

# Proposal tire & vehicle selection for WLTP

DTP10 06-Jun-2012  
JAPAN

# Discussion in DTP9

Class	RRC (kg/ton)	Case-1
1	- 6.5	
2	6.6 - 7.7	⊗
3	7.8 - 9.0	⊗
4	9.1 - 10.5	⊗
5	10.6 - 12.0	⊗ ⊗ ⊗
6	12.1 -	⊗

Lighter



Heavier

Worst [**class**] is selected.

Consider later with CO2 information from ICCT, in case that 2 or more [RRs] are in the worst class.

This part is excluded from DTP discussion due to "Extension Issue".

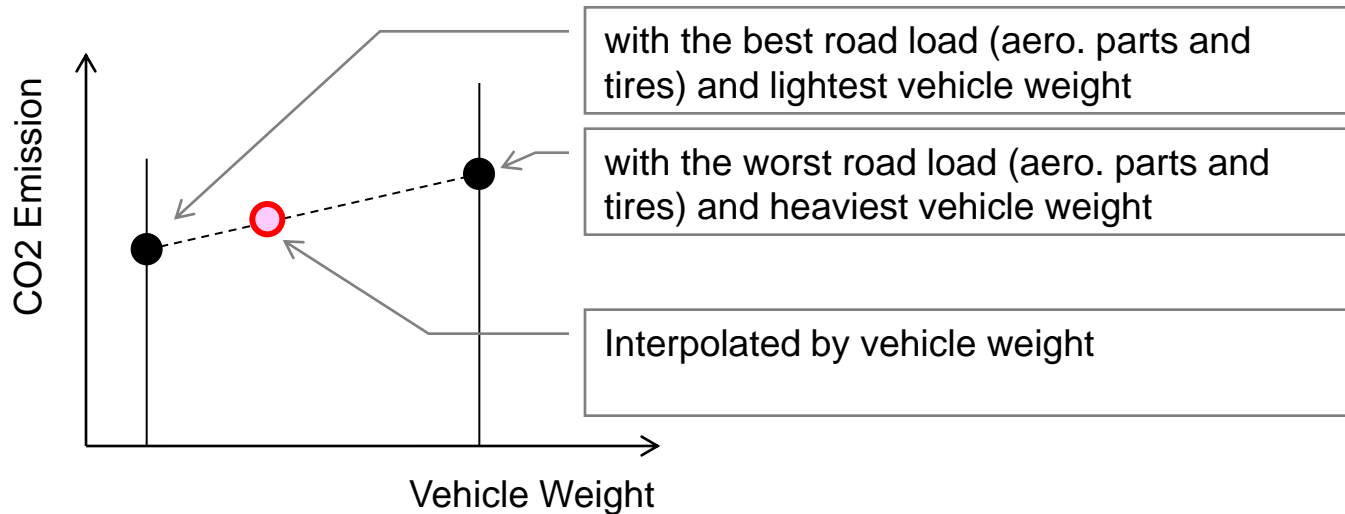
If mass production tyre is classified to heavier class, re-test is required with the worst [class].

Specification change at Mass Production

<<<Homework>>>

Above discussion is only TMH, which the worst case vehicle selection in NL/T&E/ICCT proposal. Japan should indicate their position of tire selection for TML, which the best case vehicle selection.

# Current proposal / Japanese proposal



## Summary of current proposal by NL+T&E+ICCT

- Tested by the BEST and WORST cases, including not only **vehicle weight**, but also **aerodynamic parts and tires**.
- Interpolation by **vehicle weight only** for moderate vehicles.

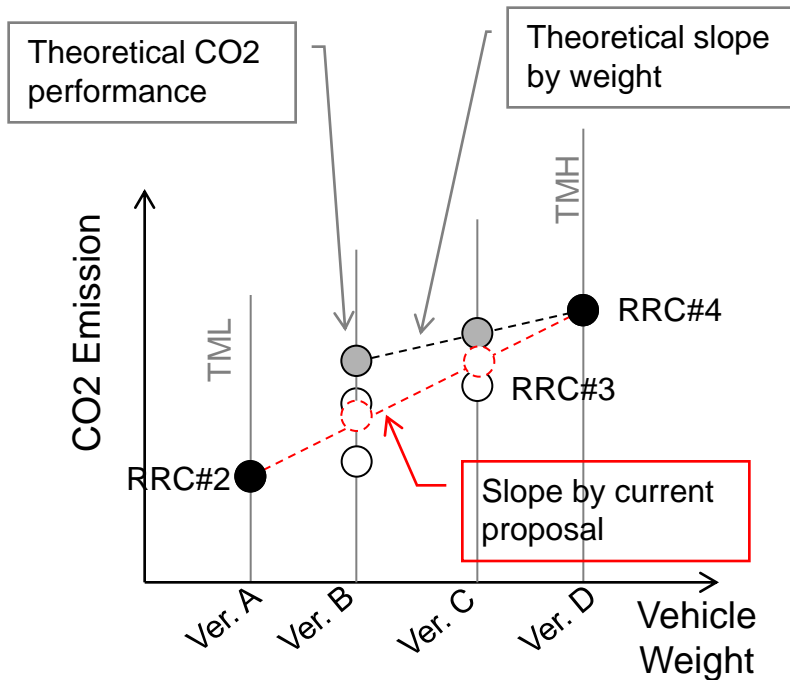
## Question at DTP9

- CO2 from best and worst vehicle weight, aero. parts, and tires can be interpolated by vehicle weight only??? (ICCT has been requested to estimate CO2 impact other than vehicle weight.)

