

Table of Contents

Section 5.54.	Taximeters	5-27
A.	Application	5-27
S.	Specifications.....	5-27
S.1.	Design of Indicating and Recording Elements.....	5-27
S.1.1.	General.....	5-27
S.1.2.	Advancement of Indicating Elements	5-27
S.1.3.	Visibility of Indications.	5-27
S.1.4.	Actuation of Fare-Indicating Mechanism.	5-27
S.1.5.	Operating Condition.	5-28
S.1.6.	Fare Identification.....	5-28
S.1.7.	Extras.	5-28
S.1.8.	Protection of Indications.....	5-28
S.1.9.	<i>Recorded Representation.</i>	5-28
S.1.10.	<i>Non-fare Information.</i>	5-29
S.2.	Basis of Fare Calculations.	5-29
S.2.1.	Initial Time and Distance Intervals.....	5-29
S.3.	Design of Operating Control.....	5-29
S.3.1.	Positions of Control.	5-29
S.3.2.	Flag	5-29
S.3.3.	Control for Extras Mechanism.....	5-29
S.4.	Interference.	5-29
S.5.	Provision for Security Seals.....	5-30
S.6.	Power Interruption, Electronic Taximeters.....	5-30
S.7.	Anti-fraud Provisions, Electronic Taximeters.....	5-30
N.	Notes.....	5-30
N.1.	Distance Tests	5-30
N.1.1.	Test Methods.....	5-30
N.1.2.	Test Procedures.....	5-31
N.1.3.	Test Conditions.	5-31
N.2.	Time Test	5-31
N.3.	Interference Test.	5-31
T.	Tolerances.....	5-31
T.1.	Tolerance Values.	5-31
T.1.1.	On Distance Tests.	5-31
T.1.2.	On Time Tests.....	5-32
T.1.3.	On Interference Tests.....	5-32
UR.	User Requirements	5-32
UR.1.	Inflation of Vehicle Tires.....	5-32
UR.2.	Position and Illumination of Taximeter.	5-32
UR.3.	Statement of Rates.	5-32

THIS PAGE INTENTIONALLY LEFT BLANK

Section 5.54. Taximeters

A. Application

A.1. This code applies to taximeters; that is, to devices that automatically calculate at a predetermined rate or rates and indicate the charge for hire of a vehicle.

A.2. This code does not apply to odometers on vehicles that are rented on a distance basis (for which see Section 5.53. Code for Odometers).

(Amended 1977)

A.3. See also Section 1.10. General Code requirements.

S. Specifications

S.1. Design of Indicating and Recording Elements.

S.1.1. General. – A taximeter shall be equipped with a primary indicating element and may be equipped with a recording element.

(Amended 1988)

S.1.2. Advancement of Indicating Elements. – Except when a taximeter is being cleared, the primary indicating and recording elements shall be susceptible of advancement only by the movement of the vehicle or by the time mechanism.

(Amended 1988)

S.1.3. Visibility of Indications. – The indications of fare, including extras, and the mode of operation, such as “time” or “hired,” shall be constantly displayed whenever the meter is in operation. All indications of passenger interest shall be easily read from a distance of 1.2 m (4 ft) under any condition of normal operation.

(Amended 1977, 1986, and 1988)

S.1.3.1. Minimum Height of Figures, Words, and Symbols. - The minimum height of the figures used to indicate the fare shall be 10 mm and for extras, 8 mm. The minimum height of the figures, words, or symbols used for other indications, including those used to identify or define, shall be 3.5 mm.

(Added 1986)

S.1.3.2. Lighting of Indications. – *Integral lighting shall be provided to illuminate the fare, extras, the rate or rate code, and the taximeter status (i.e., vacant, hired, and time off).*

[Nonretroactive as of January 1, 1989]

(Added 1988) (Amended 1990)

S.1.4. Actuation of Fare-Indicating Mechanism. – When a taximeter designed to calculate fares upon the basis of a combination of distance traveled and time elapsed is operative with respect to fare indication, the fare-indicating mechanism shall be actuated by the distance mechanism whenever the vehicle is in motion at such a speed that the rate of distance revenue equals or exceeds the time rate, and may be actuated by the time mechanism whenever the vehicle speed is less than this and when the vehicle is not in motion. Means shall be provided for the vehicle operator to render the time mechanism either operative or inoperative with respect to the fare-indicating mechanism.

