

# Baja SAE

## General Notice 2025-01

### Tracked Vehicles

Rev A

#### Background:

During the 2025 season a student team attempted to compete with a tracked vehicle. The BSAE rules did not explicitly prohibit tracked vehicles, however the rules are written based on wheeled vehicles. The BSAE Rules Committee has directed NTI to assemble requirements and rule exceptions for the purpose of allowing teams to field tracked vehicles in a safe and reasonable manner. Direction for 2026 and beyond will be considered at the conclusion of the 2025 season.

#### Eligibility:

This general notice applies only to vehicles exclusively using tracks for vehicle steering and propulsion. Teams who wish to field tracked vehicles are encouraged to confirm eligibility via a Rules Inquiry on BajaSAE.net.

### Specifications

Teams utilizing this General Notice are required to comply with the entirety of the 2025 Baja SAE rule book (of the most recent revision published on BajaSAE.net) except where explicitly called out in this document. Teams have the **choice** of utilizing any of the items listed in the Exemptions section (but are not required to). Teams are **required** to follow the entirety of the Additional Requirements section. Teams electing to not pursue an exemption does not exempt them from all Additional Requirements.

## Clarifications

- Section B.9 – For the purposes of this section 1) the track assembly will be considered the “wheels/uprights” 2) the element transferring power from the final gear reduction to the track assembly is the axleshaft. Additionally, the track assemblies are explicitly not governed by the standard rules, while all remaining drive components must comply with the BSAE rules.
- Section C.2.2.3 – For the purposes of this section, “lock all four wheels” will be replaced with “lock and skid both tracks”

## Exemptions

- Section B.7.1.4 – The following does not apply to tracked vehicles: “Any and all brakes, when actuated, shall cause the brake light to illuminate.”

## Additional Requirements

- Tracks must be a single piece and of rubber construction and constructed by an OEM track manufacturer. Metal tracks and tracks made of multiple pieces/links are explicitly prohibited. Metal banding or similar embedded within the rubber track is acceptable and does not violate the “single piece” rule.
- The brake light shall not illuminate when braking force is applied to only 1 track (steering control). The brake light shall illuminate when braking force is applied to both tracks (speed reduction).
- Each track shall have a minimum nominal track-ground contact patch of dimensions 4 in x 36 in while standing on a hard surface (concrete, pavement etc.). The ground contact area will be considered as the area of the track between the front-most and rear-most “road wheels” [1] that support the weight of the vehicle.
- Each track shall have a minimum of 3 wheels and 1 sprocket [1] supporting it with at least 3 road wheels designed to be in contact with the ground (through the track) at all times. Additional road or idler wheels [1] are permitted.
- At least 1 drive sprocket must positively engage the track to prevent slippage. Additional idler sprockets are permitted
- Fenders are required to protect the top, front, rear, & sides of the tracks. Fenders must be constructed of HROE material and rigidly mounted and capable of supporting 250lb of vertical load spread over 1 ft<sup>2</sup> (may be evaluated by sitting/standing on any portion of the fender).

- All gaps within the limits of the track which are accessible from the exterior of the vehicle must be no larger than 25 mm (1 inch). This maximum gap requirement does not apply to areas below the track position at maximum suspension compression.
- All gaps within the limits of the track which are accessible from the interior of the vehicle must be no larger than 6 mm (1/4 inch)

Fender coverage extents:

- Top Surface: Front
  - Trapezoidal Geometry: Furthest forward tangent point normal to the track surface of the rear sprocket or wheel.
  - Triangular Geometry: Location at which the track contacts the front sprocket or wheel
- Top Surface: Rear
  - Furthest rear tangent point normal to the track surface of the rear sprocket or wheel.
- Side Surface: Longitudinally
  - Between the above referenced Top Surface locations
  - At least covering the area within the circumferential path of the track assembly, a 25mm (1 inch) gap between the static location of the track and the fender coverage area is permitted.
- Side Surface: Vertically
  - From above the Top Surface of the track to the vertical location of maximum suspension compression of the road wheels.

