

## 2017 Battle of the Bluegrass Rules for

### Work Stock 2.5 Diesel Truck

The *Work Stock 2.5* Diesel class is designed full bodied, four wheel drive pickup trucks. With a wide variety of performance upgrades. **Self-policing class.**  
**Spokesman for class Thomas Carmichael, Ben Stramer and Zack Galcken.**

**Weight: 8000 lb**

**NOTE: 2018 will be a 2.6 Smooth Bore Class.**

**Changes for 2017 are underlined**

#### **Ballast:**

Ballast is permitted. Front hanging weight is permitted. No weights permitted in the cab of truck. No more than 60 in. from center of front axle.

#### **Batteries:**

The Batteries must be securely mounted can be in anywhere, but if in cab must be covered completely.

#### **Body:**

The body must be the OEM truck body including the full bed floor. The body must retain full sheet metal. Metal aftermarket hoods are permitted. Fiberglass hoods must be shielded on the underneath side with sheet metal or aluminum skin a minimum of .060 thick.. The hood must be closed and securely latched while the truck is hooked to the sled. The complete OEM firewall and complete OEM floor pan is mandatory. A factory installed pickup bed or commercial aftermarket bed must be installed.

#### **Brakes:**

Front wheel hydraulic brakes are mandatory and functional.

#### **Chassis:**

The OEM chassis is mandatory. The engine must be in the OEM location for the body used. The vehicle must retain the full OEM chassis. Wheel tubs, back half conversions, tube chassis etc, are prohibited.

#### **Cooling System:**

Radiators must be in stock location and **anti-freeze MUST circulate through the block and the head.**

#### **Compressed Gases:**

**Use of any compressed gases is prohibited. (Nitrous or propane or any other)**

#### **Driveline:**

An OEM transmission and transfer case are mandatory. They must have been an option on a one ton or smaller pickup.

## **Drive Shaft Loops:**

**Any U joint that is visible from the side of the truck must be shielded to contain the Ujoint and end of the shaft. Recommended to be at least six inch wide u-joint shields**

around the rear u-joint constructed of at least ¼ inch steel or 3/8 inch aluminum that will safely contain the u-joint and the end of the rear shaft. All shields must be securely mounted to the vehicle. Driver Restraint System:

The OEM restraint system is mandatory and must be worn.

## **Engine:**

The engine is limited to a stock appearing, OEM compression engine, available from the factory in a one ton or smaller truck. Cubic Inch limit of 444 CI. Water pumps may be electric or factory. Electric cooling fans are permitted. **No deck plate motors allowed.**

## **Exhaust:**

All vehicles must be equipped to direct exhaust upward. The exhaust must exit rearward of the driver's compartment. Stacks exiting through the hood or fender wells are prohibited. If the muffler or catalytic converter have been changed from stock, two (2) 3/8 inch diameter bolts must be installed through exhaust pipe in a cross pattern within

one (1) inch of each other and as close to the turbo as practical. **This will be teched.** Bolt heads welded to the pipe, or sheet metal screws to mimic this will be grounds for disqualification.

## **Fire Extinguisher System:**

A fire extinguisher system is permitted, it must be securely mounted All vehicles are recommended to have at least a 2 ½ lb extinguisher with working gauge securely mounted within drivers reach.

## **Fuel:**

The fuel must be pump #1, #2 diesel, or Soy/Biodiesel. Must be commercially available fuel. Fuel cells may be used in place of regular fuel tank. **Can be mounted anywhere but the cab.**

## **Fuel Injection Pump:**

The fuel injection pump is limited to cylinder number specific (I.E. 6 cylinder pump on 6 cylinder motor). The use of multiple high pressure common rail fuel pumps or HPOPs are permitted. The P pumps that are allowed are the p3000 and the p7100. Ag governors are allowed. No Sigma or 12 cylinder pumps allowed.

## **General Rules:**

All vehicles/drivers must comply with general rules.

## **Harmonic Balancer:**

All engines turning more than 4500 RPM must be equipped with a harmonic balancer or dampener meeting SFI Spec 18.1.

**Hitch:**

The hitch may be a receiver style hitch, reinforcements are permitted. **Trick hitches will be determined by the Tech Official.** The hitch must be horizontal to the ground and stationary in all directions. Bumper maybe notched or removed. The hitch's height from the ground may not exceed 24 inches. The hooking point must have a minimum of 3 inch by 3 ¾ inch inside opening for the sled hook **and can't go above the frame.** The hooking point must be a minimum of 44 inches from the center of the rear axle to the hooking point. The hooking point will be where the hook touches metal. That is the hooking point. May have drawbar type hitch. No part of the hitch can be above the frame rails. **Drawbar angle must not exceed 25° angle from the pivot point to the hook point.**

**Intercoolers:** Only air to air intercoolers are allowed. No types of water to air coolers, no spray bars or water injection allowed. No individual runner intakes manifolds allowed. (Example ZZ custom)

**Interior:**

**Interior may be stripped with just a driver's seat and a dash. Hand throttles are permitted.**

**Kill Switches:**

All trucks are required to have kill switch located on the back of the truck, located near the hooking point. On trucks with an electric injection fuel pumps it must have an electric shut off or disconnect for the injection pump on the back of the truck. For trucks with manual injection pumps they must have an air guillotine of the spring loaded type, no butterfly type to kill the air intake to the engine. It is recommended to have an air shut off on all trucks.

