

# MONTANA 500 RULES

Note: All cars that tour along must meet the rules flagged with a \*.

Note: 2013 Newly adopted or changed rules in *italics*.

## A. GENERAL INFORMATION

A1. \* These rules dated October 13, 2013 supersede all others. They are intended to outline current acceptable practices. ~~Deviation beyond these practices may result in disqualification. Directors are responsible for interpretation of all the rules pertaining to the Association. Decision of the Directors is final.~~ *Deviation beyond these practices may result in disqualification or time penalty. Directors are responsible for interpretation of all the rules pertaining to the Association and assessment of time penalties. Decision of the Directors is final.*

A2. \* All cars must comply with Montana license and insurance requirements.

A3. \* No alcoholic beverages will be allowed in competing cars. Substantiated violation is cause for disqualification.

A4. \* Drivers performing in an unsafe or unsportsmanlike-like manner will receive 1 warning. Second infraction may result in disqualification upon review and affirmative vote of 2/3 of the remaining drivers.

A5. Not more than two people are allowed per endurance car while under time.

A6. \* All drivers and relief drivers must be a paid-up member of the MCCTA.

A7. \* Tailgating of any kind is not authorized or condoned by the MCCTA. Drivers must maintain a safe following distance. No tailgating of support or tour vehicles or any non-participating vehicles.

A8. \* All participating cars must have attached or placed directly on both sides a sign with name of sponsor or owner and hometown. Use three (3) inch letters preferred.

A9. \* Drivers must drive at or below posted speed limits.

A10. Drivers are responsible for following the prescribed route. Failure to travel the entire prescribed route will result in an assessment of slow time for that leg plus a penalty of fifteen minutes. Flaggers or signs may be posted as deemed necessary or advisable.

A11. Routes will be planned to avoid running through stoplights under time.

A12. \* All Ts will be available for subsequent inspections at any time. Any member may initiate an inspection at any time, subject to approval by a majority vote of the directors present.

A13. \* All drivers and relief drivers must sign an Endurance Run Waiver and Inspection Form.

A14. Every year new lead inspection seals will be placed on each competing car.

A15. Placement position results for cars that do not complete the entire endurance run will be based on actual mileage completed.

## B. GENERAL RULES

B1. Body must be painted. Body parts must be stock for year of car, sawed off tourings allowed. Cars must have four fenders, splash aprons, running-boards, and if so equipped: front splash apron, dash, and radiator shell, and all replacement body parts must be made of metal. Chassis parts may be assembled from any year T parts. Gas tank must be stock for that year of car and mounted in stock position. No fuel additives are allowed. Cars must use straight automotive pump gas as fuel during the race time, starting with inspection and continuing until the end of the race.

B2. All T's must be assembled from stock parts and/or reproduction parts equal to stock specifications, with the following exceptions:

B2a. \* All competing cars must be equipped with two headlights and one or more rear stop and tail light in working order. The stop and tail light does not have to be a single unit.

B2b. \* Horn of any type in working order required.

B2c. \* Rear view mirror of any type required.

B2d. Windshields must be stock for year of car. No altering. Must have safety sheet or safety plate glass top and bottom. Windshields to be completely closed and sealed by an inspector.

B2e. \* Padded seat and back rest of any type required.

B2f. Original turtle deck may be replaced by some type of substantially built box or turtle deck. Minimal length and width equal to size for stock turtle deck on that year of car, with floor, sideboards and end-gate. Sides and end no less than six (6) inches high from the floor and made of no smaller than 3/4" wood.

B2g. Fuel line not to exceed 3/8" I.D.

B2h. \* At least 36 inches of 1 1/2" exhaust pipe required, properly attached to and extending from the exhaust manifold.

B2i. Only stock cast iron or stock aluminum or new manufactured intake manifolds with ports not to exceed 1 1/8" diameter are allowed. No grinding or performance enhancing alterations of the intake or exhaust ports allowed.

