



## 2024 Mini Truck Rules

- All race teams are expected to read and follow the General Track Rules as well.
- MUST be 14 years or older to compete
- Rookie driver's must display yellow rookie stripe on rear.
- 850lbs minimum / 59 % Left Side weight maximum
- **CHASSIS SPECIFICATIONS:**
  - Chassis can be altered or modified with approval from Tech Official.
  - Class is open to any chassis that meets Home Track rules and has a 2022 Home Track Approved Tech Sticker.
  - **Truck - 70" wheelbase X 47" outside to outside wheel track.**
  - .065. Main frame rail const. 1 1/4" square tube.
  - .065. Main cage tube supports, 1 1/4x.065 O.D Mild tube.
  - Left side drivers door bars must be plated with .065 steel at bumper height mandatory.
- **UPPER / LOWER CONTROL ARMS, SPINDLES AND WHEEL HUBS:**
  - Any upper/lower control arms any length. No alum.
  - Altering of these components allowed within reason.
  - Everything must be nylock nuts tie rods, rod ends, on steering parts.
  - No Aluminum rod ends are allowed.
  - Spring and shock rear location in or outboard of the frame is allowed.
  - Spindle min. 3/4" shaft must be steel. No alum.
- **SUSPENSION:**
  - Pro / AFCO / Carrera springs and shocks allowed.
  - One shock & spring per wheel.
  - NO solid struts.
- **SWAY BARS:**
  - Front sway bars are allowed. NOTE: It is not mandatory to run a front sway bar.
  - Rear sway bars are allowed.
  - Any size of bar is allowed.
- **AIR DUCTING: For engine cooling only**
- **REAR END:**
  - Wishbone one-piece solid with motor mounted to it with one or two steel rod ends on front.

- Solid frame with motor mounted / Aluminum 4 link trailing arms allowed with steel rod end. (Must be approved)
- Solid frame with motor mounted / trailing arms, truck arms design 2 steel rod ends.
- Pan Hard Bar with frame slider and 2 steel rod ends 1/2" heim's
- **MOTOR LOCATION:**
  - Centre line of chassis, minimum 14" engine face to outside drivers side frame rail. (Left side)
- **FLOOR PAN:**
  - Full steel 22-gauge firewall behind driver's seat and up right side to side mandatory.
  - No floor and/or belly pans allowed behind rear firewall.
  - All Trucks must have .100 steel floor plate or alum. 3/16 bolted in under driver's seat **(MANDATORY)**
  - alum. 1/8" floor plate allowed to be bolted in foot box area ahead of drivers seat
- **FIREWALL:**
  - Firewall must be steel 22-gauge steel or .40 aluminum with mud flap or rubber backing of some sort in chain area and go full width of cage behind driver to upright cage post
  - No ducting through firewall is allowed
- **GROUND CLEARANCE:**
  - Bottom of chassis to ground must be a minimum of 2" with driver in measured at rocker panel on main frame rail on both sides. Front Body nose and rockers min. of 1"
- **WHEEL BASE:**
  - Wheelbase must be 70" a minimum of 69 1/2" and a maximum of 70 1/2". - **But only 1/2" between both sides max.**
- **TREAD WIDTH:**
  - **Maximum tread width of 47" (MAX) measured from outside-to-outside face of tires at spindle height.**
- **WHEELS / TIRES:**
  - Wheels must be aluminum approved racing wheel (example: Douglas).125 min. Thick.
  - Only one size wheel will be allowed. 8" dia. X 6" width. All 4 wheels must have same offset of 3 1/2" backsides.
  - Only three tires will be allowed: 15" x 8" x 7" **(American Racer. M-32 or M33) or (Hoosier tire MC – 780)**
  - Tires must be racing slick and must be approved
- **STEERING:**
  - Quick release mechanism is mandatory. (Must be tight).
  - Rack & Pinion steering is permitted. PT# ARC SC 1200 or EMPI 00-3147-7 or replacement.
  - Universal joint allowed on steering shaft.
  - Front or rear steer allowed. (Steering components must be covered from driver's leg area)
- **STEERING SHAFT SPECIFICATIONS:**
  - Solid .625 (5/8") diameter cold rolled steel.
  - Hollow .750 (3/4") .070 wall d.o.m. tube.
  - Recommend collapsible steering column.
- **SEATS:**
  - High back aluminum racing seat to top of helmet with left and right head supports is mandatory.
  - Seat must be bolted in four places with minimum of 5/16" diameter Grade 8 bolts.
  - The seat must be located a minimum of 8 1/4" from outside of left frame rail to the narrowest part of the seat. (Where side of seat meets back of seat)
  - Driver's Helmet when belted in properly must be 1" below top halo on roll cage (Mandatory)
- **FUEL CELLS:**
  - Fuel cells are mandatory.1 Gallon or 1 1/2 gallon.
  - Fuel cells must be a plastic or bladder type.
  - Fuel lines must be installed in a safe manner.
  - No fuel cooling devices are allowed. Example: Ice canisters.
  - Must be behind rear axle.
- **WEIGHT:**
  - **Mini Trucks must have a minimum weight of 850lbs with the driver after race completion as raced.**
  - **Maximum left side weight is 59% of total weight with the driver.**

