

CHAPTER 11
RESULTS OF THE EXPERIMENT
ON FUEL- CONSUMPTION
MEASUREMENT IN ACCELERATION
MODE (FCS-4)

The analysis of variance of the data generated by experiment FCS-4 showed that none of the factors considered in the experiment had any significant influence on fuel consumption during acceleration. Considering that the vehicles were stopped at the beginning of the positive grade and then were accelerated to the maximum until the speed stabilized (steady-state speed), one could tell that the fuel consumption per unit of time would not be significantly different for each vehicle class and factor combination. This was confirmed in the field-data analysis which evidenced that the *volume of fuel per unit of time* ratio remained the same for each class of vehicle, for the different level combinations of the factors considered.

Table 11.1 presents, for each class of vehicle, the estimated mean and standard deviation of fuel consumption, as well as the number of observations and minimum and maximum consumption observed.

TABLE 11.1 - FUEL CONSUMPTION DURING ACCELERATION (FCS-4)

VEHICLE	N° OF OBSERVATIONS	FUEL CONSUMPTION (ml/sec)			
		MEAN	STANDARD DEVIATION	MINIMUM	MAXIMUM
Car	69	2.72	0.11	2.50	2.90
Bus	65	5.85	0.46	4.00	7.60
Utility	143	3.60	0.49	2.10	4.40
Light Truck (G)	66	10.03	0.95	8.40	12.50
Light Truck (D)	69	3.78	0.35	2.80	4.60
Heavy Truck	149	5.80	1.01	2.60	8.80
Semi-Trailer	92	10.08	1.14	7.00	12.80

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