(Amended 1977)

S.1.5. Operating Condition.

S.1.5.1. General. – When a taximeter is cleared, the indication “Not Registering,” “Vacant,” or an equivalent expression shall be shown. Whenever a taximeter is set to register charges, it shall indicate “Registering,” “Hired,” or an equivalent expression and the rate at which it is set shall be automatically indicated (Rate 1 or Rate A, for example).

(Amended 1988)

S.1.5.2. Time not Recording. – When a taximeter is set for fare registration with the time mechanism inoperative, it shall indicate “Time Not Recording” or an equivalent expression.

(Amended 1988)

S.1.6. Fare Identification. – Fare indications shall be identified by the word “Fare” or by an equivalent expression. Values shall be defined by suitable words or monetary signs.

S.1.7. Extras. – Extras shall be indicated as a separate item and shall not be included in the fare indication. They shall be identified by the word “Extras” or by an equivalent expression. Values shall be defined by suitable words or monetary signs. Means may be provided to totalize the fare and extras if the totalized amount returns to separate indications of fare and extras within 5 seconds or less.

(Amended 1988)

S.1.7.1. Nonuse of Extras. – If and when taximeter extras are prohibited by legal authority or are discontinued by a vehicle operator, the extras mechanisms shall be rendered inoperative or the extras indications shall be effectively obscured by permanent means.

S.1.8. Protection of Indications. – Indications of fare and extras shall be displayed through and entirely protected by glass or other suitable transparent material securely attached to the housing of the taximeter.

S.1.9. Recorded Representation. – *A printed receipt issued from a taximeter, whether through an integral or separate recording element, shall include the following:*

(a) *date,*

(b) *unique vehicle identification number, such as the medallion number, taxi number, vehicle identification number (VIN) or permit number,**

(c) *start and end time of trip,**

(d) *distance traveled, maximum increment of 0.1 kilometer (0.1 mile),**

(e) *fare in \$,*

(f) *for multi-rate taximeters, each rate at which fare was computed and the associated fare at that rate,**

(g) *additional charges where permitted such as extras, surcharge, telephone use, tip and tax shall be identified and itemized,* and*

(h) *total fare in \$ (total charge).**

*[Nonretroactive as of January 1, 1989] *[Nonretroactive as of January 1, 2000]*

(Added 1988) (Amended 1999)

S.1.9.1. Multiple Recorded Representations.

S.1.9.1.1. Duplicate Receipts. – *A recording element may produce a duplicate receipt for the previous transaction provided the information printed is identical to the original with the exception of time issued. The duplicate receipt shall include the words “duplicate” or “copy.” The feature to print a duplicate receipt shall be deactivated at the time the meter is hired for the next fare.*
 [Nonretroactive as of January 1, 2000]

(Added 1999)

S.1.10. Non-fare Information. - *The fare and extras displays may be used to display auxiliary information provided the meter is in the vacant condition and such information is only displayed for 10 seconds, or less. If the information consists of a list of information, the list may be displayed one item after another, provided that each item is displayed for 10 seconds, or less.*

[Nonretroactive as of January 1, 2002]

(Added 2000)

S.2. Basis of Fare Calculations. – A taximeter shall calculate fares only upon the basis of:

- (a) distance traveled,
- (b) time elapsed, or
- (c) a combination of distance traveled and time elapsed.

(Amended 1977)

S.2.1. Initial Time and Distance Intervals. – The time and distance intervals of a taximeter shall be directly proportional as expressed in the following formula:

$$\frac{\text{Seconds of Initial Time Interval}}{\text{Seconds per Non – Initial Time Interval}} = \frac{\text{Distance of Initial Mileage Interval}}{\text{Distance per Non – Initial Mileage Interval}}$$

(Added 1990)

S.3. Design of Operating Control.

