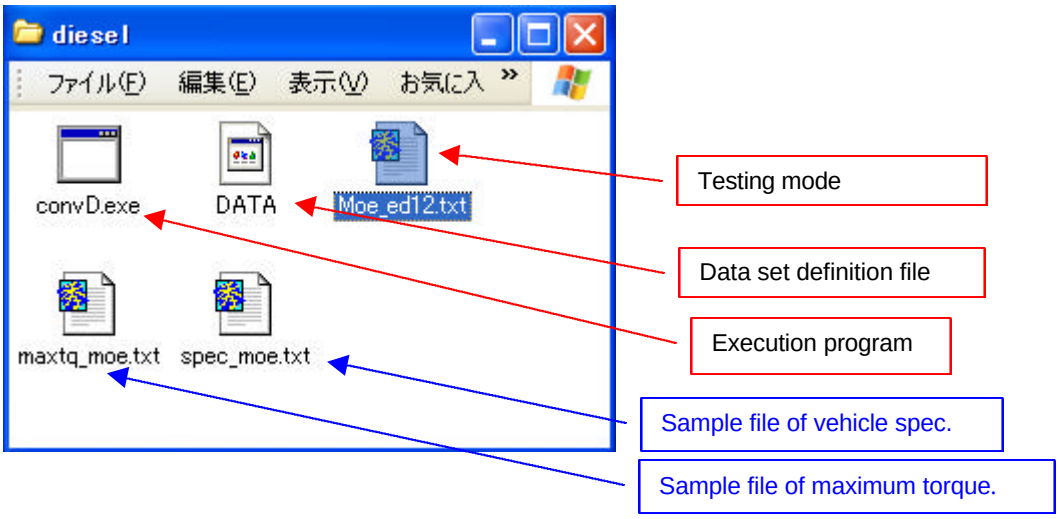
Instruction manual - Diesel Engine -

1. How to use

① Construction of transformation program



② Edit a vehicle specification and maximum engine torque.

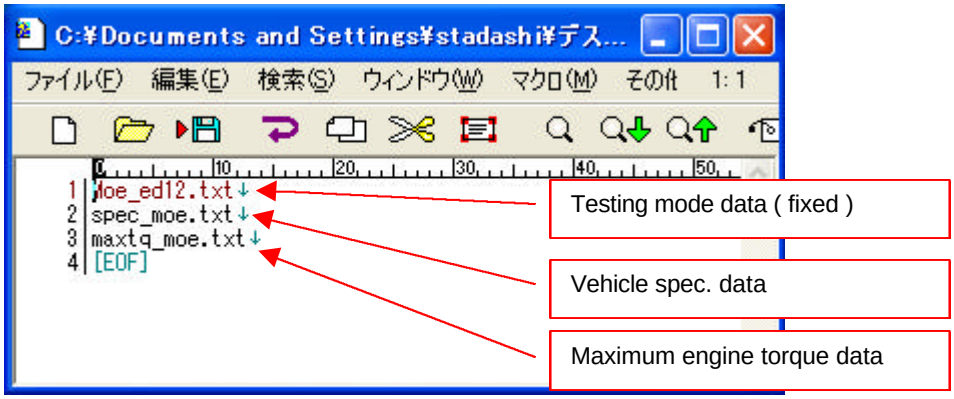
How to edit refers 2.- 3.

Sample file

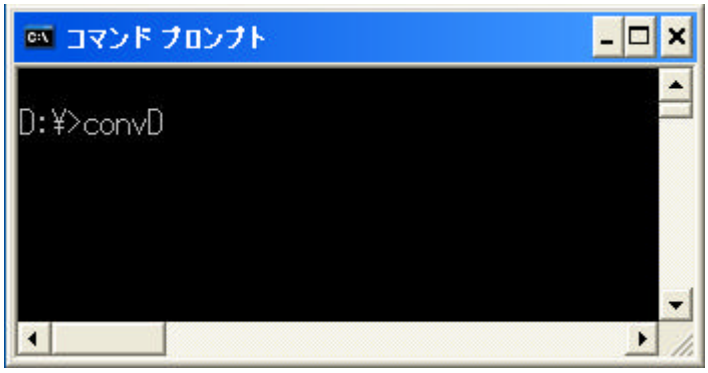
vehicle specification data ：example) spec_moe.txt

