



## COMPACT DIESEL RULES 600kg class

### A. Chassis

1. A one piece frame extending from front to rear axle housing mounting bolts.
2. The front wheels must be in line with the rear wheels

### B. Frame / Shielding

1. Max. wheelbase 1,620mm
2. Max length of 2,000mm from centre of rear wheel to forward most portion including weights and weight racks.
3. Max width 1,350mm measured from outside tread to outside tread.
4. Max width of frame 420mm.
5. Max width of hood 450mm till 50mm under the top of the hood (the side shielding 30mm wider each side). The total width of hood and side shielding to be not more than 510mm.
6. Tractor must have hood, grill and fenders as intended by the original manufacturer on smaller scale, tractor must retain stock appearance.
7. The position of the front axle may not be forward of the grill, unless when copying a stock model that has it that way.
8. The side shielding has to cover the engine compartment totally, with a quick removable fastening.

### C. Engine

1. Engine limited to a maximum of 2500cc.
2. Compact diesel tractors are limited to four cylinder engines and two valves per cylinder.
3. A maximum one turbo is allowed, waste gate must be connected if originally fitted to the engine.
4. Diesel fuel only
5. Standard manufacturer's intercooler permitted (air only will be allowed).
6. Diesel pump must remain stock, as originally fitted to the engine.
7. A conversion from four into two stroke principle is not allowed.

### D. Clutches, flywheels and transmissions

1. Standard automotive clutches are allowed up to a maximum of 4600rpm but must be covered with the following:
  1. Bell housing must be covered 360 degrees in a minimum of 8mm steel or 10mm aluminium and a minimum of 4mm steel or 6mm aluminium front and back side.
2. Automatic transmissions are not allowed
  1. No dual mass flywheel assemblies are allowed
3. All homemade clutches and flywheels must be made of steel plate or billet steel.
4. Flywheel, pressure plate and pressure plate cover are allowed to be made out of aluminium. Only billet aluminium is adequate for pulling applications.
5. Minimum mechanical properties required for both steel and aluminium as follows:
  1. Tensile strength 414 N/mm<sup>2</sup>
  2. Yield strength 275N/mm<sup>2</sup>
6. If homemade clutches are fitted to the above specifications, bell housing shielding can be reduced to 6mm steel and 3mm steel or 4mm aluminium to front and back side.

7. Drawings with measurement of homemade major components, flywheel clutch assemblies etc, must always be with the pulling vehicle and be made available upon tech inspectors request.
  1. **All clutches, standard or homemade, must be inspected annually off the vehicle by a BTPA clutch inspector to certify that they are in a serviceable condition and reported on a BTPA clutch inspection form.**

#### **E. Driveline shielding.**

1. Driveline should be guarded with 5mm steel or 6mm aluminium, the shielding should be round with a max diameter of 50mm larger than the biggest part of the driveline. The uses of cross links (universal joints) are not allowed.

#### **8. RPM regulation**

1. All engines must have a spring on the fuel pump so that the pump goes automatically to idle position when you release the throttle.
2. Engine rpm is restricted to a maximum of 4600 rpm, and will be checked before the class begins.
  - a. No flywheel, clutch or construction may make more rpm than the engine crank shaft.
  3. An rpm sensor must be fitted to the front pulley and wired to a socket on the back of the tractor, which will be supplied with the sensor from the BTPA.

#### **F. Vibration damper**

1. A vibration damper must be retained to the crank shaft by its original bolt assembly.
2. The damper must be shielded 360 degrees with 5mm steel or 6mm aluminium and have a cross piece covering the front opening

#### **G. Exhausts**

1. All exhaust pipes must discharge vertically, height to be a min of 300mm above the bend.
2. All turbo engines must have a minimum of two M8 grade 8.8 bolts through the exhaust pipe in the vertical portion of the exhaust pipe, bolts are allowed to be welded through the pipe, and the head of the bolt must remain for inspection. Bolts to be installed 90 degrees to each other within a max of 20mm apart.
3. Max exhaust diameter of 75mm

#### **H. Fuel tanks and fuel lines**

1. Fuel tanks should be strong and rigidly fixed but should not be mounted to the engine.
4. No fuel tanks or fuel pressure gauges, fuel pumps and/or fuel lines in the driver's compartment. If the fuel tank is located behind the driver a fire barrier is highly recommended.
5. Fuel lines in motor compartments should be shielded with a steel cover.
6. All tractors should have a fuel shut off in easy reach i.e. on a cable to the driver's compartment in the low pressure side of the fuel system.