## Japanese proposal

- Interpolation by vehicle weight is **allowed in case of weight difference only**.
- For other difference influenced to CO2 or Fuel Economy, additional tests are necessary.

# Case study - tires



**Sample of specification**

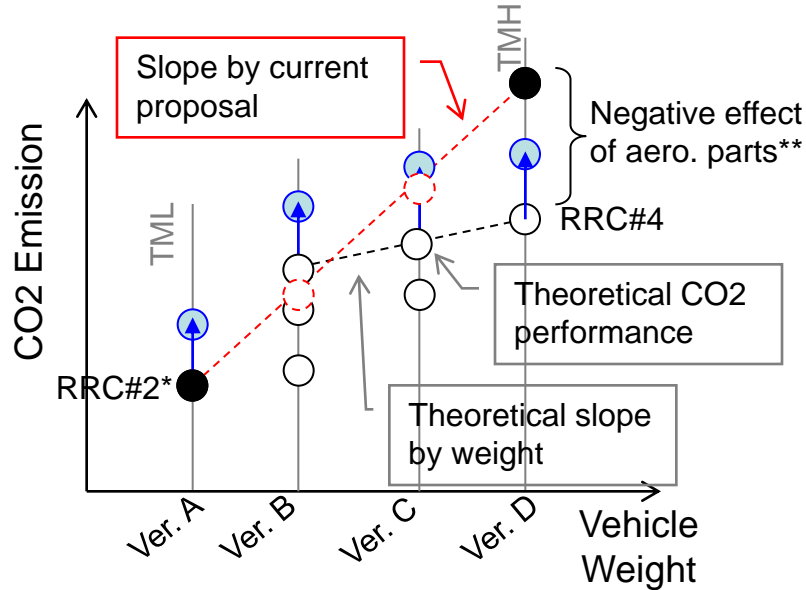
RRC \ Weight	Ver. A	Ver. B	Ver. C	Ver. D
	Lightest	Lighter	Heavier	Heaviest
#2	X	X		
#3		X	X	
#4		X	X	X

Low RR ↑  
↓ High RR

## Concern

- Current proposal could produce CO2 gap since RRC of tire does not correlate with vehicle weight. (Dots of theoretical CO2 performance are not on the line of slope by the current proposal.)
- Japan estimate approx. 2% CO2 impact within a RRC. Interpolation by the current proposal could make some error not negligible.

# Case study - tires & aero. parts



\* with the best aero. Setting  
 \*\* assumed actual impact is 50% of total aero. parts effect (adjusted by blue arrow)

## Sample of specification

Weight	Ver. A	Ver. B	Ver. C	Ver. D
RRC	Lightest	Lighter	Heavier	Heaviest
#2	X	X		
#3		X	X	
#4		X	X	X

Low RR  
 ↑  
 ↓  
 High RR

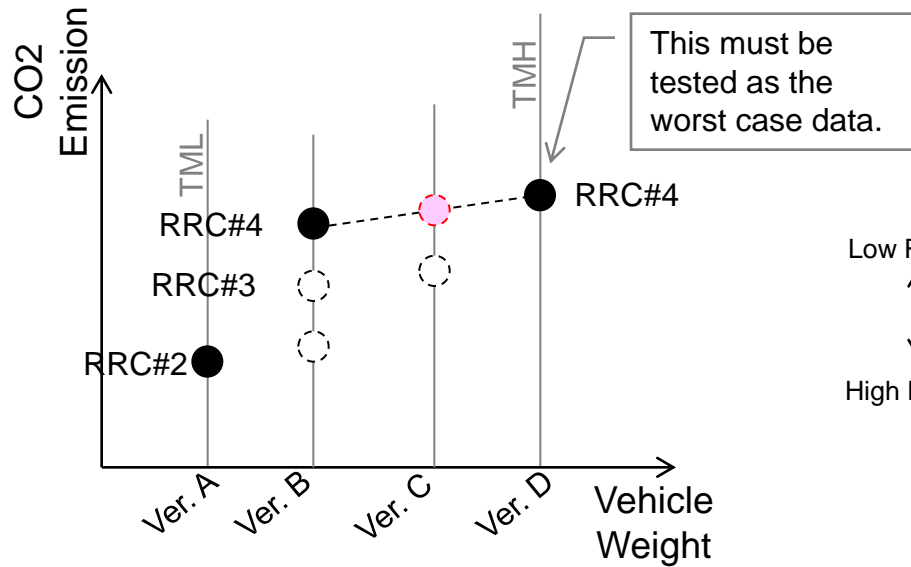
### Adjustable controlled aerodynamic pars:

- Radiator shutter
- Folding front spoiler
- Folding Rear spoiler

## Concern (same as previous slide)

- Current proposal could produce CO2 gap since RR of tire and aerodynamics does not correlate with vehicle weight. (Dots of theoretical CO2 performance are not on the line of slope by the current proposal.)

# Proposal



**Sample of specification**

RRC \ Weight	Ver. A	Ver. B	Ver. C	Ver. D
	Lightest	Lighter	Heavier	Heaviest
#2	X	X		
#3		X	X	
#4		X	X	X

Low RR  
↑  
↓  
High RR

Element		Proposal
Weight		Interpolation is OK in case of weight difference only, or worse data can be used with no additional tests.
Tire		Tested by worst RRC.
Aerodynamics	Electric/Automatic controlled	Tested by the worst case unless authorities approve that the modified road load reflect representative condition of the electric controlled aero. systems.
	Mechanical parts	Tested by the road load with applicable parts, or worse data can be used with no additional tests.