

# JASIC Review on ETRTO Proposed Equations

WTPP

21 December 2021



**JAPAN AUTOMOBILE STANDARDS INTERNATIONALIZATION CENTER**

## Trailer Method

### Normal

	$t_0$	a	b	c	d
JASIC	20	0.98688	-0.00020	0.00039	0.05533
ETRTO	20	0.99655	-0.00124	0.00041	0.06876

### 3PMSF

	$t_0$	a	b	c	d
JASIC	10	0.89538	0.00402	-0.00081	0.09760
ETRTO	10	0.89488	0.00061	-0.00080	0.09217

Correction Equations given by ETRTO, JASIC are similar but not equal.

[JASIC checked and found what are the differences as next page.](#)

### 1) Difference in calculation of $\Delta t^2$

ETRTO and JAISC used different methods to calculate  $\Delta t^2$ .

ETRTO: Square the difference between the average road surface temperature of the dataset and the road surface temperature

JAISC : Square the difference between the reference temperature and the road surface temperature  
(Stated in GRBP-70-20, that was proposed by ETRTO as the basis for the Wet Grip test method)

### 2) The number of digits

The number of digits used by ETRTO for calculations was not fixed.

### 3) Data correction

In the data shared by ETRTO, a correction from the data distributed on 27 September was found.  
(i.e. Adjusted  $\mu$  peak value of N6-1)

### 4) Calculation tools

Different calculation tools may be used.  
JAISC used "excel solver".

#### JASIC can agree ETRTO equations proposal

- The difference between JASIC's and ETRTO's calculations is small
- The calculation process is clearly explained and can be verified

However, JASIC requests WTPP to record the reasons for the calculation differences between ETRTO's and JASIC's officially (for example, in the meeting minutes, or status reports to IWG WGWT).