- Lead Weight requires 2 bolts per pc. connected to frame rail or welded in bracket.
- **DO NOT BOLT TO TIN FLOOR- MUST BE BETWEEN FRONT AND REAR WHEEL BASE.**
- **BATTERY:**
  - Battery must be located behind firewall and securely fastened.
- **CLUTCH:**
  - Dry type engine mounted clutch is mandatory.
  - No transmission gearbox or other device which permits a change of gear sprocket ratio while vehicle is in motion is allowed.
  - Torque converters are not allowed.
  - Disc type clutches allowed. 4 Disc max:
  - Hortsman Redhawk Clutch or Jammer.
  - No direct drives allowed.
  - Crank shaft can be no more than 7" LONG.
  - Adjustable type clutch only.
  - Old style clutches are still allowed. (Noram)
  - No weight can be added or subtracted from clutch assembly from stock production.
- **CHAIN: #35 size Max. (Chain Guides strongly recommended)**
- **BRAKES:**
  - Hydraulic brakes only. (No scrubs or band type brakes allowed).
  - All brake systems must be in good working order.
  - Front and rear brakes are allowed, only one master cylinders allowed.
  - All bolt-on brake components must be cotter keyed for safety. (Not rear brake rotor)
- **KILL SWITCHES:**
  - Trucks must have a kill switch located on the left side of the dash panel with a maximum of 7 ½" from door bar.
  - Key Ignition, on dash allowed without push start.
- **REAR AXLE:**
  - Rear axle dimension must be 1 1/4" diameter maximum .no longer than 44'.
  - **No floater hubs on drive hub.** They will be allowed on gear and brake hubs.
  - Axle must have safety clips and both keys in drive hubs on each end to prevent hubs from coming off or slipping
  - No titanium or aluminum axles allowed. **No ceramic bearings allowed.**
- **SAFETY BELTS:**
  - All trucks must have a 3" or 2" wide 5-point harness.
  - Harness cannot be cut in any place.
  - Any belts in question will not be allowed.
  - All belts must be 3 years old or newer.
- **WINDOW NETS:**
  - All trucks must have a window net located on driver's side.
  - Minimum window net size as 14" x 12".
  - Window net must be removable for safety crew to have access.
  - Right side window allowed. Must be removable from outside with no tools, or with finger pull holes.
- **SAFTEY HELMET and APPAREL:**
  - HELMET - Minimum Snell rated full-face helmet with eye shield required. (SA2015 or newer mandatory)
  - DRIVER SUIT - 1 or 2-piece, full body, single layer Proban or Nomex required. (SFI rating mandatory) ABSOLUTELY NO NYLON OR OTHER FLAMMABLE MATERIAL
  - FOOTWEAR - Full leather upper shoe or Nomex shoe required  
BALACLAVA - Nomex balaclava strongly recommended
  - Right & left head supports MANDATORY
  - GLOVES - Single layer Nomex glove or full leather glove MANDATORY
  - **HEAD and NECK RESTRAINTS - (MANDATORY FOR 2022)** If running head and neck restraints - (HANS) or (ZAMP) is worn, you still need left and right-side head support.
  - **NO TWO-WAY RADIOS ALLOWED**

- **BODY DIMENSIONS:**

- Body must be fiberglass body unaltered from original body.
- Roof hatch must be fastened at rear to keep closed while racing.
- Exterior scrub rails. Can be inside body or outside body lexan "V" type 1 1/4" sticking
- Door panels
- (No hood pins or Dsuz fasteners allowed sticking out of the side of the body, (cut- tires).
- Rear spoiler optional
- .5 – 4" dim., holes in top of rear bumper fiberglass allowed for hot air to get out or Rear cover can be open for better cooling.
- **BUMPER BAR: Max tube size 1"x .095 1- Rear, 2-Front. No external bars, Bottom of rear bumper –No higher than 13" from ground.**

- **NUMBERS:**

- Numbers must be located on both door panels and on roof hatch.
- Numbers on door must be **14 1/2" high. minimum**
- Numbers on roof must be a minimum of 12" high.
- Numbers must be easily read from scoring tower.
- Numbers must be easy to read from the flag stand. **Make as big as possible.**

- **MIRRORS:**

- Only approved mirrors will be allowed. Maximum size of mirrors is 4" x 8" or 32 sq. inches.
- Inside cab, upper right side.
- Small left side mirrors allowed so you can see the blind spot no bigger than 3" around.

- **APPEARANCE:**

- All trucks must be kept neat in appearance.
- Any trucks in question will be at the discretion of the tech. department

- **MOTOR:**

- Honda GX390 QAE 13.0 HP motor is mandatory.