S.3.1. Positions of Control. – The several positions of the operating controls shall be clearly defined and shall be so constructed that accidental or inadvertent changing of the operating condition of the taximeter is improbable. Movement of the operating controls to an operating position immediately following movement to the cleared position shall be delayed enough to permit the taximeter to come to a complete rest in the cleared position.

(Amended 1988)

S.3.2. Flag. – If the control for the operating condition is a lever-arm and flag, the flag shall be at its highest position when the taximeter is cleared, and in this position the whole of the flag shall be above the level of the taximeter housing.

S.3.3. Control for Extras Mechanism. – The knob, handle, or other means provided to actuate the extras mechanism shall be inoperable whenever the taximeter is cleared.

S.4. Interference. – The design of a taximeter shall be such that there will be no interference between the time and the distance portions of the mechanism device at any speed of operation.

(Amended 1977 and 1988)

S.5. Provision for Security Seals. – Adequate provision shall be made to provide security for a taximeter. Security may be provided either by:

- (a) Affixing security seals to the taximeter and to all other components required for service operation of a complete installation on a vehicle, so that no adjustments, alterations, or replacements affecting accuracy or indications of the device or the assembly can be made without mutilating the seal or seals; or
- (b) Using a combination of security seals described in paragraph (a) and, in the case of a component that may be removed from a vehicle (e.g., slide mounting the taximeter), providing a physical or electronic link between components affecting accuracy or indications of the device to ensure that its performance is not affected and operation is permitted only with those components having the same unique properties.

The sealing means shall be such that it is not necessary to disassemble or remove any part of the device or of the vehicle to apply or inspect the seals.

(Amended 1988 and 2000)

S.6. Power Interruption, Electronic Taximeters.

- (a) After a power interruption of 3 seconds or less, the fare and extras indications shall return to the previously displayed indications and may be susceptible to advancement without the taximeter being cleared.
- (b) After a power interruption exceeding 3 seconds, the fare and extras indications shall return to the previously displayed indications and shall not be susceptible to advancement until the taximeter is cleared.

*After restoration of power following an interruption exceeding 3 seconds, the previously displayed fare shall be displayed for a maximum of 1 minute at which time the fare shall automatically clear and the taximeter shall return to the vacant condition.**

*[*Nonretroactive as of January 1, 2002]*

(Added 1988) (Amended 1989, 1990, and 2000)

S.7. Anti-fraud Provisions, Electronic Taximeters. - An electronic taximeter may have provisions to detect and eliminate distance input that is inconsistent with output of the vehicle's distance sensor. When a taximeter equipped with this feature detects input inconsistent with the distance sensor:

- (a) The meter shall either filter out the inconsistent distance input signals or cease to increment fare based on distance until the distance input signal returns to normal. If the meter ceases to increment fare based on distance, the taximeter may continue to increment fare based on elapsed time;
- (b) The taximeter shall provide a visible or audible signal that inconsistent input signals are being detected; and
- (c) The taximeter shall record the occurrence in an event logger. The event logger shall include an event counter (000 to 999), the date, and the time of at least the last 1000 occurrences.

(Added 2001)

N. Notes

N.1. Distance Tests.

N.1.1. Test Methods. – To determine compliance with distance tolerances, a distance test of a taximeter shall be conducted utilizing one or more of the following test methods:

- (a) **Road Test.** – A road test consists of driving the vehicle over a precisely measured road course.

- (b) **Fifth-Wheel Test.** – A fifth-wheel test consists of driving the vehicle over any reasonable road course and determining the distance actually traveled through the use of a mechanism known as a “fifth wheel” that is attached to the vehicle and that independently measures and indicates the distance.
- (c) **Simulated-Road Test.** – A simulated road test consists of determining the distance traveled by use of a roller device, or by computation from rolling circumference and wheel-turn data.

