



## MINI TRUCK RULEBOOK 2023

- **MUST be 13 years or older to compete**
- **(Unless pre-approved by Home Track officials)**
- **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.

Small steel or aluminum body shocks only. Non- adjustable no canister (rebuildables allowed)

Bump Stops allowed

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 ½" and a maximum of 70 ½". - **But only ½" 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 ½" 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 ¼" 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 ½ 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 - Any heat range allowed, must be stock reach, stock gaskets must be used.
- 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 – Any heat range, stock reach, stock gaskets must be used.
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
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.**

**Transponder Location:**

**75" from the front of the car. Must be mounted facing downwards.**

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