

**Chapter 12:**  
**ENGINE LIMITS / Weight compensation (2015/2017)**

**A. General rules**

1. The following limits will be effective for all classes on all levels of competition in Europe on events/pulls sanctioned by the ETPC or affiliated organisation.  
The limits regarding Modifieds, Super Stock, Pro Stock, Modifieds < 950 kg and Trucks are set for a period of three (3) years, effective from January 1, 2015.  
The limits regarding two wheel drives are set for a period of five (5) years, effective from January 1, 2009. Two years before the end of the period, new limits will be set for the next period.
2. Limits will be checked by (ETPC or national) Tech and Safety Board in consultation with the competitor.
3. Violation of limits will be sanctioned:
  - Driver, tractor or any combination thereof, all team members and all parts of the vehicle will be suspended and banned from participation in events or demonstration-pulls, sanctioned by the ETPC or affiliated organisation, for a period of one (1) year and ten (10) days from the date of the last violation.
  - The competitor will lose any prior placings, prize money, contingency money a points and/or event awards at that event.
4. In case of over limited engines on the vehicle, it must be clearly shown that this (these) engine(s) are not running during the pull (e.g. by covering the inlet or outlet).
5. Super Stocks, Pro Stocks and Two wheel drives must have two (2) oil pan bolts with a 2 mm hole in bolt head. These two (2) bolts must be placed on one side of the oil pan, next to each other.

**B. Limits**

**1. Modified classes (>950 kg)**

- modified 2,5 ton: max. 42 engine points
- modified 3,5 ton: max. 57 engine points
- modified 4,5 ton: max. 76 engine points
- modified 5,5 ton: no limits

**Point system for engine combinations in Modified classes (>950 kg):**

**[For OEM-engines first production date before 1955 see point G,H,I and J.]**

**A. Automotive V8, wedge style heads that accepts a stock OEM intake manifold bolt pattern. [billet heads not permitted]**

1. naturally aspirated ..... 8 points
2. max. blower 8-71 with max. 70 % overdrive .....14 points
3. max. blower 8-71 .....19 points
4. single stage turbocharged or max. one charger of any other type .....21 points
5. any other charging system .....23 points
6. max. blower 14-71 with max. 50% overdrive .....19 points

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**B. Automotive V8, wedge style heads without a stock OEM intake manifold bolt pattern [billet heads not permitted]**

1. naturally aspirated ..... 8 points
2. max. blower 8-71 with max 50% overdrive ..... 14 points
3. max. blower 8-71 ..... 22 points
4. single stage turbocharged or max. one charger of any other type ..... 23 points
5. any other charging system ..... 25 points
6. max. blower 14-71 with max. 40% overdrive ..... 19 points

**C. Automotive V8, any other style heads incl. Hemi**

1. naturally aspirated..... 10 points
2. max. blower 8-71 with max. 40% overdrive..... 15 points
3. max. blower 14-71 with max. 40% overdrive..... 19 points
4. max. blower 14-71 or max. one [mechanical driven] charger of any type ..... 25 points
5. max. single stage turbocharged..... 27 points
6. any other charging system..... 30 points

**D. Piston engines other than A, B or C max. 650 c.i. [10650 cc] max. 8 cyl.**

1. naturally aspirated ..... 9 points
2. single stage charged [petrol & diesel] ..... 19 points
3. single stage charged [alcohol] ..... 25 points
4. any other charging system [petrol & diesel] ..... 21 points
5. any other charging system [alcohol]..... 30 points

**E. Piston engines other than A, B, C or D max.1050 c.i. [17200 cc] max. 12 cyl.**

1. naturally aspirated ..... 12 points
2. single stage charged [petrol & diesel] ..... 21 points
3. single stage charged [alcohol]..... 28 points
4. any other charging system [petrol & diesel] ..... 25 points
5. any other charging system [alcohol] ..... 35 points

