

# Rule 5 – Taxi meter standards

## Definitions

1. In this Rule, the following applies:

(a) “NIST handbook 44” means the National Institute of Standards and Technology Handbook 44 at [NIST Handbook 44 - Current Edition | NIST](#), as amended from time to time;

(b) “NTEP” means the National Type Evaluation Program administered through the National Conference on Weights and Measures. Or “NCWM”: [National Council on Weights and Measures \(NCWM\)- Certificate of Conformance search](#)).

## Application

2. This Rule applies to licensees granted a special authorization with a designated PDVA: Taxi sector type that have:

(a) Express authorization stating that vehicles may or must “be equipped with a meter that calculates fares on a time and distance basis”, and

(b) Board-approved meter rates.

## Use of taxi meters

3. A taxi meter in a taxi must:

(a) Be capable of calculating and displaying a fare based on time and distance; and,

(b) Have a fare display that a passenger with normal eyesight seated in the rear of the taxi is able to read at all times.

4. A taxi meter must be produced by a qualified taxi meter company.

5. A licensee may only use a taxi soft meter if the licensee:

(a) Only uses taxi soft meter models (including any software updates or hardware modifications) that meet the performance requirements set out in this Rule.

(b) Only installs and operates taxi soft meters that:

i. are programmed with current Board-approved rates;

ii. have hardware and software provisions that protect the rates from unauthorized changes as required in sections 13 to 14, below;

iii. are affixed to the vehicle to the right of the driver and physically secured in the vehicle by hardware;

iv. provide passengers with a printed or electronic receipt at the end of every trip which contains information as required in section 21.

6. A licensee may only use taxi soft meter models that:

(a) Calculate flag rates, distance rates, and time rates at distinct periods of time without overlap;

(b) Have been evaluated and shown to meet the standards and perform within tolerances set out in section 5.54 of the NIST Handbook 44, including the following:

i. section 5.54 (S.1.3) "Visibility of Indications"

ii. section 5.54 (N.1) "Distance Tests"

iii. section 5.54 (N.2) "Time Test"

iv. section 5.54 (N.3) "Interference Test"; and,

v. section 5.54 (T) "Tolerances"

(c) Are installed with a functioning fare announcer that:

i. a driver can easily activate and silence at the request of a passenger,

ii. announces the following in English:

- Upon meter activation: The taxi company name, the unique taxi ID number for the vehicle, and the flag rate;
- During a trip: The trip fare at regular intervals (e.g., every \$1 or \$2);
- When a trip concludes: The total fare, the company name, and unique taxi ID for the vehicle; and,
- If turned off while a trip is in progress: A verbal acknowledgement that the fare announcer has been turned off and that the meter is still running.

7. A licensee using a soft meter with a fare announcer must provide training to all drivers on when and how to use the fare announcer.

8. A licensee using a soft meter with a fare announcer must comply with fare announcer requirements unless otherwise exempted, in writing, by the Board.

9. If a taxi soft meter uses GPS technology to calculate distances and distance rates, the road tests and routes used to evaluate the meter's performance must show that it can operate within NIST Handbook section 44 tolerances despite the following technical challenges:

(a) Canyon effect (e.g., by routes on urban streets with tall buildings 20 stories high on both sides for 3 or more blocks);

(b) GPS signal loss (e.g., by routes with a tunnel at least 500 metres in length); and,

(c) Variable driving conditions (e.g., by routes that include 90° turns, gradual curves, and changes in elevation of 100 metres or more).

10. Upon request, a licensee must provide documentation of the evaluation it undertook to ensure that the taxi soft meter model it selects meets the standards and performance requirements in this Rule.

11. Documentation to meet the requirement in section 10 may include one or more of the following:

(a) Product specifications and performance test documentation that has been provided by the maker of the taxi soft meter;

(b) A report by an independent engineer who reviewed the product, conducted road tests, and evaluated its level of conformance with requirements in this Rule; or,

(c) A Certificate of Conformance issued by a laboratory that is authorized to conduct NTEP evaluations of taxi meters.

## **Adjustment of taxi meters**

12. Taxi meters must be adjusted to calculate the current, Board-approved metered rate accurately.

13. Hardware changes or software upgrades must not affect the way rates are calculated. If the calculation of rates is affected, the licensee must evaluate the taxi meter in accordance with this Rule.

14. Hardware and software provisions must be in place that prevent a vehicle operator from changing the rates or modifying how the taxi meter works in a taxi, except in circumstances described in section 15.

15. Rates programmed into a taxi meter may only be changed by an authorized representative of the licensee:

a. Who has permission to remove and replace physical taxi meter seals to adjust traditional taxi meters or central, password-protected access to program rates for all taxi soft meters in the fleet; and,

b. After the Board has approved a rate change, the Board has provided notice to a licensee of a rates change under Rule 3 [Rate Bands], or the Registrar has ordered changes to meet compliance requirements.

16. The licensee must have access to, and provide to the Board or Registrar upon request, a change log that provides a persistent audit trail of rates that are charged, historical rate changes that have been made, and the person(s) who made such changes.

## **Testing the accuracy of taxi meters**

17. Licensees must ensure that taxi meters in their vehicles are accurate at all times.

18. A taxi meter in a vehicle is considered accurate if:

(a) On a road test, the distance computed by the taxi meter is within 2% of the actual distance travelled, and

(b) On a time test, the time computed by the taxi meter is within 2% of the actual time.

## **Trip start**

19. Subject to section 20, the taxi meter may only be turned on after the vehicle starts moving.

20. A taxi meter may be turned on before the vehicle starts moving if the vehicle has arrived at the pick-up location and one of the following occurs:

(a) A passenger instructs the driver to start the taximeter;

(b) A passenger enters the taxi and instructs the driver to wait for one or more passengers; or,

(c) A driver informs a passenger of their arrival, and after waiting at least 4 minutes, the driver does not see the passenger on the way to getting in the taxi. Note: Drivers of WAVs cannot charge for waiting time during loading or unloading of passengers.

## **Trip end**

21. The meter must be turned off when the taxi arrives and stops at the passengers' destination.

22. A taxi soft meter must generate a receipt in print or electronic form at the end of every trip that must be offered to the payer and that includes the following details:

- (a) Each charge or fee for the trip (including flag rate, total distance charges, total waiting time charges and other rates);
- (b) The total amount paid;
- (c) The date, start time, and end time of the trip;
- (d) The total time for which “time rates” were charged and total distance travelled for which “distance rates” were charged;
- (e) The initial pickup and final drop off locations;
- (f) The company name and taxi number; and,
- (g) The taxi company contact information (phone, URL, or email).

## **Responsibility for costs**

23. Licensees are responsible for all costs associated with taxi meters including their evaluation, inspection, installation, use, maintenance, and removal.