



3.1 BAGGERS TECHNICAL SPECIFICATIONS

The following rules are intended to give freedom to modify or replace some parts in the interest of safety, research and development and improved competition between various motorcycle concepts.

EVERYTHING THAT IS NOT AUTHORIZED AND PRESCRIBED IN THIS RULE IS STRICTLY FORBIDDEN

3.1.1 Motorcycle specifications

All Years Harley-Davidson FL Touring

All Years Indian Bagger or Touring

3.1.2 Engine configurations and displacement capacities

Harley-Davidson Motorcycles: originally equipped V-Twin engine with a maximum displacement of 131cc or S&S Twin Cam Engine w/MSO

Indian Motorcycles: Originally equipped V-Twin Engine

3.1.5 Numbers and number plates

The background colors and figures (numbers) for Baggers may be any color but must be strongly contrasting.

- a. All machines must display a 11" wide x 9" tall number plate/sticker on the front fairing and a number plate on each side of the saddle bags.

3.1.6 Fuel

- a. All competitors must use VP Supplied Fuel. Fuel Specification TBA.

3.1.7 Tires

- a. Any publicly available Dunlop (TBD) DOT tire made for the street or racetrack may be used.



3.1.8 Engine

3.1.8.1 Fuel system

- a. The original equipped fuel system must be used.
- b. Air funnels and airbox may be altered or replaced.
- c. Air and air/fuel mixture must go to the combustion chamber exclusively through the throttle bodies.

3.1.8.2 Cylinder Head

The cylinder head must be the originally fitted part with the following modifications allowed:

- a. The cylinder head must begin as a finished production part using originally equipped materials and castings.
- b. Porting and polishing of the cylinder head normally associated with individual tuning such as gas flowing of the cylinder head, including the combustion chamber is allowed. Epoxy may be used to shape the ports.
- c. The throttle body intake insulators may be modified.
- d. The compression ratio is free.
- e. The combustion chamber may be modified.
- f. Valves may be modified.
- g. Valve seats can be modified or replaced for repair.
- h. Valve guides may be modified.
- i. Valves must remain in the homologated location and at the same angle.
- j. Rocker arms (if any) may be modified.
- k. The exhaust air bleed system may be blocked.
- l. Valve springs may be modified.

3.1.8.3 Camshaft

- a. Camshafts may be altered or replaced.

3.1.8.4 Cam sprockets or cam gears

- a. Camshaft sprockets, pulleys or gears may be altered or replaced to allow degreeing of the camshafts.



- b. The cam chain or cam belt tensioning device(s) can be modified or changed.

3.1.8.5 Cylinders

- a. Must be the originally fitted.
 - i. Harley Davidson machines may increase the bore to a maximum total displacement of 131ci.

3.1.8.6 Pistons, rings, pins and clips.

- a. May be modified.

3.1.8.9 Connecting rods

- a. Connecting rod may be altered or replaced.
- b. The center to center (little end to big end) length of the rod must be the same as the original item.
- c. Connecting rod bolts are free but must be of the same weight or heavier, and of the same material as the original bolt or of higher specific weight material.

3.1.8.10 Crankshaft

Only the following modifications can be made to the crankshaft:

- a. Bearing surfaces may be polished.
- b. Surface treatments may be applied to the crankshaft.
- c. Balancing is allowed.

3.1.8.11.1 Crankcase / Gearbox housing

- a. Crankcases must be the originally fitted part with only the following modifications allowed. If the crankcases have an integral cylinder, then the top face of the cylinder may be ground to adjust deck height. Oil Spray nozzles may be modified. No other modifications are allowed (including painting, polishing and lightening).
- b. Only the original or an approved sump Oil-pan (sump) and oil pick up can be used.
- c. Oil breather cover must remain as original, but the internal breather/damper plate can be modified or replaced.



3.1.8.11.1 Lateral covers and protection

- a. Lateral (side) covers may be altered, modified or replaced (excluding pump covers). If altered or modified, the cover must have at least the same resistance to impact as the original one. If replaced, the cover must be made in material of same or higher specific weight and the total weight of the cover must not be less than the original one.
- b. All lateral covers/engine cases containing oil, and which could be in contact with the ground during a crash, must be protected by a second cover made from metal such as aluminum alloy, stainless steel, steel or titanium.
- c. All drain and fill plugs must be lock wired (safety wired). The use of clips is not permitted. External oil filter(s), screws and bolts that enter an oil cavity must be safety wired (i.e. on crankcases) or the oil filter may optionally have a secondary retention mechanism.

3.1.8.12 Transmission / Gearbox

- a. The layout of the transmission shafts must be the same as on the homologated motorcycle.
- b. The gear design and material are free.
- c. Final drive belt systems may be converted to chain type systems.