**I. Kill switches**

1. All diesel engines must have a kill switch which activates the air shut off; the air shut off must have a spring loaded mechanism to positively close the shut off.
2. All diesel engines must be equipped with an emergency shut down and air shut off which can be utilised from the driver's seat.
3. The kill switch must be located in the rear centre, (max 150mm off centre in any direction +/- 400mm above the point of hook).
4. The break away kill switch must have attached to it a min of 25mm diameter ring, and the kill switch cable of the sledge will be attached to this ring.

**J. Engine throttles**

1. All pulling vehicles must be equipped with a dead mans throttle. All throttles working in a forward-rearward direction shall be closed in the rear most position. Must be positive, two way mechanical linkage.
2. All diesel engines will have a visible return-spring on the fuel injection pump lever.
3. No computer controlled electronic fuel management engines are allowed.
4. No traction control devices

**K. Seats and fenders**

1. All tractors must have a strong and rigid seat; the seat may not be behind the centre line of the rear wheels and have a min back cover of 100mm above the bottom of the seat.
2. All tractors must have strong and solid fenders; the construction of the fender must protect the driver from touching the rear wheels with any part of his body.

**L. Stabilizers bar**

1. Two Stabilizer bars must be on all pulling vehicles and in no way attached to the pulling assembly.
2. This device is to have a wheel or skid plate, wheels at least 25mm wide and 100mm diameter, skid plates to be at least 50mm by 75mm. The back side of the skid plate must extend a minimum of 100mm and not more than 200mm behind the rear tyres, measured vertically behind the tyre.
3. Pads or wheels to be no more than 20mm above the ground.
4. Stabilizer bar assemblies must be able to support the weight of the vehicle in the heaviest class pulled so that is completely off the ground.
5. All tractors must have bumpers to prevent them passing over the buck board of the sledge; they should be 150mm high, vertically measured.

### **M. Turbocharger**

1. The turbocharger must be guarded 360 degrees on all compact diesel tractors, open bottom and side of the shielding are allowed under the following conditions:
  - a. Must have a complete closed hood construction
  - b. The shielding must extend on both sides 50mm beneath the turbocharger to the ground.
  - c. The width must extend at least a min of 50mm passed the turbo (axle)
  - d. The shielding must be mounted as close as possible to the turbo, at min 4 points.
  - e. The shielding must ensure that no wheels or other parts of the turbo can leave the tractor in case of a turbo explosion.
2. The shielding may be integrated in to the hood construction if the hood material is made of steel and a minimum of 1.5mm thick, the grill cannot be part of the shielding.

### **N. Tyres**

1. Contests open to pulling vehicles with rubber tyres. No four wheel drive.
2. No dual tyres, or tyres studs, chains permitted.
3. Max tyre size 800mm high and 400mm high outside tread.
4. The Cepek tyre size 31 x 15.50 x 15 is allowed.

### **O Safety**

1. If track officials or tech inspectors feel the vehicle is unsafe they have the right not to allow the vehicle to pull.
2. All pulling vehicles are to be equipped with a min 1kg fire extinguisher, yearly checked, fully charged and within easy reach of the driver.
3. Government approved full face helmets are mandatory; all drivers must wear helmets with a chin strap when pulling.
4. The use of fire suits, including gloves, head-sock and leather shoes is mandatory for all drivers. Fire suits must meet the following specifications:
  - a. A min of one layer fire suit of Nomex 3 or equivalent
  - b. All suits must be in an overall good condition and maybe required to prove age of suit
5. Roll cage dimensions same as the 950kg modified class, but a tube size of 33.8 x 2.5mm in any steel is advised but aluminium material is acceptable.

### **P. Lights / Neutral**

1. A white reverse light must be fitted to the driver's compartment and also to the rear of the tractor.
2. A neutral inhibitor switch is also necessary so no machine may start in gear.
3. A green neutral light is advisory.