

13HP MINI TRUCK TECHNICAL RULES

1. CHASSIS SPECIFICATIONS:

- Chassis – J-car mfg. Or home built allowed.
- Chassis can be altered or modified with approval from JCAR tech.
- Chassis can be MKS with serial number plate.
- Class is open to any chassis that meets spec.
- Truck - 70" wheelbase
- .095. Main frame rail const. 1 ¼ " square tube.
- .095. Main cage tube supports, 1 1/4x.095 Mild tube.

2. 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 pinned, tie rods, rod ends, on steering parts only.
- 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.

3. SUSPENSION:

- Pro AFco springs and shocks or carrera allowed with the following numbers: Shocks- 1500 series. Springs - 29000 series.
- One shock & spring per wheel.
- Front or rear steer allowed.
- Small steel body shocks only 1500 or 1600 series only.

4. SWAY BARS:

- Front sway bars will be allowed. NOTE: It is not mandatory to run a front sway bar.
- Rear sway bars will be allowed.
- Any size of bar is allowed.

5. AIR DUCTING:

- No ducting thru interior.
- Off bottom of truck to engine.
- Or tunnel cover only (not side body)
- No ducting to carb.,

6. REAR END:

- Wishbone one piece solid motor.
- Aluminum trailing arm with steel rod end. (Must be approved.)
- Solid motor-trailing arms, truck arms- 4 links allowed.
- Pan Hard Bar with frame slider.

7. MOTOR LOCATION:

- Centre line of chassis, 15" engine face to outside frame rail.

8. FLOOR PAN:

- Full steel floor pan from firewall to front of truck mandatory.
- No floor and/or belly pans allowed behind rear firewall.
- All Cars & Trucks must have .100 steel floor plate –bolt in under drivers seat (MANDATORY)
- alum. 3/16" plate allowed

9. FIREWALL:

- Firewall must be steel and go full width of cage behind driver to upright cage post with side panel on each end.
- No ducting through firewall is allowed

10. GROUND CLEARANCE:

- Bottom of chassis to ground must be a minimum of 2" with driver measured at rocker panel on main frame rail on both sides.

11. WHEEL BASE:

- Wheel base must be a minimum of 69 ½" and a maximum of 70 ½". - Trucks 70 "

12. TREAD WIDTH:

- Maximum tread width of 47" (MAX) measured from outside of tires.
- Rear tread width must be even on each side of body.

13. WHEELS / TIRES:

- Wheels must be an aluminum approved racing wheel (example: Douglas) or steel. .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 one size tire will be allowed. 15" x 8" x 7" American Racer. M-32 or M33.
- Tires must be racing slick.
- Must be approved.

14. STEERING:

- Quick release mechanism is mandatory. (Must be tight).
- Rack & Pinion steering is permitted. PT# ARC SC 1200 or EMP00-3147-7
- Universal joint allowed on steering shaft.
- Front or rear steer allowed.

15. STEERING SHAFT SPECIFICATIONS:

- Solid .625 (5/8") diameter cold rolled steel.
- Hollow .750 (3/4") .070 wall d.o.m. tube.

16. SEATS:

- High back aluminum seat is mandatory.
- Seat must be bolted in four places with minimum of 5/16" diameter 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)

17. FUEL CELLS:

- Fuel cells are mandatory. 1 Gallon or 1 1/2 gallon.
- Fuel cells must be a foam 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.

18. WEIGHT:

- Suspension trucks must have a minimum weight of 800lbs with the driver.
- Maximum left side weight is 60% 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.**
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19. BATTERY:

- Battery must be located behind fire wall and securely fastened.