3.1.8.13 Clutch

- a. Aftermarket or modified clutches are permitted (including plates/springs etc.).

3.1.8.14 Oil pumps and oil lines

- a. The oil pump may be modified or replaced.
- b. Oil lines may be modified or replaced. Oil lines containing positive pressure, if replaced, must be of braided reinforced construction with swaged or threaded connectors.

3.1.8.15 Cooling System

- a. The only liquid engine coolants permitted is water.



- b. Additional radiators or oil coolers may be added.
- c. The original oil/water heat exchanger may be modified, replaced or removed.

3.1.8.16 Airbox

- a. The airbox may be modified or replaced.
- b. Airboxes should be designed to retain oil from the crankcases in the event of engine failure or tip-over.
- c. **Where breather or overflow pipes are fitted, they must discharge via existing outlets. The original closed system must be retained; no direct atmospheric emission is permitted.**

3.1.8.17 Fuel supply

- a. Fuel lines from the fuel tank up to the injectors (fuel hoses, delivery pipe assembly, joints, clamps, fuel canister) may be replaced and must be in such a way that they are protected from crash damage.
- b. Quick connectors or dry break connectors may be used.
- c. Fuel vent lines may be replaced.
- d. Fuel filters may be added.

3.1.8.18 Exhaust system

- a. Exhaust pipes, catalytic converters and silencers may be altered or replaced from those fitted to the homologated motorcycle. Catalytic converters may be removed.
- b. For safety reasons, the exposed edge(s) of the exhaust pipe(s) outlet(s) must be rounded to avoid any sharp edges.
- c. Wrapping of exhaust systems is allowed.
- d. The noise limit for Baggers will be 115 dB/A measured at 3000 RPM. See Art. 2.14 2020 MotoAmerica Regulations for complete sound testing procedure. (with a 3 dB/A tolerance after the race only).

3.1.9.3 Generator, alternator, electric starter

- a. The stator/coil must be the originally fitted parts with no modification allowed.



- b. Motorcycles should self-start on the starting grid in neutral. Push-starting on the starting grid is not allowed, however start line Officials may push start the motorcycle if necessary (in gear).

3.1.10 Main frame and spare motorcycle

- a. During the entire duration of the event, each rider may only use one (1) complete motorcycle.

3.1.10.1 Frame body and rear sub-frame

- a. The main frame must be the originally manufactured and fitted part.
- b. Holes may be drilled on the frame only to fix approved components (i.e. fairing brackets, steering damper mount).
- c. The original position (of engine, steering stem or pivots) is considered as the position in which the production motorcycle is supplied and must be retained.
- d. All motorcycles must display a vehicle identification number punched on the frame body (a proper 'legal VIN')
- e. Crash protectors may be fitted to the frame using existing points or pressed into the ends of the wheel axles.

3.1.10.2 Suspension - General

- a. The suspension products used in the Baggers class must be available to all participants at least one month before the first round.

3.1.10.3 Front Suspension

- a. The front fork in whole or part may be changed but must be the same type homologated (leading link, telescopic, etc.).
- b. The upper and lower fork clamps (triple clamp, fork bridges) and stem may be changed or modified.
- c. A steering damper may be added or replaced with an 'after-market' damper.
- d. The steering damper cannot act as a steering lock limiting device.

3.1.10.4 Swing-arm (Rear Fork)



- a. Swing-arms may be replaced or modified.
- b. A solid protective cover (shark fin) shall be fixed to the swing-arm and must always cover the opening between the lower chain run, swingarm and the rear wheel sprocket, irrespective of the position of the rear wheel.
- c. Rear wheel stand brackets may be added to the rear fork by welding or by bolts.
- d. Brackets must have rounded edges (with a large radius). Fastening screws must be recessed.
- e. Swingarm spindle (pivot) may be modified or replaced.

3.1.10.5 Rear suspension unit

- a. Rear suspension unit may be changed but a similar system must be used (i.e. dual or mono).
- b. The original fixing points on the frame (if any) must be used to mount the shock absorber, linkage and rod assembly fulcrum (pivot points).
- c. Removable top shock mounts may be replaced. If replaced they must retain their homologated geometry.

3.1.10.6 Wheels

- a. Wheels may be replaced, and associated parts may be altered or replaced from those fitted to the homologated motorcycle.
- b. Aftermarket wheels must be made from aluminum alloys.
- c. The use of the following alloy materials for the wheels is not allowed: Beryllium ($\geq 5\%$), Scandium ($\geq 2\%$), Lithium ($\geq 1\%$).
- d. Bearings, seals, and axles may be altered or replaced from those fitted to the homologated motorcycle. The use of titanium and light alloys is forbidden for wheel spindles (axles).
- e. Wheel balance weights may be discarded, changed or added to.
- f. Aluminum or steel inflation valves are compulsory.