**F. Piston engines other than A, B, C, D or E max. 1500 c.i. [24570] max.12 cyl.**

1. naturally aspirated ..... 14 points
2. single stage charged [petrol & diesel] ..... 23 points
3. single stage charged [alcohol] ..... 35 points
4. any other charging system [petrol & diesel] ..... 28 points
5. any other charging system [alcohol] ..... 44 points

**NOTE: point G, H, I and J: only for OEM engines first production date before 1955.**

**G. Piston engines other than A, B or C, < 1675 c.i. (27448 cc) (e.g. RR Merlin)**

1. naturally aspirated ..... 9 points
2. single stage charged (petrol and diesel) ..... 15 points
3. single stage charged (alcohol) ..... 19 points
4. any other charging system (petrol and diesel) ..... 17 points
5. any other charging system (alcohol) ..... 23 points

<b>H. Piston engines ≥ 1675 c.i. (27448 cc) (e.g. Allison)</b>	
1. naturally aspirated .....	11 points
2. single stage charged (diesel) .....	15 points
3. single stage charged (petrol) .....	17 points
4. single stage charged (alcohol) .....	22 points
5. any other charging system (diesel) .....	19 points
6. any other charging system (petrol).....	20 points
7. any other charging system (alcohol) .....	28 points
<b>I. Piston engines ≥ 2000 c.i. (32774 cc) (e.g. RR Griffon)</b>	
1. naturally aspirated .....	17 points
2. single stage charged (diesel) .....	21 points
3. single stage charged (petrol) .....	27 points
4. single stage charged (alcohol) .....	35 points
5. any other charging system (diesel) .....	30 points
6. any other charging system (petrol) .....	33 points
7. any other charging system (alcohol) .....	38 points
<b>J. Piston engines ≥ 3500 c.i. (57355 cc), max 42 cyl.</b>	
1. naturally aspirated .....	40 points
2. single stage charged [diesel] .....	44 points
3. single stage charged [petrol] .....	50 points
4. single stage charged [alcohol] .....	57 points
5. any other charging system [diesel] .....	53 points
6. any other charging system [petrol] .....	60 points
7. any other charging system [alcohol] .....	65 points

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### K. Turbine engines

Lycoming T53-L-1.....	9 points
Lycoming T53-L-11.....	11 points
Lycoming T55-L11-D.....	37 points
TurbomecaTurmo III E 3.....	15 points
Rolls Royce Gnome H 1000 .....	10 points
Rolls Royce Gnome H 1200 .....	13 points
Rolls Royce Gnome H 1400-1 .....	15 points
Isotov/Klimov TV2-117 low output version (see remark below) .....	15 points
Isotov/Klimov TV2-117 high output version (see remark below) .....	17 points
Isotov/Klimov TV3-117 (Mi-14 version) (see remark below) .....	19 points
Isotov/Klimov TV3-117 (other versions) .....	22 points

### L. OEM automotive piston engines max. 5000 cc:

*Engine-displacement naturally aspirated with any charging system*

Max. 1000 cc.....	1 point.....	1.5 point
Max. 2000 cc.....	2 points.....	3 points
Max. 3000 cc.....	3 points.....	4,5 points
Max. 4000 cc.....	4 points.....	6 points
Max. 5000 cc.....	5 points.....	7,5 points

### Remarks

- Interpretation of 'single stage charging':
  - Stock supercharger on aircraft and industrial engines.
  - Application of any size blower.
  - Application of any size and number of turbos as long as there is only one pressure stage.
  - Application of any other than OEM mechanical charger as long as there is only one pressure stage.
- Interpretation of 'any charging system':
  - Any combination of superchargers and/or turbochargers in more than one pressure stage.
- Every Isotov/Klimov TV-2 is given 17 points until the ETPC receives information to make a distinction between the versions.
- The maximum number of TV-2 engines in Modified 4,5 ton is four (4) engines.
- Every Isotov/Klimov TV-3 is given 22 points, unless the competitor can prove to the ETPC Turbine Tech Team that his engine(s) is(are) the Mi-14 version. A competitor will get a written notice, that has to be shown on every request from the (ETPC or national) Tech and Safety Board.
- The number of naturally aspirated V8 engines on Modified tractors is unlimited, but in combination with charged engines they get 8/10 points each.
- One factory built-on supercharger is seen as a single stage charger.
- Maximum measurements Roots type blowers (inside measurements)
  - 8-71: length rotorcase: 407 mm (16 inch);
  - width rotorcase: 286 mm (11,25 inch).
  - 14-71: length rotorcase: 483 mm (19 inch);
  - width rotorcase: 286 mm (11,25 inch).Helix restricted to a max. rotor spiral of 6,5 degrees per inch of rotor length.

