



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**

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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 body shocks only 1500 or 1600 series only

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 11/4" 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 – Autolite P/N 3910X**
- 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 120 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:

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Keith Marshman – 1-519-245-0425

Dave McAdams – 1-519-686-8034

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

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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 – Autolite P/N 3910X
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 120 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.

Full Throttle Motor Speedway @ Varney

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