

For Information

PROPOSAL TO CONTROL IDLING ENGINES

Purpose

At the request of the Legislative Council Panels on Environmental Affairs and Transport at their joint meeting on 27 February 2001, this paper provides the following information:

- (a) Government's internal guidelines on the control of idling engines of government vehicles;
- (b) analysis on the comparison of exhaust emissions between running and idling engines; and
- (c) analysis on the conservation of fuel resulting from control of idling engines.

Government's Internal Guidelines on the Control of Idling Engines of Government Vehicles

2. According to Order 35 of the "Standing Orders for Driving Government Vehicles", government drivers should switch off the engine whilst awaiting. All government drivers and other officers holding a Government

Driving Permit must abide by the Standing Orders when driving government vehicles. An extract of the relevant section of the Standing Order is at Annex A.

Comparison of Exhaust Emissions between Running and Idling Engines

3. A table showing the comparison between exhaust emissions between running and idling engines of different vehicle types is at Annex B.

Conservation of Fuel resulting from Control of Idling Engines

4. According to the information from the website of the City of Toronto of Canada, an idling diesel engine will burn about 2.5 litres per hour and an idling gasoline engine will burn about 3.5 litres per hour. They estimate that ten seconds of idling uses more fuel than restarting the engine.

Environment and Food Bureau

June 2001

Standing Orders
for
Driving Government Vehicles
駕駛政府車輛常規

GLT 18

STANDING ORDERS FOR DRIVING GOVERNMENT VEHICLES [GLT 18A]

1.
 - (a) All Government drivers are abided by these Standing Orders and/or other departmental instructions. Contravention of any of these Orders and/or departmental instructions may result in disciplinary action.
 - (b) Other officers holding a Government Driving Permit [G.F. 8] are also required to abide by these Standing Orders and/or other departmental instructions when driving, insofar as they are applicable.
2. Whilst on duty, driver will carry a copy of these Orders on his/her person at all times.
3. The holder of a Government Driving Permit [G.F. 8] is required to pay for the replacement cost if he/she loses his/her G.F. 8. Upon leaving Government service or if the need to drive Government vehicles ceases, he/she should hand in his/her G.F. 8 to the appropriate officer in his/her department. Failure to do so will render him/her liable to pay for the replacement cost as if he/she had lost it.

ENVIRONMENTAL AWARENESS

35. The engine should be switched off whilst awaiting in order to avoid idling emissions and achieve fuel saving.

Comparison of Emissions from Running and Idling Vehicles

Vehicle Type	Mode of Operation ¹	Exhaust Emissions			
		Carbon Monoxide	Nitrogen Oxides	Hydrocarbon	Particulates
Private car (unleaded petrol)	Idling emission factor ² (g/min)	4.0	0.2	0.31	Negligible
	Running emission rate ³ (g/min)	4.92	0.68	0.39	Negligible
	Difference between running and Idling	0.92	0.48	0.08	Not Applicable
Taxi (diesel)	Idling emission factor ² (g/min)	0.3	0.5	0.06	0.0444
	Running emission rate ³ (g/min)	0.42	0.64	0.15	0.22
	Difference between running and Idling	0.12	0.14	0.09	0.176
Public Light Bus and Light Goods Vehicles (diesel)	Idling emission factor ² (g/min)	0.3	0.5	0.08	0.044
	Running emission rate ³ (g/min)	0.53	0.93	0.29	0.25
	Difference between running and Idling	0.23	0.43	0.21	0.206
Large Bus and Medium and Heavy Goods Vehicles (diesel)	Idling emission factor ² (g/min)	2.0	2.0	0.21	0.042
	Running emission rate ³ (g/min)	3.73	4.92	0.98	0.58
	Difference between running and Idling	1.73	2.92	0.77	0.538

¹ The average speed of the running vehicle is assumed to be 25 km/hr. All the calculations have taken into account the effect of air conditioning.

² The idling emission factors are based on the corresponding USEPA idling emission factors but modified to suit the local vehicle operating conditions.

³ The running emission rates are calculated based on 1998 fleet average emission factors.

⁴ This figure is estimated by the Environmental Protection Department.