maximum engine torque data ：example) maxtq_moe.txt

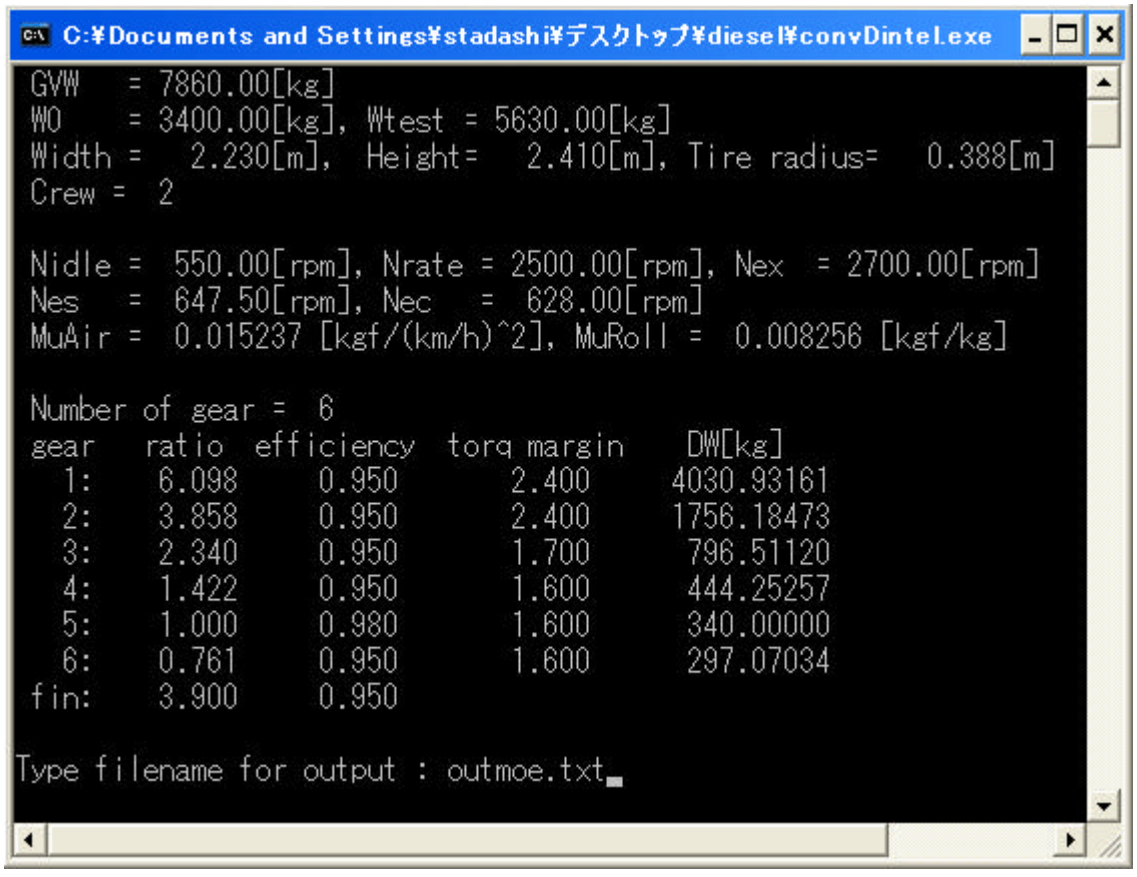
③ Make dataset definition file. **File name must be “DATA”.**



⑤ Execute program **“convD.exe”**.



Designate the output filename



The output data format refers 4.

2. Input data of vehicle spec.

3400	! curb vehicle mass (kg)
4350	! payload (kg)
2	! crew (persons)
2.41	! overall height (m)
2.23	! overall width (m)
0.388	! tire rolling radius (m)
6	! number of gear
6.098	! 1st gear ratio
3.858	! 2nd gear ratio
2.34	! 3rd gear ratio
1.422	! 4th gear ratio
1	! 5th gear ratio
0.761	! 6th gear ratio
3.9	! final gear ratio
550	! idling engine speed (rpm)
2500	! rated engine speed (rpm)
2700	! governed engine speed (rpm)

3. Input data of maximum engine torque

engine speed : 5% normalized engine speed – governed engine speed

rev(rpm)	torque(Nm)
542	482
551	482
559	484
568	489
574	496
583	502
590	506
598	509
605	514
.	.
.	.
2801	366
2809	350
2816	334
2825	320
2833	308
2840	295
2849	292
2855	251
2864	201
2872	157
2879	107
2888	68
2898	24

4. Output data format

time (s)	Vtarget (km/h)	Vreal(km/h)	Ne (rpm)	Te (N-m)	n_norm (%)	T_norm (%)	shift
0	0	0	500.0	0.0	0	0	0
1	0	0	500.0	0.0	0	0	0
2	0	0	500.0	0.0	0	0	0
3	0	0	500.0	0.0	0	0	0
4	0	0	500.0	0.0	0	0	0
5	0	0	500.0	0.0	0	0	0
6	0	0	500.0	0.0	0	0	0
7	0	0	500.0	0.0	0	0	0
8	0	0	500.0	0.0	0	0	0
9	0	0	500.0	0.0	0	0	0
10	0	0	500.0	0.0	0	0	0
11	0	0	500.0	0.0	0	0	0
12	0	0	500.0	0.0	0	0	0
13	0	0	500.0	0.0	0	0	0
14	0	0	500.0	0.0	0	0	0
15	0	0	500.0	0.0	0	0	0
16	0	0	500.0	0.0	0	0	0
17	0	0	500.0	0.0	0	0	0
18	0	0	500.0	0.0	0	0	0
19	0	0	500.0	0.0	0	0	0
20	0	0	500.0	0.0	0	0	0
21	0	0	500.0	0.0	0	0	0
22	0	0	500.0	0.0	0	0	0
23	0	0	500.0	0.0	0	0	0
24	0	0	500.0	0.0	0	0	0
25	4.19	4.19	562.5	952.1	5	88.73	2
26	8.32	8.32	770.3	939.2	21.63	61.32	2
27	12.33	12.33	1141.6	913.4	51.33	50.64	2
28	16.05	16.05	1486.0	850.3	78.88	49.46	2
29	18.74	18.74	1020.3	864.8	41.62	47.56	3
30	20.28	20.28	1104.1	520.7	48.33	28.78	3

note) Vtarget : target speed
Vreal : real speed
Ne : engine speed
Te : engine torque
n_norm : normarized engine speed = (engine speed - idling engine speed)/(rated engine speed - idling engine speed)
T_norm : normarized engine torque = engine torque / maximum engine torque