2026-2027 Virginia Middle School Dragster Checklist

(Fall Competition & Regional Fair)

Participant ID #: _____

Circle One

Dragster met the following requirements and is allowed to race: **Yes**

Dragster has a point deduction and is allowed to race: **Yes**

Dragster is disqualified and is NOT allowed to race: **Yes**

Elapsed Race Time: _____

Point Deduction VS Disqualification Explanation:

Fall competition and Regional Fairs ONLY. Does not apply to Technosphere or the National Conference.

The goal is to have more students participate in the dragster events in **Virginia**. Too often, entries are disqualified because the dragster did not meet one or more requirements below, but those requirements gave no advantage or did not cause the dragster to be unsafe to race.

- All **Point Deductions** will be reviewed by the **Event Coordinator** to determine if the dragster can be safely raced on the track. Example: the dragster is so wide it contacts the end gate.
- **Point Deduction** = 20% deduction of total possible event points
  Note: If a dragster has 3 or more **Requirement Point Deductions**, the dragster will be disqualified from the race. A dragster with 1 or 2 Point Deductions will be assigned a one 20% deduction during scoring.
- **DQ / Disqualification** = Dragsters disqualified from the race due to an unfair advantage or unsafe construction.
  Note: If the dragster is disqualified from the race, the entry can still be judged but will NOT receive race points.

Entry Repairs

No repair or maintenance is allowed after the entries have been registered. Any entry damaged during the race is evaluated by the event coordinator to determine whether or not the vehicle is allowed to race again. In the event that the vehicle is damaged by the conference personnel, the event coordinator rules as to whether the vehicle may be repaired by the student entering the vehicle. This is the only reason a student is allowed to touch his/her vehicle after registration. Undamaged wheels that come off at the conclusion of the race may be replaced by the student as determined by the event coordinator. Damaged wheels may not be replaced.

Judges Initials: _____

Dragster Body Requirements	Point Deduction or Disqualification	Minimum	Maximum	Meets Requirement	
Special Design Challenge Requirement: No special design requirements for the 2026-2027 school year.					
1 piece construction (no laminations) Acceptable body construction material includes wood, plastics, or urethane modeling foam Can be produced using traditional hand tools, power tools, CNC Milling and 3D printing.	Point Deduction			yes	no
There are **NO** add-ons, such as body strengtheners, fenders, plastic canopy, exhaust, or air foils attached to or enclosed within the vehicle Hydro dipping is permitted.	Disqualification			yes	no
Decals, if any, are not covering holes in dragster body, decoration only	Disqualification			yes	no
Body length	Point Deduction	230mm	240mm	yes	no
Body height with wheels	Point Deduction		75 mm	yes	no
Dragster mass (without CO2 cartridge)	DQ-Under / PD-Over	55g	65g	yes	no
Actual dragster mass in grams					grams
Body width at axels (front and back)	Point Deduction	35mm	42mm	yes	no
Dragster total width (including wheels)	Point Deduction		90mm	yes	no

Judges Initials: _____

Axles / axle holes / wheelbase Requirements		Minimum	Maximum		
Dragster must have two axles	Point Deduction			yes	no
Bottom of axle hole or bearing above bottom of car (measured at sides)	Point Deduction	5mm	10mm	yes	no
Axle hole from front and rear of car	Point Deduction	10mm	100mm	yes	no
Wheelbase	Point Deduction	105mm		yes	no
Bearings, bushings and lubricants may be used.	Point Deduction				
Glue may only be used to secure bearings to body.	Point Deduction			yes	no

Judges Initials: _____

Spacer washers / clips Requirements		Minimum	Maximum		
Spacer washers	Point Deduction		10	yes	no
Axle clips	Point Deduction		8	yes	no
No glue used to hold wheels or axles in place	Point Deduction			yes	no

Judges Initials: _____

Power plant (CO_2 cartridge hole) Requirements		Minimum	Maximum		
The farthest point at the rear of the car	Point Deduction			yes	no
Drilled parallel to the racing surface	Point Deduction			yes	no
No paint intentionally inside the CO_2 cartridge hole	Point Deduction			yes	no
Hole depth	Point Deduction	45mm	55mm	yes	no
Entire safety zone thickness	Point Deduction	5mm		yes	no
3D printed cars should have sufficient infill entirely around, and in front of, the CO_2 cartridge hole to ensure structural integrity (Virginia only requirement)	Disqualification if failure at conclusion of race			yes	no
Chamber diameter	Point Deduction	19mm	20mm	yes	no
Lowest point of chamber diameter to race surface (with wheels)	Point Deduction	26mm	40mm	yes	no

Judges Initials: _____

Eye Screws Requirements		Minimum	Maximum		
Number of eye screws	Disqualification	2	2	yes	no
Eye screws do not contact the race surface	Disqualification			yes	no
Track string must pass through both eye screws located on the center line of the bottom of the car				yes	no
Glue or epoxy may be used to secure eye screws					
Eye screws holes are tightly closed to prevent string from slipping out	Disqualification			yes	no
Inside diameter	Point Deduction	3mm	5mm	yes	no
Distance apart at farthest points	Point Deduction	150mm		yes	no

Judges Initials: _____

Wheels Requirements		Minimum	Maximum		
Number of wheels	Point Deduction	4	4	yes	no
All wheels touch racing surface at the same time (without CO_2)	Disqualification			yes	no
All wheels roll	Point Deduction			yes	no
All wheels are made entirely from plastic	Point Deduction			yes	no
Dimensions are consistent for the full circumference of the wheel	Point Deduction			yes	no
Wheel diameter	DQ-Under / PD-Over	30mm	40mm	yes	no
Wheel width (at continuous point of contact between wheel and track)	DQ-Under / PD-Over	2mm	18mm	yes	no