span	Balsa: Min 34mm	-4										
T7.10.1	Front wing chord	Min 15mm	-2										
T7.10.2	Rear wing chord	Min 15mm	-2										
T7.11.1	Front wing thickness	Balsa: Min 3.5mm Max: 9mm Other: Min 1.5mm Max 9mm	-2										
T7.11.2	Rear wing thickness	Balsa: Min 3.5mm Max: 9mm	-2										
T7.12	Rear wing positioning behind centre line of rear axle	Visual Check	-1										
T7.13	Rear wing height measured normal to bottom surface	> 34mm	-4										
T7.14	Rear wing must be made of balsa	Visual & Drawing Check	-4										
<b>Points Penalty Page Total</b>									-	<b>Time Penalties Car A Page Total</b>		0.	s
<b>Points Penalty Page Total</b>									-	<b>Time Penalties Car B Page Total</b>		0.	s

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<b>ARTICLE T8 – WHEEL REGULATIONS</b>										Pass/Fail	Pass/Fail	
T8.1	Number and location, common shared centreline	4, 2 x 2	-4									
T8.2.1	Combination of four unmodified REA standard wheels	Visual Check	-4									
T8.5	Full contact width with race track – no camber	80gsm paper	-2									
T8.7	Freely rotating wheels – forward rolling motion	Reasonably minimal effort	-4									
T8.8	Visibility in front view – permitted height of obstruction	Max 15mm	-4									
T8.9.1	Visibility from top, bottom & side. In front of front wheels	Min 1mm exclusion zone	-4									
T8.9.2	Visibility from top, bottom & side. Behind front wheels	Min 15mm exclusion zone	-4									
T8.9.3	Visibility from top, bottom & side. In front of rear wheels	Check diagram	-4									
T8.9.4	Visibility from top, bottom & side. Behind rear wheels	Min 1mm exclusion zone	-4									
<b>ARTICLE T9 – WHEEL SUPPORT REGULATIONS</b>										Pass/Fail	Pass/Fail	
T9.3	Four unmodified REA axle grommets	Visual Check	-4									
T9.4	REA standard brass axles (3.175mm) OR axles from a different material with minimum 3mm diameter	Visual Check	-2									
T9.5	No added parts or modifications to wheel systems	Visual Check	-2									
<b>ARTICLE T10 – TETHER LINE GUIDE REGULATIONS</b>										Pass/Fail	Pass/Fail	
T10.1	2 guides firmly secured, front and rear underside of car	Visual Check	-10									
T10.2	Longitudinal separation measured inside edges of guides	Min 120mm	-1									
T10.3	Inside diameter of guide (hole size)	Min 3mm	-2									
T10.4.1	Guides must be closed for racing	Visual Check	-4									
T10.4.2	No sharp edges	Visual Check	-4									
T10.4.3	Adequate strength & fixing	200g mass	-4									
<b>ARTICLE T11 – POWER PLANT PROVISIONS REGULATIONS</b>										Pass/Fail	Pass/Fail	
T11.1	Cylinder when fully inserted must interface with launch pod	Visual Check	-20									
T11.2	CO2 cylinder chamber diameter	19mm	-1									
T11.3	Depth of chamber	Min 45mm Max 60mm	-1									
T11.4	Height of lowest point of chamber above track surface	Min 20mm	-4									
T11.5	CO2 cylinder chamber completely surrounded by material	Min 3mm	-4									
T11.6	Paint & other materials not present in CO2 cylinder chamber	Visual Check	-1									
								<b>Points Penalty Page Total</b>	-	<b>Points Grand Total</b>		/80
								<b>Time Penalties Car A Page Total</b>	0. s	<b>Time Penalties Car A Grand Total</b>		0. s
								<b>Time Penalties Car B Page Total</b>	0. s	<b>Time Penalties Car B Grand Total</b>		0. s

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