

## **2.8 Rules**

The 2.8 class is designed for full-bodied diesel pickup trucks.

### **Designations:**

2.8 followed by competition number.

### **Weight Breaks:**

8000lbs. Weight is with driver. Minimum weight of 7500lbs.

## **REGULATIONS**

### **Ballast:**

Ballast is permitted. Hanging weights may not extend more than 60 inches from the centerline of the front axle.

### **Batteries:**

The batteries must be securely mounted. They may not be located in the driver compartment or forward of the radiator core support.

### **Body:**

The body must be the OEM truck body, including the full bed floor. The body must retain full sheet metal. Metal after-market hoods are permitted. The hood must be closed and securely latched while the vehicle is hooked to the sled.

### **Brakes:**

Four-wheel hydraulic brakes are mandatory.

### **Chassis:**

The OEM chassis is mandatory. The vehicle must retain the full OEM chassis. Wheel tubs, back-half conversions, tube chassis, etc., are prohibited. Vehicles with other motors/engine location to be accepted by tech committee. The engine must be in the OEM location for the body used.

### **Cooling System:**

Radiators must be in the stock location and be of at least stock size.

### **Credentials:**

All drivers must have a valid state driver's license.

### **Driveline:**

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

### **Driver Restraint System:**

The OEM restraint system is mandatory and must be worn.

### **Driveshaft Loops:**

All trucks must have 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. Any front shaft u-joint that is visible from the side of the truck must be shielded to contain the u-joint and the end of the shaft.

### **Engine:**

The engine block must have been available as a factory option on a one-ton or smaller pickup truck. Engine and Transmissions can be interchanged between brands (Dodge, Ford and GM). There will be no limit on RPM. Aftermarket intake manifolds are allowed.

**Exhaust:**

All vehicles must be equipped to direct exhaust upward. Two 3/8 inch diameter bolts must be placed through the exhaust pipe in a cross pattern within one inch of each other and must be within 12" of the exhaust housing. Hood stacks are allowed.

**Fire Extinguisher System:**

A fire extinguisher system is permitted. It must be securely mounted.

**Firewall:**

The complete OEM firewall is mandatory.

**Floor:**

The complete OEM floor pan is mandatory.

**Fuel:**

The fuel must be pump#1/#2 diesel only. Soy/Biodiesel fuel is permitted. Fuel cells are permitted.

**Fuel Injection Pump:**

The fuel injection pump is limited to stock-appearing. Dual high-pressure common-rail fuel pumps or HPOPs are permitted. Ag governors are permitted on P Pump applications.

**Hitch:**

Trick hitches are prohibited. The hooking point must be the rear-most point on the vehicle and must be rearward of the stock location of the tailgate. The hitch must be horizontal to the ground and stationary in all directions. Bumpers may be notched or removed. The hitch's height from the ground may not exceed 26 inches. The hooking point must have a minimum 3.00 inch wide x 3 3/4 length inside diameter opening for the sled hook. The hooking point must be a minimum of 44" from the center of the rear axle to the center of the hooking point. The hooking point will be measured to the center of the clevis loop.

**Nitrous Oxide:**

Nitrous oxide is prohibited. No other oxygen extenders are allowed. All system components must be removed from the truck.

**Propane:**

Propane is prohibited. All system components must be removed from the truck.

**Rear End:**

Non-OEM rear-end housings are prohibited. The rear end must have been an option on a one-ton or small pickup. Rear axle bolts must be covered by a cap or shield.

**Suspension, Front:**

The upper mounting point for strut assemblies must be in the factory location. Adjustable caster/camber pillow ball mounts are permitted. The lower control arm may be strengthened provided factory-mounting points to chassis are maintained. The lower mounting point for the strut assembly may be modified for improved caster or camber. Strut tower braces, lower tie bars, sway bars, and limit straps are permitted. Traction bars and devices are permitted. The final decision rests with the Platte County Fair Board and St. Joseph Diesel Tech Committee.

***Suspension, Rear:***

An OEM-style suspension is mandatory. Traction bars and devices are permitted; they must be Bolt on only; welds are permitted for attachment to frame or axle housing. Control arms may be strengthened or replaced, provided all original mounting points are retained. Strut tower braces, lower tie bars, sway bars, limit straps, and camber kits are permitted. Blocked suspension is permitted. All rear suspension must use at least one working shock absorber per wheel.

***Tires:***

The tires must be DOT street tires. Cut tires are prohibited.

***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. Any non-OEM floor-mounted automatic transmission shifter must be equipped with a spring-loaded positive reverse lockout device to prevent the shifter from accidentally being put into reverse gear. A functional neutral safety switch is mandatory. All transmission lines must be metallic or high-pressure-type hose. All vehicles 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 block and completely cover the converter area completely with a six inch overlap where it is fastened. All non-blanket-type shields must incorporate two (or one, per manufacturer's instructions) 3/4 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 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. Aftermarket internal components are permitted. A clutch meeting minimum SFI Spec 1.1 or 1.2 is mandatory on all vehicles. All manual transmissions must be clutch assisted. Sequential shifters are prohibited. All vehicles 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 blanket that completely covers the bellhousing; it must be attached to the block and extend rearward to the transmission with a minimum six inch overlap where it is fastened.

***Turbocharger:***

The vehicle is limited to a single turbocharger; a 2.8 bushing will need to be used if the compressor wheel exceeds 2.8. If a bushing is used, it must be round, at least 3/4 inch long, mounted within 3/4 inch of the compressor wheel, and the inside diameter of the bushing may not exceed the 2.8 inch limit the bushing must be

3/4" in width. If you have any questions regarding the construction of a bushing, contact St. Joseph Diesel Technical Service. The inlet will be measured using a 2.85 inch plug. A stock map width enhancement (MWE) groove is allowed. No MWE groove will be allowed that has a width greater than 1/4 inch. All provisions allowing air to the wheel other than via the bore and the MWE groove are prohibited.

***Water Injection:***

Water injection is permitted. Water lube permitted. No other additions allowed.

***Wheelbase:***

The vehicle must retain the original unaltered factory wheelbase and track width. Front dual-wheel spacers may be used only with accompanying positive-offset dually-style wheels.