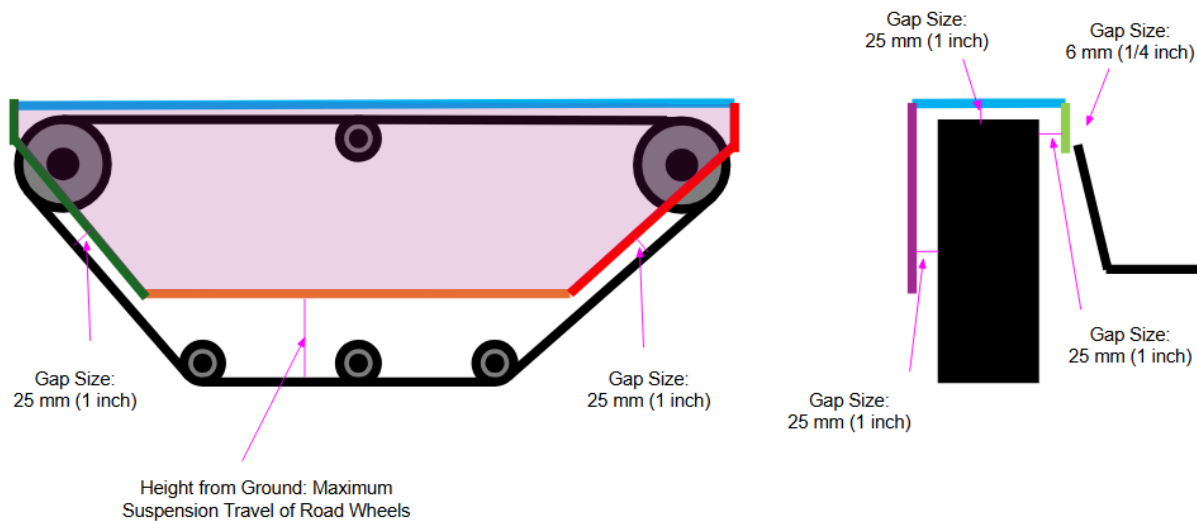


Figure 1: Fender Coverage area for Trapezoidal Track Geometry. Gaps shown are maximum permitted values.

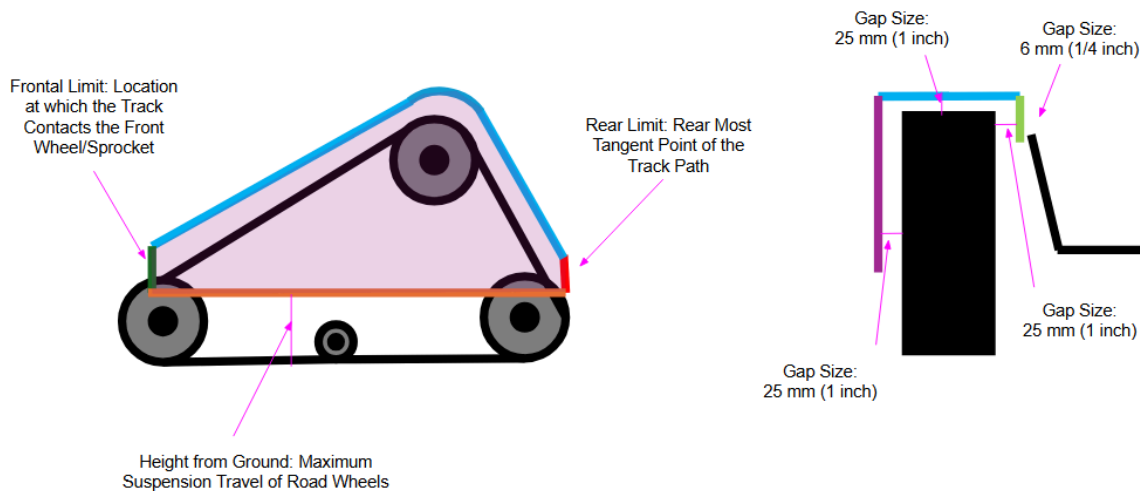


Figure 2: Fender Coverage Pattern for Triangular Track Geometry. Gaps shown are maximum permitted values.

## Deviation from Requirements

It is anticipated that this document will not fully encompass 1) design choices teams make or 2) risks posed by those decisions. Ultimate vehicle approval authority lies with SAE representatives (A.3.4).

Where teams have questions prior to competition, submission of Rule Inquiries on BajaSAE.net is encouraged.

## References

1. Wong, J.Y., "Theory of Ground Vehicles", Wylie, 2008, ISBN 978-0470170380