

# EV Challenge STEM Cycle Mechanical Inspection

Vehicle # \_\_\_\_\_ School Name \_\_\_\_\_

#	Inspection Item	Specification Reference	Circle Yes / No/ N/A	
1	Track Width Greater than 50 cm (19.7")	M1.1	Yes	No
2	Vehicle Width no greater than 122 cm (48")	M1.2	Yes	No
3	Vehicle Length no greater than 365.75 cm (144")	M1.3	Yes	No
4	Vehicle Height no greater than twice the track height	M1.4	Yes	No
5	Minimum Ground Clearance (Greater than sidewall height of tires)	M1.5	Yes	No
6	Vehicle has three or four wheels	M2.1	Yes	No
7	Frame protects the driver from collisions from any direction	M3.1	Yes	No
8	Driver is seated less than 100 mm (3.9") from the ground	M3.2	Yes	No
9	Vehicle steering is from the front wheels	M4.1	Yes	No
10	Vehicle steering has a well-constructed mechanical linkage with minimal play	M4.2	Yes	No
11	Vehicle has less than a 7.625 meter (25 foot) turning radius	M4.3	Yes	No
12	All wheels have a brake	M5.1	Yes	No
13	Vehicle has two independent braking systems with separate actuators	M5.2	Yes	No
14	Brakes on the same axle are operated by a single mechanism	M5.3	Yes	No
15	Brakes do not press directly on the tire	M5.4	Yes	No
16	Brakes are of cantilever, disk or drum design	M5.5	Yes	No
17	Brakes are actuated by a pedal or lever	M5.6	Yes	No
18	Brake system can hold the vehicle at a 20° grade (~41% of fully loaded force)	M5.6(2)	Yes	No
19	Vehicle is constructed of moisture resistant materials	M6.1	Yes	No
20	Vehicle side and top coverings prevent driver arms from leaving vehicle	M6.2	Yes	No
21	Solid floor pan underneath the driver compartment	M6.3	Yes	No
22	Floor pan is made from a rigid material	M6.4	Yes	No
23	Driver Visibility Adequate		Yes	No
24	Lap and Shoulder Belts Appropriate and Function Correctly		Yes	No

**Notes and explanation for any "No" circled above or any other concerns:**

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