

WLTP DHC subgroup	
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1.0. Introduction

These guidelines are additional to the WLTP-DHC guidelines and should be followed when collecting data in the EU.

2.0. Parameters to be recorded/monitored

The following parameters should be recorded. Those highlighted in grey are optional.

2.1. Vehicle information

Parameter	Example
Vehicle ID	Unique identification number (assigned by Contracting Party), this will act as a unique key in the database
Vehicle category	SR1 definition (1-1, 1-2, 2)
	EU type (M1, N1, etc.)
Engine type	Petrol/Diesel/other (please specify)
Engine displacement	
Curb mass	
Gross vehicle weight	
Transmission	Automatic/manual/CVT
Number of gears	
Maximum Rated power	
Maximum Rated engine speed	
Vehicle make/model ¹	Ford/Focus
Year of first registration	
Emission category	
Maximum rated vehicle speed	
Adaptive speed equipment	Yes/No
Cruise control	Yes/No
Gear shift indicator	Yes/No

¹Mandatory unless in privacy issues

2.2. Journey information

Parameter	Example
Country/Region/City	UK, London
Start date and time of journey	09:00, 08/01/09
Weather conditions ¹	Heavy snow
Vehicle load	100 kg
Driver pays fuel	Yes/No
Driver instructed	Yes/No

¹ Adverse weather conditions (e.g. low visibility) must be recorded

2.3. Continuous information (at least 1 Hz)

Parameter	Measurement equipment
Continuous time signal	
Road type	Urban/Rural/Motorway
Driving period	Peak/Off-peak/Weekend
Time stamp	
Vehicle speed	OBD (and GPS if available)
Engine speed	OBD, photoelectric pick-up, ignition pulsation
Vehicle position (latitude)	GPS
Vehicle position (longitude)	GPS
Vehicle position (altitude)	GPS
GPS number of satellites	GPS
GPS signal quality	GPS
Vehicle acceleration	OBD, GPS, accelerometer
Engine torque/load	OBD
Coolant temperature	OBD
Gear used	OBD
Clutch signal	OBD, assume from engine speed, clutch depression switch
Brake signal	OBD
Recommended gear	OBD

3.0. Data resolution

All continuous data should be collected at a frequency of 1 Hz or greater. Raw data should be recorded and submitted for analysis. Please note that vehicle speed is required with resolution of at least two decimal places (i.e. 25.89 km/hour) to enable accurate calculation of acceleration.

4.0. Reporting format

Data should be reported using the template provided (see reporting_template.xls). Data may be recorded using MS Excel or csv formatted files. Please note that csv

formatted files will be required if large amounts of data are collected (Excel is limited in capacity).

The reporting template has three worksheets; these are described below. Please ensure data are reported using the correct units (e.g. km/hour). Each package of in-use data should be given a unique filename. This filename will act as the identification key, linking the information recorded in the three worksheets. In addition it is required to record a vehicle identification number (this is not the registration number of the vehicle); this vehicle identification number will be used as a second identification key when the data are submitted into the database.

4.1. Measurement equipment

This worksheet should be used to record what measurement equipment was used to record the collected data. For example, vehicle speed may be measured using either GPS data or directly from the ECU.

4.2. Vehicle and journey information

This worksheet should be used to record general parameters such as vehicle parameters and journey details. The general remarks column should be used for any additional comments, in particular it should be noted if the vehicle has travelled along the same route a number of times.

4.3. Continuous information

This worksheet should be used to record those parameters that should be recorded on a continuous basis, e.g. vehicle speed, engine speed, etc.

4.4. Driver information

This worksheet should be used to record information on the vehicle driver. This information is not mandatory; however, it may be useful e.g. when undertaking the gear shift analysis.

5.0. Reporting/submitting data

Raw data should be submitted to [insert address] once ready for data analysis.