- **OLD GX390 ENGINE SPECIFICATIONS**

- Governor and choke mechanism may be removed.
- Decompressor mechanism may be removed.
- Block may be bored to the three over sizes available from Honda .25mm, .50mm, and. 75mm.
- Piston dish must be a minimum of .080".
- Piston may be a maximum of .005" above deck.
- Stock Honda rings must be used and installed properly.
- Any ring gap allowed.
- Stroke shall be 64.1 mm or 2.524" maximum.
- Stock or .010" undersize rods allowed.
- Spark Plug – optional
- Stock valves and keepers, satellite ex allowed.
- Valves may be refaced but not excessively.
- Any valve spring allowed.
- Only 13HP carb. stock Jets and emulsion tube allowed. **NO jets larger than 110 allowed. NO MODIFIED CARBS**

- Minimum head cc is **26.5**
- 3 angle valve jobs allowed.
- Cylinder head thickness from deck surface to valve cover surface is **3.640 minimum.**
- Head gasket is composition .042" minimum.
- Any flywheel air gap permitted.
- Any ignition timing allowed as per the flywheel with 3 deg. offset key.
- **Carb. throttle bore 1.070" maximum.**
- **Carb.venturi .833" Max no go.**
- Any vacuum operated fuel pump is allowed.
- Any camshaft timing is allowed.
- No metal removed or added to camshaft.
- Cam lobe height intake 1.270" minimum - 1.290" maximum.

- Cam lobe height exhaust 1.250" minimum - 1.270" maximum.
  - Lashed at factory recommendations maximum life intake valve .313"
  - Lashed at factory recommendations maximum life exhaust valve .290"
  - Camshaft may not have lobe separation angle changed from stock angle.
  - **Any Pump fuel and/or an approved racing fuel allowed. No straight Alcohol, or Methanol allowed** Note: some pump fuel contains 8% alcohol and or pre-approved additives is ok. Track Approved fuel – no additives
  - **1 1/4". Maximum O.D. Header pipe is permitted with a mandatory length of 24" to 32" to the end of pipe measured on the outside of bend.**
- No porting, no polishing, deburring or machining allowed.
- Motor seals must be installed in the following places:
    - Crank case cover - Cylinder head bolt
    - Rockers, Push rods – stock

**NOTE:** All engines must be properly assembled in accordance with Honda shop manuals. OEM / STOCK components ONLY.

**MOTORS:**

Engines may be built by anyone to accordance to Honda shop manual BUT can only be dyno. tested or sealed by an approved Home Track Builder:

Keith Marshman – 1-519-245-0425

Dave McAdams – 1-519-686-8034

Ryan Custer – 1-519-819-0481 (with a Serial Trace)

Crankcase oil > 4 cycle engine lubricating oil that conforms to SAE or API standards with any additives a sample of oil maybe provided at any time by TECH.

**NEW GX390VT2 ENGINE RULES:**

1. Governor and choke may be removed
2. De-compressor must not be removed
3. Block may be bored to the 3 honda oversizes
4. Piston may be a minimum of .035 below deck
5. Piston dish must be a minimum of .080
6. Stock Honda rings must be used & installed properly
7. Any ring gap allowed
8. Stroke shall be a maximum of 64.1mm or 2.524
9. Stock or .010 undersize rods allowed
10. Spark Plug – optional
11. Stock 25T valves & keepers, stellite exhaust allowed
12. Valves may be refaced but not excessively
13. Any valve spring allowed
14. **13hp carb.** stock jets & emulsion tube allowed **Max venturi size .833 / NO JETS LARGER THAN 110 ALLOWED .no modified carbs.**
15. Minimum head thickness is 3.728
16. Head is a 25Twith minimum CC of 37
17. Head gasket is steel approximately .010 thickness
18. ZF6 old style coil & flywheel may be used
19. ZF6 old style coil & rebroached new flywheel allowed
20. Any ignition timing allowed
21. Any flywheel to coil air-gap allowed
22. Any camshaft to crankshaft timing allowed
23. No metal added or removed from camshaft
24. Cam lobe height for intake is 1.275-1.290
25. Cam lobe height for exhaust is 1.255-1.270
26. Max lift with 0 lash at intake valve is .325
27. Max lift with 0 lash at exhaust valve is .305
28. Cam must have stock lobe separation angle

(Updated 2024)

- 29. Any vacuum operated fuel pump allowed
- 30. Three angle seats grinding allowed
- 31. Valved guards to be in stock location
- 32. No porting, no polishing, no deburring, no matching

**All engines to be properly assembled as per Honda shop manuals**

**All parts to be compared with a know stock Honda part to verify originality**

**New replacement rod with bearing GX 390 – A R C -# 6272.**

**MAX. Horse Power for these motors with stock parts allowed is approx. 20 HP**

**NOTE: Some new engines have 3 groove cast iron camshafts and some have camshafts with sintered lobes pressed on a billet shaft.**

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