Wheel Sizes Front and Rear 17-19"

3.1.10.7 Brakes

- a. Front brake master cylinder may be altered or replaced.
- b. Front brake calipers may be altered or replaced.



- c. Rear brake master cylinder may be altered or replaced.
- d. Rear brake calipers may be altered or replaced.
- e. Brake pads or shoes may be altered or replaced.
- f. Brake hoses and brake couplings may be altered or replaced.
- g. Hydraulic anti-knockback systems may be fitted to the brake lines/caliper.
- h. Brake discs may be altered or replaced. Only Steel (max. carbon content 2.1 wt.%) is allowed for brake discs. Alloys containing beryllium are not allowed to be used for brake calipers.
- i. ABS systems should be removed. If used, the system may not be altered.

3.1.10.8 Handlebars and hand controls

- a. Handlebars, hand controls and cables may be altered or replaced from those fitted to the homologated motorcycle.
- b. Cable operated throttles (grip assembly) must be equipped with both an opening and a closing cable including when actuating a remote drive by wire grip/demand sensor.
- c. Motorcycles must be equipped with a functional ignition kill switch or button mounted on the right-hand handlebar (within reach of the hand while on the hand grips) that can stop a running engine. The button or switch must be RED.

3.1.10.9 Footrest and foot controls

- a. Footrests, hangers/brackets and hardware may be replaced and relocated but the hangers/brackets must either be mounted to their original frame mounting points or another location that does not require the modification of the frame.

3.1.10.10 Fuel tank

- a. The fuel tank must conform in principle to the homologated appearance and location of the original tank.

3.1.10.11 Fairing / Bodywork

- a. The fairing, mudguards and body work must conform in principle to the homologated shape as originally produced by the manufacturer. Material is free. Headlights may



be included even when considered external. All glass and plastic lenses should be covered by a clear vinyl or a vinyl replicating the look of the lens.

a. Harley Davidson:

- i. If the VIN # indicates the motorcycle came equipped with a fairing it must conform in principle to the OE original appearance. Batwing or Road Glide fairings are acceptable on either model motorcycle.
- ii. If the VIN # indicates model does not come equipped with a front fairing, an OE and or aftermarket option from the Drag Specialties catalog must be used.

b. Indian Motorcycles:

- i. The OE fairings should conform in principle to the original appearance

b. The windscreen may be replaced.

c. It is **required** that a lower catch pan /belly pan be constructed to hold, in case of an engine breakdown, at least half of the total oil and engine coolant capacity used in the engine (min. 5 liters).

d. The saddlebags must conform in principle to the homologated appearance remaining stock size, position height may be altered a maximum of 4". Material is free.

3.1.10.12 Seat

a. Seat may be altered or replaced.

3.1.11 The following items MAY BE altered or replaced from those fitted to the homologated motorcycle.

- a. Any type of lubrication, brake or suspension fluid may be used.
- b. Gaskets, seals, and gasket material.
- c. Bearings (ball, roller, taper, plain, etc.) of any type or brand may be used.
- d. Fasteners (nuts, bolts, screws, etc.), but internal engine bolts must remain of standard homologated materials or materials of higher specific weight.
- e. Thread repair using inserts of different material such as helicoils and timeserts.
- f. External surface finishes and decals.

3.1.12 The following items MAY BE removed

a. Instrument and instrument bracket and associated cables.



- b. Tachometer.
- c. Speedometer and associated wheel spacers.
- d. Chain guard.

3.1.13 The Following Items MUST BE Removed

- a. Rear-view mirrors.
- b. Horn.
- c. License plate bracket.
- d. Toolbox.
- e. Safety bars, center and side stand brackets welded to the main frame may be removed. If the side stand is not removed it must be held in the up position by a secondary device.

3.1.14 Timekeeping

The team acknowledges and agrees to purchase a transponder, exclusively of the model/type indicated by MotoAmerica, to be used for the automatic time keeping during the entire championship season.

- a. The MotoAmerica official timing is already equipped with the latest X2 technology. Our timing system is able to detect both old (TranX) and new (X2) transponders.
- b. The allowed MyLaps (<http://www.mylaps.com/en>) transponders will be the following:
 - i. TranX series (old)
 - ◆ Mylaps TranX Pro transponder with 12-volt connection (10R037) *
 - ◆ Mylaps TranX Pro transponder (10R036)*
 - ◆ Mylaps TranX 260 transponder (10R027CB)
 - ◆ Mylaps TranX 260 direct power transponder (10R018CB)
 - ii. X2 series (new)
 - ◆ Mylaps X2 Subscription
 - ◆ Mylaps X2 Pro (10R201)
 - ◆ My Laps X2 Pro Plus Transponder, including battery backup (10R200)