B2j. Only stock Ford roller type, New Day, Anderson flapper type timers or Crystal timers allowed. Quick couplers NOT ALLOWED in timer wires.

B2k. Holes must be drilled through the heads of the following bolts for braided seal wire: two center head bolts, middle two small pan bolts, and a hole must be drilled through the threaded end of both bolts that fastens the carburetor to the intake manifold. Please paint the heads of the drilled bolts a contrasting color.

B2l. Only NH swayback or Ford "F" swayback carburetors allowed. Carburetor must be complete, including choke butterfly. [The Association's 0.710" gauge](#) MUST NOT go through the carburetor from either side.

The club's [W gauge](#) shall not pass from the choke side of the carburetor. [Carburetor must conform to the diagram as printed.](#) No material can be added to the interior of the carburetor.

B2n. Only Model T type wire wheels, Model T type wooden spoke wheels, Model T type disk wheels, Model T type aluminum spoke wheels, Model A 21" wire wheels, or 30 by 3 1/2" wire wheels are allowed.

B2o. Only stock Model T or Ruckstell rear-ends and axles with:

- standard eleven tooth pinion
- forty tooth ring gear
- stock roller bearings
- Ruckstell rear-ends must be locked in high.

B2p. Cast iron or aluminum pistons of stock Model T type required. Cast iron pistons must have a full set of .250" width rings in place. Aluminum pistons must have two (2) .125" width compression rings and one (1) 0.1875" width oil ring in place. Pistons must conform to the attached diagrams. [Refer to Illustration for Piston Dimensions](#)

B2q. There must be one stock piston, rod and cap assembly in the engine. Exceptions: Cap may be drilled for dipper, and grooved for oil. The other three (3) assemblies can be balanced to this one. Piston is not to exceed a height of .400" above the head gasket.

B2r. Rods must be Model T Ford script. Maximum center to center distance of 7.030" measured from center of rod journal to center of wrist-pin.

B2s. Any cast iron original Ford script head is allowed, but the combustion chamber is limited to 270cc minimum. The head will be measured without the head gasket, without spark plugs, and the spark plug holes will be plugged with clay to be flush. One stock combustion chamber is required, the other chambers to mimic the stock chamber. No material can be added to the combustion chamber to equalize.

B2t. The crankshaft must be Model T Ford Script with a stock stroke of four (4) inches +/- .030. Chroming, hardening or grinding of journals allowed, not to exceed 1.250" maximum or 1.208" minimum diameter.

B2u. For all valves use a minimum stem diameter of 5/16", a maximum head diameter of 1.500" and seating face of 45 degrees. Use either pins or two-piece keepers. Radiused, 45 degree or three angle seat grinds allowable.

B2v. Any cam that doesn't require modification of the block may be used. Bearing bores must be standard size, no relieving of the bearing bores.

B2w. Adjustable flat tappet lifters (push rods) of stock dimensions, stem oversize to 1/32" allowed.

B2x. Only stock Model T Ford and Model A Ford valve springs are allowed.

## C. NON-OPTIONAL ITEMS

- C1. \* Emergency brakes must be in good working order.
- C2. \* All transmission bands must be in good working order.
- C3. \* Complete set of floorboards required.
- C4. Rebuilt or new radiators allowed. Must be built to stock dimensions including tanks and side brackets.
- C5. No modifications of the inside oiling system allowed.
- C6. Non-Model T style and size tops not allowed.
- C7. Throat of carburetor may be smoothed as long as the Association's .710" gauge does not pass. No altering of the basic design of the carburetor allowed. Carburetor must be complete including all butterflies, adjusting needle, and stock spray needle. Choke and throttle rods must pass a visual inspection for stock uniform shaft dimensions with no obvious modifications. Butterflies must be original size.
- C8. Bolts on wishbone at rear of pan must be safety wired. Front wishbone accessory braces on pre-1920 cars allowed. Use standard wishbone sizes.
- C9. Use stock configuration spring sets with a minimum of seven leaves per spring set.
- C10. External auxiliary accessory type brakes are not allowed.
- C11. Belly bands are allowed and if the motor mount breaks the car takes the standard penalty. The belly bands cannot be used for support at any time.
- C12. Accessory pan arms are not allowed except for as an emergency repair while under time.
- C13. Steering dampeners are not allowed.
- C14. Ignition battery must be 6 volt type.
- C15. Accessory battery charging devices must be disconnected.
- C16. Battery disconnect switches and fuses are allowed in the primary circuit, excluding the ignition system.
- C17. Original type ignition switch required.
- C18. Cylinder bore not to exceed 3.825" maximum or 3.750" minimum
- C19. Counter-balanced crankshaft not allowed.

