2016 Rule(s) Bulletin

Bulletin: 2016 – 4 – March 30, 2016

The following is a revision to the 2016 World of Outlaws Craftsman Late Models Series and DIRTcar Racing Late Model rulebooks. Refer to the published 2016 book for complete rules.
Please note: this document is intended to circulate the changed portions of the complete rules effective the date above.

15.8 Rear Suspension & Suspension Components

A.) General

1) Rear suspension designs and applications are constantly evolving. Although the intent of the rear suspension rules are an attempt to accommodate the majority of suspension and suspension component designs and applications currently being used in competition, the rules cannot be absolute. Any and all new designs or modifications to an existing suspension and/or suspension component must be communicated to and approved by the Series Director before being used in competition.

2) Rear suspension must utilize either coil or leaf springs.

3) Rear suspension configuration used on current and new chassis(s) must be the design commonly known as four (4) link. Older cars currently competing with other rear suspension designs will be allowed to compete until further notification at the discretion of the Series Director**.**

B.) Rear Suspension Frame Mounts

1) The frame/roll cage structure must have integral welded mounting brackets for the attachment of rear suspension components. Frame suspension mounts may be welded or bolted securely (without any movement) to the frame/roll cage structure.

2) The only materials used to fabricate frame suspension mounts that will be permitted are magnetic steel or aluminum.

3) Frame suspension mounts may be either a single or double shear configuration for mounting suspension components.

4) Single shear frame suspension mounts must be a minimum of 1/4 inch in thickness. Double shear frame suspension mounts must be a minimum of 3/16-inch thickness on both sides of the mount.

5) All frame suspension mount component mounting holes must be round and sized correctly for the fastener being used. Clearance between the fastener and the mounting hole must not exceed the next fractional drill size. Example: 1/2-inch fastener, 33/64 inch mounting hole.

C.) Axle Housing Mounts

1) Only one (1) axle-housing mount per side will be permitted.

2) Axle housing mounts may be a solid (welded) type or a floating type (birdcage) design.

3) The final assembled axle-housing mount must be a one (1)-piece mount. When a floating type mount (birdcage) is fabricated using two (2) pieces, the two (2) pieces must create a common one (1)-piece pivot (barrel). The two (2) pieces must be fastened or welded together to prevent independent movement of the two (2) pieces. The axle-housing mount must attach directly to the axle tube with clearance only to permit rotation of the entire mount. Fore, aft or vertical movement of the mount or the axle housing within the mount will not be permitted.

4) The only materials used to fabricate axle-housing mounts that will be permitted are magnetic steel or aluminum.

5) Mounts for suspension attaching (radius) rods must be an integral part of the axle-housing mount. The mounts may be either a single or double shear configuration. When using a single shear configuration, a minimum thickness of 1/4 inch for magnetic steel or 1/2 inch for aluminum is required. When using a double shear configuration, a minimum thickness of 3/16 inch for magnetic steel or 1/4 inch for aluminum is required. Dynamic movement of any mount other than a rotational and pivoting movement as a result of suspension travel will not be permitted.

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6) Unless otherwise authorized by the Series Director, the mounting of any component(s) other than suspension attaching (radius) rods or shocks will not be permitted on the axle housing mounts.