9. Every engine not mentioned in the point system is illegal as long as there is no approval of the ETPC.
10. Charged engines as in point C :max.2 engines in 2.5 mod. / max.3 engines in 3.5 mod. and max. 4 engines in 4.5 ton Modified class.

\* one engine point = approx. 100 horsepower

\* one cubic inch (c.i.) = 16.3871 cubic centimetres (cc)

## 2. Super Stocks

- Maximum of three pressure stages with a maximum of four turbos
- Maximum engine size 650 c.i. (10650 cc); see chapter 3
- Limited to two valves per cylinder, except when factory-produced with more (in case of a dispute it is

## 3. Pro Stocks

- Maximum of one (1) turbocharger
  - Maximum engine size 510 c.i. (8364 cc) with 2 valves per cylinder\*
  - Maximum engine size 450 c.i. (7374 cc) with more than 2 valves per cylinder\*
- \* see chapter 4

## 4. Modifieds <950 kg: No limits.

## 5. Two wheel drives

Allowed is maximum one (1) piston automotive type engine. An automotive type engine is any engine or its replica available in a passenger car. A replica is considered legal if the original crankshaft fits in het engine without any changes. A maximum of eight (8) cylinders are allowed.

Only methanol or petrol is allowed as fuel.

Engine sizes:

- a. V8 with wedge style heads
  1. with blower: max. 540 cubic inch, max. 2 valves per cylinder
  2. with turbocharging: max. 500 cubic inch, max. 2 valves per cylinder
  3. blower and turbocharging: max. 500 cubic inch, max. 2 valves per cylinder

Limits on valve-angles (wedge style heads):

- angle intake valve: min. 12 degrees, max. 27 degrees
- angle exhaust valve: min. 6 degrees, max 18 degrees

b. V8 with hemi style heads:

1. with blower: max. 500 cubic inch
2. with turbocharging: not permitted

c. Motor with more than 2 valves per cylinder (max. 5):

1. blower and/or turbocharging: max. 360 cubic inch

Other types of charging on any type: not permitted in Two wheel drive class.

## 6. Trucks

- Maximum engine size: 18500 cc.

## Weight compensation:

Giving tractors with lower engine points extra weight, as follows:

2.5 t. modified (new: **light modified**) max. engine points 42.

- 38-42 eng. points: 0 kg extra weight allowed
- 33-37 eng. points: 100 kg extra weight allowed
- 32 or less eng. points: 200 kg extra weight allowed

3.5 t. modified (new: **modified**) max. engine points 57.

- 53-57 eng. points: 0 kg extra weight allowed
- 48-52 eng. points: 100 kg extra weight allowed
- 47 or less eng. points: 200 kg extra weight allowed

4.0 t. modified (new: **super modified**) max. engine points 76

- 72-76 eng. points: 0 kg extra weight allowed
- 67-71 eng. points: 100 kg extra weight allowed
- 62-66 eng. points: 200 kg extra weight allowed
- 57-61 eng. points: 300 kg extra weight allowed
- 56 or less eng. points: 400 kg extra weight allowed

## Additional rules to this weight compensation:

-All tractors with only automotive V8 engines falling under point 1 B and 1 C in the engine limit system not allowed to add any weight.

-Engine configuration and weight can not be changed during the whole season, except with written permission of the ETPC board.

-Tractors equipped with only naturally aspirated engines receive max. compensation in weight.

-ETPC can change compensation weight / points thresholds and blower overdrive on a yearly basis.

2014

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