Danish Street Rod Association Statistics.

Founded: 1995.

Chariman: Jim Jensen.

ESRA representative: Daniel Marslev-Jensen.

Activities:

General assembly: in January or February of each year.

DSRA Nationals: usual in the weekend of week 32, held by local clubs with the support of DSRA.

Technical approval.

Legislation.

For smaller modifications, one has to comply with the rules stated in the "Vejledning Om Syn Af Køretøjer.pdf" (from heron; VOSAK, translated to "Guidance on vehicle inspection" – the danish MOT), where VOSAK's legal ground was set by "Detailforskrifter for køretøjer".

In order to have our cars registered with approved further modifications, Danes have to have a "vehicle repport" from a "Godkendt instans" (approved body – hereafter GI). In 2016, an executive order was given with the rules on how to become a GI, with amendment in 2019: 2016/594:

https://www.retsinformation.dk/eli/lta/2016/594

2019/483: https://www.retsinformation.dk/eli/lta/2019/483

The amendment removed a lot of the old chapter 18.05 in VOSAK, in order to keep it to be about the inspection approval of cars. With 2016/594, with amendments, the rules for modified cars and requirements for GIs were legislated, so modifications done from here on out has to obey these.

How a modified car is approved.

To get a modified car approved, a vehicle report has to be made by a GI. When one start a project, it is therefore best to involve the GI as early as possible, in order to make sure, the modifications to chassis can be approved. The GI makes assessments and the necessary calculations of the critical sections and components, which are included in the vehicle report. This gives the owner/builder free hands to build with any parts, as long as they can be approved in the context.

When the cars is build, with assessments and the necessary calculations along the way, the car has to go through a driving ability test; usually a smaller airfield is rented, where the car, along other vehicles, has to pass a series of practical tests, as stated in aforementioned "2019/483, bilag 1".

The tests are (according to <u>AutoConsult</u>):

- Dobbelt undvigemanøvre (double evasive maneuver),
- kurvekørsel (cornering at certain speed),
- kurvekørsel med bump (cornering with bump at certain speed),
- kørsel til tophastighed (driving up to top speed),
- kørsel til tophastighed med ubalance for kontrol af egensvingninger (driving up to top speed with imbalance to control eigenvibrations).



Cones are set up to give the lanes, pieces of lumber to illustrate curbs, etc., and the car has to be perform satisfyingly, or go back and rectify the cause, and try again – but that is rarely the case, if people follow the instructions from the GI.

Currently, the only - to my knowledge - GI certified to approve hot rods, is <u>AutoConsult</u>. On their FB page, they have shared some videos of some of the stages of a driving test: <u>double evasive maneuver (from passengers seat)</u>, <u>double evasive maneuver (from outside)</u>, <u>cornering at certain speed</u>, <u>cornering with bump at certain speed</u>, <u>driving up to top speed (with overflowing radiator)</u>.

Classification of modifications

This is a short overview, for further technical details, please see the references.

In <u>2019/483</u>, <u>bilag 1</u>, the modifications are divided into the categories below, with different degrees of extent, and the requirements for approval – for hot rods, they often end up in section K, as they deal with several of the categories.

A. Power increase:

- 0-20%
- 20-40%,
- 40-100% or max 20kW/100kg,
- +100% or +20kW/100kg.
- B. Enhancement of top speed
- C. Replacement of wheels
- D. Replacement of springs, shock absorbers and anti-roll bar
- E. Replacement of braking system
 - A calculation of brake rotor is possible (section A.2.2.1), as a way to avoid the brake fading test.
- F. Replacement of suspension components
- G. Modification of body or chassis
- H. Replacement of steering wheel
- I. Conversion to hearse
- J. Conversion of VW Type 1 to buggy or similar
- K. Composed/compound/put together car

A car is designated "composed car", if:

- Monocoque body/chassis is unchanged except necessary brackets and three or more changes has been made,
- Modified monocoque body/chassis and two or more changes has been made.

The changes are:

- If front suspension is changed from another model or manufacturer.
- If rear suspension is changed from another model or manufacturer.
- If steering components is changed from another model or manufacturer.
- If engine is replaced with a different number of cylinders, or cylinder configuration (straight/ V/ etc.).

Technical weighted average year

One of the things, which needs to be calculated, is the technical weighted average year (from hereon; TWAY), in order to determine, which year of the inspection rules apply, and for taxation – see below.

Example: A, in 2020, modified 1932 Ford frame, is equipped with a '31 Ford Tudor, TCI ifs (based on '69 Camaro components), '65 Jaguar irs, '82 Landrover steering box, brake system based on aforementioned '69 Camaro and '65 Jaguar parts (average '67), and a 1971 sbc. This gives following year: 1963.

 $(((1932+2020)/2)*3 + 1931*3 + 1969*1 + 1965*1 + 1982*1 + 1967*1 + 1971*2)/12 = 1962,1667 \rightarrow '63.$

Inspection

Once a car is approved, the vehicle report should be uploaded to a national vehicle database, where government can access it for details. Here can the vehicle inspection companies also see the details when the car is in for "syn" (the Danish MOT).

Depending on, how the car is registered, it will be called to inspection every 2nd for normal cars or every 8th year for cars registered as vintage.

Taxation.

For 2021 prices, see https://skat.dk/skat.aspx?oid=2302178.

Registration fee

When a car is modified, they often lose their taxed identity, and a new registration fee has to be paid. Here is the TWAY also used to set the registration fee and road taxes, where a similar car from that year is found; reusing the example from above, the taxation authorities look into the taxation of a two-door, 4seater, V8-powered car in '63, which usually gives a (US) Ford or Chevrolet car from that year, and the taxation is then the base for the registration fee for the hot rod.

Road tax

Danish cars, older than 1997, pay road taxes based on their weight, the so called "vægtafgift". For vintage cars, which in Denmark are cars older than 35 years, they pay a reduced road tax, which ¼ of the vægtafgift.

Insurance.

In Denmark, a car has to be insured to be able to register it, and insurance companies are well aware of the low risk of ensuring cars, which have been built from scratch, and therefore the owner takes good care of.

Most have their hot rod insured as a vintage car by their regular insurance company, although a few only allows originals – in those cases, people usually insure through several companies.

Association discounts

DSRA have not negotiated any discounts, as people does not seem to have problems insuring their hot rods.