20. CLUTCH:

- Dry type engine mounted clutch is mandatory.
- No transmission gear box 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.
- No direct drives allowed.
- Crank shaft can be no more than 7" LONG.
- Adjustable type clutch only.
- Old style clutches are still allowed.(Noram)

21. CHAIN GUARD: NOT MANDATORY:

- Chain guard must be constructed of a minimum .080" steel or aluminum.
- Chain guard must be a minimum of 3" wide.
- Chain guard must be mounted no higher than 3" above chain.
- Chain guard to curve 120 degrees around clutch and extended to rear of truck to cover sprocket

22. BRAKES:

- Hydraulic brakes only. (No scrubs or band type brakes allowed).
- All brake systems must be in good working order.
- If front and rear brakes are used one master cylinders allowed.
- All bolt-on brake components must be cotter keyed for safety.(not rear brake rotor)
- Balance bar allowed - front and rear only.

23. KILL SWITCHES:

- Trucks must have a kill switch located on the left side of the dash panel with a maximum of 7 1/2" from door bar.
- Key Ignition, on dash allowed with out push start.

- 24. REAR AXLE:**
- Rear axle dimension must be 1 1/4" diameter maximum.
 - No floater hubs.
 - Axle must have safety clips on each end to prevent hubs from coming off and wired closed.
 - No titanium or aluminum axles allowed.
- 25. SAFETY BELTS:**
- All trucks and cars 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.
- 26. 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, with finger holes.
- 27. SAFETY HELMET and APPAREL:**
- HELMET - Minimum Snell rated full face helmet with eye shield required. (SA2000 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 FLAMABLE MATERIAL
 - FOOTWEAR - Full leather upper shoe or Nomex shoe required
BALACLAVA - Nomex balaclava strongly recommended
 - NECK COLLAR - Nomex neck collar, Right & left head supports MANDITORY
 - GLOVES - Single layer Nomex glove or full leather glove MANDITORY
 - HEAD and NECK RESTRAINTS - (highly recommended) If running head and neck restraints - (HAANS) is worn, you do not need neck collar and left side head support.
- BUMPER BAR :Max tube size 1"x.095 1- Rear, 2-Fraont. No external bars, Bottom of raer bumper – 13" from ground.**
- 28. 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 out No wider than wheel track – 47" only.
 - Door panels must be bolted in four original locations on tower frame rails. (No hood pins or Dsuz fasteners allowed to stick out of the side of the body ,(cut- tires).
 - NACA ducts allowed. Only in rear deck.
 - Rear spoiler not to exceed 4 inches height x 34 inches in width.
 - .5-2"dim., hole in top rear bumper allowed.
- 29. NUMBERS:**
- Numbers must be located on both door panels and on roof hatch.
 - Numbers on door must be minimum 14 1/2" high.
 - 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.
- 30. MIRRORS:**
- Only approved mirrors will be allowed. Maximum size of mirrors is 4" x 8" or 32 sq.inches.
 - Inside cab, upper right side.
- 31. APPEARANCE:**
- All trucks must be kept neat in appearance.
 - Plating is allowed.
 - Any trucks in question will be at the discretion of the tech. department.
- 32. MOTOR:**
- Honda GX390 QAE 13.0 HP motor is mandatory.

ENGINE SPECIFICATIONS

- Governor 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.
- Stock air cleaners or washable snorel type.
- Any heat range.
- Stock valves and keepers, satellite ex allowed.
- Valves may be refaced but not excessively.
- Any valve spring allowed.
- Any carb. jet and emulsion tube allowed.
- 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. Key no offset keys.
- Carb. throttle bore 1.070" maximum.
- Carb. venturi .835" 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.
- Pump fuel and/or an approved racing fuel allowed only. No additives, alcohol, aviation fuel or leaded fuel allowed. Note: some pump fuel contains alcohol.
- 1 1/4". Header pipe is permitted with a minimum length of 22" to maximum 26" end of pipe or muffler.
- RVL approved mufflers are mandatory, square hole end plate. Mod.
- No porting, no polishing, deburring or machining allowed.
- Restrictor plates may be required at discretion of **JCAR** officials
- Motor seals must be installed in the following places:
 - Crank case cover - Cylinder head bolt

NOTE: All engines must be properly assembled in accordance with Honda shop manuals.

MOTORS :

Engines may be built by anyone to accordance to Honda shop manual BUT can only be dyno. tested or sealed by either Keith Marshman or Dave McAdams (with a Serial Trace)