**Rear End:**

Non OEM rear-end housings are prohibited. The rear end housings must have been for a one ton or smaller pickup pick up. Rear axle bolts must be covered by a cap or shield.

**Safety Equipment:**

All drivers must wear a helmet, and a SFI 3.2a approved fire jacket and long pants, not necessarily fire suit pants.

**Steering:**

The vehicle must retain the full, original OEM steering gear box. Additional stabilizers are permitted. Non OEM power assist methods are permitted.

**Suspension - Front:**

The factory suspension configuration must be retained. The upper mounting point for strut assemblies must be in factory location. Adjustable caster/camber pillow ball mounts are permitted. The lower control arm may be strengthened provided factory mounting points are maintained. The lower mounting point for the strut assembly may be modified for improved caster and camber. Strut tower braces, lower tie bars, sway bars, and limit straps are permitted. Traction bars and devices are permitted. Air shocks are prohibited. Must be an OEM front end housing. Final decisions rest with the Battle of the Bluegrass Tech Department.

**Suspension - Rear:**

An OEM style rear end is mandatory. Traction bars and devices are permitted, and welds are permitted for attachment to the frame or axle housing. The rear suspension may be solid. Air bag spring assist and air shocks is prohibited.

**Tires:**

The tires must be DOT street tires, 12.50X35 inch max. Cut tires are prohibited. No chains or studs.

**New for 2017:** No duals allowed period. Four (4) Tires only.

**Transfer Case: Non - OEM transfer cases are prohibited. It must have been an option on a one ton or smaller pickup truck.**

**Transmission - Automatic:**

Non - OEM transmissions are prohibited. Aftermarket torque converters, valve bodies and internal components are permitted. Transmission brakes are prohibited. Any non - OEM floor mounted automatic shifter must be equipped with a spring-loaded positive reverse lockout device to prevent the shifter from accidentally being put into reverse. A functional neutral safety switch is mandatory. Vehicle must not start in gear. All transmission lines must be metallic or high pressure type hose. All vehicles with engines running 4500 RPM or more and using an automatic transmission must be equipped with a transmission shield meeting SFI Spec 4.1 and must be labeled accordingly. A blanket type shield is permitted, it must be appropriately labeled as meeting SFI Spec 4.1 and it must extend from the rear of the engine block and extend rearward to the transmission with a minimum of six (6) inch overlap where it is fastened. All non-blanket shields must incorporate two,(or one per manufactures instruction) ¾ inch by 1/8 inch straps that bolt to the shield on each side and pass under the transmission pan unless the transmission pan is labeled as meeting SFI Spec 4.1. All vehicles with engines running 4500 RPM or more and using an automatic transmission must be equipped with a flex plate meeting SFI Spec 29.1 and be covered by a flex plate shield meeting SFI Spec 30.1.

**Transmission - Manual:**

Non - OEM transmissions are prohibited. A clutch meeting minimum SFI Spec 1.1 or 2.1 is mandatory on all engines running 4500 RPM or more. All manual transmissions must be clutch assisted. Sequential shifters are prohibited. All vehicles with engines running 4500 RPM or more and equipped with a manual transmission must have a flywheel shield labeled as meeting minimum SFI Spec 6.3 or greater. Applications for which an SFI Spec flywheel shield is not available may use a properly attached SFI 4.1 or 4.2 blankets that completely cover the bell housing. It must be attached to the rear of the engine block and extend rearward to the transmission with a minimum of six (6) inch overlap where it is fastened. All transmissions or clutch pedals will have a safety interlock switch so that vehicle will not start in gear.

**Turbocharger:**

T-4 mounting flange is the largest allowed. Turbos must be a true 2.5 charger. No clipped wheels or step down covers. Billet compressor wheels are allowed. A single .200 inch MWE groove maximum allowed. It must be in the neck of inducer bore behind face of the wheel in 2.5 area, no forward facing MWE groove. Inducer bore must be non-removable. All air must go through the 2.5 inducer bore and the MWE groove. The wheel must protrude into the 2.5 bore 1/8 inch. Turbo will be checked with a 2.550 plug or internal calipers. **Throat area of compressor cover may not exceed 5.5 inch diameter.** The 6.4 Power Stroke engine may utilize the factory twin turbo configuration. The driver

will be responsible for making turbo accessible for tech personnel to measure and inspect. If you have any questions regarding turbo rule contact Battle of the Bluegrass Technical Staff.

**In addition to the above rule, competitors may run a 2.6 Smooth Bore Turbo instead of the 2.5.**

**Water Injection:**

Water injection is prohibited. All system components must be removed from truck.

**Wheelbase:**

The vehicle must retain the original factory wheel base and track width. Cab and chassis trucks may not exceed 172 inches center to center of axles. Front dual-wheel spacers may be used only with accompanying positive-offset dually style wheels.