D.) Rear Suspension Attaching (Radius) Rods

1) A maximum of two (2) attaching (radius) rods per side will be permitted.
2) The only materials used to fabricate attaching (radius) rods that will be permitted are magnetic steel or aluminum
3) Attaching (radius) rods may be solid or tubular material. The material may be round or hexagon in shape.
4) Spherical rod ends or steel clevises must be used at the end of each rod for pivoting, static length adjustment, and mounting. Bushings of any type will not be permitted.
5) The final assembled attaching (radius) rod must not have the capability to change length dynamically by any means or devices.
6) Spherical rod end sizes may be a minimum of a 5/8-inch rod end body with a 1/2 inch bearing to a maximum of a 3/4 inch rod end body with a 3/4 inch bearing.
7) In all applications, the correct size fastener must be used when mounting the spherical rod end to a bracket (example: 1/2 inch fastener must be used with a 1/2 inch bearing and mounting hole). Metal step spacers will be permitted to reduce the hole size of the spherical rod end bearing.
8) Attaching (radius) rods must mount directly to the frame suspension mount at the forward end and to the axle-housing mount at the rearward end.
9) All rear suspension fasteners must be magnetic steel with a minimum diameter of 1/2 inch. The use of grade 8 fasteners is highly recommended. All fasteners must be correctly sized for the component and application of use.
10) When rear suspension assembly is completed, the attaching (radius) rods must have a minimum of eight (8) inches between the pivots at both the frame suspension mount and the rear axle-housing mount.

E.) Rear Droop Limiter

1) One (1) droop-limited chain per side will be permitted.
2) The droop limiting chain may incorporate bump stops and/or springs.
3) The droop limiting chain must attach to a collar or bearing type mount on the rear axle tube and to the frame assembly directly above the lower mount. Chains to the rear axle mount (birdcage) will not be permitted.
4) Droop limiting chains must be mounted so that when taunt they are as close to vertical as possible.

F.) Torque Control Devices

1) Lift arm assemblies and pull bars will be permitted.
2) Only one (1) torque control device may be used.
3) Lift arms must attach to the axle housing using a mounting configuration that prevents any movement between the lift arm and the rear axle housing. A gusset or brace bar to prohibit side-to-side flex will be permitted.
4) The forward end of the lift arm may use a spring over shock assembly (5th coil), a spring or bushing, and a limiting chain.
5) Pull bars may be adjustable on both ends; however, the adjustments must remain fixed during competition. Adjustors within reach of the driver will not be permitted.

G.) Rear Springs

1) Coil springs or leaf springs will be permitted.
2) Coil springs must be manufactured from magnetic steel. Leaf springs must be manufactured from either magnetic steel or approved composite material.

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15.8.1 Shock Absorbers

A.) Shocks are intended to dampen and help control spring frequencies in both the compression and rebound motions. The amount of force applied to move the shock piston and shaft assembly may be varied with the option of shock "builds" however the piston and shaft assembly must have the ability to move in both directions.

B.) Mono-tube, single piston, nitrogen gas charged shocks will be permitted. All shocks must utilize mechanical oil controls, such as: spring shim(s), drum and disc(s), check ball and spring, needle and seat for internal and external shock adjustments. Magnetic and/or electro-magnetic controls are not permitted. Remote nitrogen gas reservoirs will be permitted. The remote reservoirs may contain a compression adjustor. Adjustments described above are the only shock adjustments that will be permitted.

C.) Shock adjustments while the vehicle is in motion will not be permitted.

D.) Shocks and shock components may only be manufactured from steel or aluminum.

E.) Rotating parts will not be permitted inside or mounted to the shock absorber. Inertia/gyro style shocks are not permitted.

F.) Thru-rod shocks will not be permitted.

G.) Unless otherwise authorized, all shocks must be mounted as close to vertical as possible.

H.) Approved shock locations are as follows:

I.) One (1) shock will be permitted at each front wheel

J.) One (1) shock will be permitted at the right rear wheel

K.) Two (2) shocks will be permitted at the left rear wheel. When using only one (1) shock at the left rear wheel, the shock must be mounted behind the rear axle tube. When two (2) shocks are used at the left rear wheel, one (1) shock must be mounted behind the rear axle tube and the second shock must be mounted on top of or forward of the rear axle tube.

L.) One (1) shock will be permitted mid-ship at the front of the lift arm assembly.

M.) One (1) braking shock will be permitted. The shock must be mounted within three (3) inches of the center line of the rear axle center section. This shock must be mounted horizontally.

N.) Prior to introduction into competition a new design shock absorber must be submitted to World Racing Group / World of Outlaws Officials for approval. Shock absorber manufacturers may be required to provide a board of components for inspection and display.

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