KPower - Dynorun Tool Version 3.0.9

1. Terms of Use and Program Copyright

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By installing this software, you acknowledge that this program is provided "as it is" and "with all faults, defects and errors" and that all use of the program is at your own full risk.
When generating logging data for this program, keep sure that danger to other traffic is impossible.
The road traffic rules have to be respected and your brain exists to be used.
Operation of the measurement laptop should be done by a second person on the backseat.

2. Functions

The program enables to measure power and torque of your engine by examining the OBD measurement data that can be obtained with the diagnostic software KOBD2Check, VAG-COM, VCDS or GS-911.
You are able to check and rate modifications of your engine e.g. air filters, chip-tuning etc. without expensive dyno runs.

3. Use of the program

You have to generate e.g. with VCDS a suitable log file:
Log your drive e.g. with measurement block 5 and 6 (TDI engine), engine speed and vehicle speed need to be in the log.

How to drive: The "driving cycle" is split in two parts, acceleration and deceleration.
Accelerate with the throttle full open from 1500rpm to the highest engine speed in third or forth gear. Then press the clutch and do nothing else, keep the clutch pressed! Let the engine run idle when your car gets slower.

The road used for measurement should be constant. If you have no suitable road, the measurement can be split in two parts and be put

in the program by hand.

Short description:
- roll e.g. in third gear / 1000rpm to your measurement road.
- start slow acceleration and start logging.
- throttle full open
- at 4500rpm (TDI engines, with petrol engine at the suitable maximum engine speed) press the clutch and let the engine idle.
  Up to this point the acceleration power is measured.
- KEEP the clutch open until the vehicle speed has been fallen to at least ~70km/h (automatic gears: use neutral position).
  Here rolling- and aerodynamic power loss is measured.
- Stop the log file.

Now you can release the clutch and drive normal. It is recommended to change the log file name for each measurement in order to keep sure that only one measurement is within the log.

The logged file can be imported in KPower using the "Import log file" button.
You can also import your log data manually in the data tables or copy them from Microsoft Excel or OpenOffice/LibreOffice.
The values in the tables can be changed by doubleclicking them.

If the program cannot determine the correct parts of the log file automatically, please correct/delete so that only acceleration and deceleration parts remain.

The column names of the CSV log files are preset to our VCDS distribution. If you use other column names or separators e.g. with KOBD2Check, change them in the settings property page of KPower.

4. FAQ

Q:How can I import KOBD2Check logs?
A:Change the column name settings in KPower to the following:
Column name for time:s
Column name for engine speed:rpm
Column name for vehicle speed:km/h
It is important that there are NO spaces before and after the column names if you use KOBD2Check. VCDS standard settings use spaces in some column names.
KOBD2Check is logging very fast, if your curves consists of lots of spikes, reduce the logging speed with further unnecessary values (columns) after km/h.

Q:My curves show spikes, how can this happen?

A:The measurement has not been done correctly, most time there are more than one measurement data in the log file or you did release the clutch too early, braked etc.

Q:The calculated power is much too small/big?
A:Did you insert the correct vehicle weight? Bigger or smaller tires than stock? Correct your vehicle input data or use your brain, read and try to understand this readme again.

Q:My diagram shows an unrealistic hill in lower engine speeds?
A:You did brake too early (braking has been logged) or your road is not constant. Delete wrong log values or do the log again in correct manner.

Q:My diagram shows a "ding" or too small values at that engine speeds where the maximum torque should be?
A:You did the measurement in a too small gear. Give the engine and turbocharger enough time to release its full power.
If you are interested in specific torque areas, you can log them separately in a big gear.

Q:The column names of my log data are not recognized...
A:Type the correct column names and the correct separator in the program settings property page.

Q:Which measurement data needs to be logged?
A:Time stamp, engine speed, vehicle speed. It is recommended to log that a high sample rate of the logging data is achieved.

Q:Can I import data from a calculation program e.g. Microsoft Excel or OpenOffice?
A:Yes, with the "Insert..." buttons on the measurement property page. Select the cell where to insert and press the button.

Q:Power correction according the german DIN shows wrong values?
A:You should NOT change barometric pressure and air temperature when you have an engine with a turbocharger.
Use power correction only with petrol unsupercharged engines.
Supercharged engines change multiple ECU parameters dependent on several temperatures and the barometric pressure in order to remain engine and turbocharger health.
It makes absolutely no sense to use DIN correction here.

Have fun - Rainer Kaufmann