(Amended 1977)

N.1.2. Test Procedures. - The distance test of a taximeter, whether a road test, a simulated-road test, or a fifth-wheel test, shall include at least duplicate runs of sufficient length to cover at least the third money drop or 1 mi, whichever is greater, and shall be at a speed approximating the average speed traveled by the vehicle in normal service. In the case of metric-calibrated taximeters, the test should cover at least the third money drop or 2 km, whichever is greater.

(Amended 1977)

N.1.3. Test Conditions.

N.1.3.1. Vehicle Lading. – During the distance test of a taximeter, the vehicle shall carry two persons, or in the case of a simulated-road test, 70 kg or 150 lb of test weights may be substituted in lieu of the second person.

N.1.3.2. Tire Pressure. – At the completion of test run or runs, the tires of the vehicle under test shall be checked to determine that the tire pressure is that operating tire pressure posted in the vehicle. If not, the tire pressure should be adjusted to the posted tire pressure and further tests may be conducted to determine the operating characteristics of the odometer.

(Amended 1977)

N.2. Time Test. – If a taximeter is equipped with a timing device through which charges are made for time intervals, the timer shall be tested at the initial interval, four separate subsequent intervals, and an average time test of at least four consecutive subsequent time intervals.

(Amended 1988)

N.3. Interference Test. – If a taximeter is equipped with a timing device through which charges are made for time intervals, a test shall be conducted to determine whether there is interference between the time and distance elements. During the interference test, the vehicle’s operating speed shall be 3 km/h or 4 km/h, or 2 mi/h or 3 mi/h faster than the speed at which the basic distance rate equals the basic time rate. The basic rate per hour divided by the basic rate per mile is the speed (km/h or mi/h) at which the basic time rate and basic distance rate are equal.

(Amended 1988)

T. Tolerances

T.1. Tolerance Values.

T.1.1. On Distance Tests. – Maintenance and acceptance tolerances for taximeters shall be as follows:

- (a) On Overregistration: 1 % of the interval under test.
- (b) On Underregistration: 4 % of the interval under test, with an added tolerance of 30 m or 100 ft whenever the initial interval is included in the interval under test.

T.1.2. On Time Tests.

T.1.2.1. On Individual Time Intervals. – Maintenance and acceptance tolerances on individual time intervals shall be as follows:

- (a) On Overregistration: 3 seconds per minute (5 %).
- (b) On Underregistration: 9 seconds per minute (15 %) on the initial interval, and 6 seconds per minute (10 %) on subsequent intervals.

T.1.2.2. On Average Time Interval Computed After the Initial Interval. – Except for the initial interval, maintenance and acceptance tolerances on the average time interval shall be as follows:

- (a) On Overregistration: 0.2 second per minute (0.33 %).
 - (b) On Underregistration: 3 seconds per minute (5 %).
- (Amended 1991)

T.1.3. On Interference Tests.

T.1.3.1. The registration of a taximeter in the “time on” position shall agree within 1 % of its performance in the “time off” position.

(Added 1988)

UR. User Requirements

UR.1. Inflation of Vehicle Tires. – The operational tire pressure of passenger vehicles and truck tires shall be posted in the vehicle and shall be maintained at the posted pressure.

(Amended 1977)

UR.2. Position and Illumination of Taximeter. – A taximeter shall be so positioned and illuminated that its indications, operational markings, and controls of passenger interest can be conveniently read by a passenger seated in the back seat of the vehicle.

(Amended 1985 and 1986)

UR.3. Statement of Rates. – The distance and time rates for which a taximeter is set, including the initial distance interval and the initial time interval, the local tax rate, and the schedule of extras when an extras indication is provided, shall be conspicuously displayed inside the front and rear passenger compartments. The words “Rate,” “Rates,” or “Rates of Fare” shall precede the rate statement. The rate statement shall be fully informative, self explanatory, and readily understandable by the ordinary passenger, and shall either be of a permanent character or be protected by glass or other suitable transparent material.

(Amended 1977, 1988, 1990, and 1999)