#### D. ITEMS WITH OPTIONS

- D1. Optional equipment must serve the original purpose and no other purpose.
- D2. Optional equipment includes:

- Balancing of rotating parts
- Band material type
- Body color
- Bronze or roller thrust washers and neoprene seals on Model T or Ruckstell rear ends and axles
- Camshaft bearings and seal
- Camshaft gear may be drilled
- Camshaft timing gear material type
- Coil box material type
- Engine splash pans
- Fan use and type
- Fourth main type
- Gas strainers allowed
- Gauges
- Grooving and drilling of the rod bearings and main bearings
- Hardened valve seats
- Hood use
- Hot air stove, original type
- Internal timer material type
- Knurling of piston
- Maximum of one outside oil line allowed
- Muffler use and type
- Multi-piece piston rings
- Neoprene seals use
- Rod bolts and nuts choice
- Shock absorber use and type
- Spare tires and type of carriers

- Stainless steel and swirl polished valves
- Timer ball or needle bearing rollers
- Tops of open cars use
- Transmission oil screen allowed
- Turn signals
- Use and type of high speed clutches, such as Watts and Turbo 400
- Use of offset key between crankshaft timing keyway and the crankshaft timing gear keyway
- "V" type belt and pulleys
- Water pump design and use
- Windshield wiper of any type
- Zerk fittings in place of oil and grease cups

#### E. TIMING AND TEARDOWN RULES

E1. Timing will begin as designated for each car whether or not the car is on the starting line. Starting times can be adjusted at the timer's discretion. If the timers recognize a beneficial savings in time, a lagging car may be sent out ahead of its designated time. Usually this will be discussed with the Directors ahead of time. Time will start for this car when it leaves the starting line.

E2. \* Each car will come to a complete stop before starting at the timer's direction.

E3. Removal of head or pan while at stop (not under time) or on tour day, if tour day occurs during the endurance run, will impose a time penalty of 1 hour. Report this infraction to the inspectors immediately. Removal of head or pan under time must be reported to the inspectors at the first opportunity for replacement of seal.

E4. Changing the carburetor imposes a time penalty of 15 minutes. Report the infraction to an inspector immediately. Replacement carburetor must meet the requirements stated in the Inspection Rules.

E5. Disabled cars will receive slow time for each leg not completed. In addition, cars trailered in on the last day are not eligible for prize money or trophies.

E6. Replacement of complete engine is cause for disqualification.

E7. The top 3 cars will be torn down immediately following the last flag. Additional teardowns will be put to a vote of the Endurance drivers. Endurance drivers will vote to accept or reject items of question.

E8. The first, second and third place cars will be torn down by a panel of five inspectors. The driver in the top position at tear down cannot be an inspector, but the next five place drivers are required to be inspectors for tear

down. If a car is disqualified, the next place lower will be inspected, until three have been found qualified, as per rule #76. All inspectors must vote. Any driver has the right to consult with an inspector on any issues concerning the cars. The five teardown inspectors have final say in what is brought to the vote of the drivers.

E9. The teardown team must ask the drivers present if there are any other items that should be reviewed, before the completion of the teardown. Items brought up will be voted on by the drivers present. If a majority of drivers vote yes, the teardown team will take a look at the item brought up.

*E10. The [Tear-Down Manual](#) is a supplement to printed Rules. If there is conflict then the printed Rules will take precedence.*