IAPMO R&T LAB

5001 East Philadelphia Street
Ontario, California – USA 91761-2816
Ph: 909.472.4100 | Fax: 909.472.4243
http://www.iapmortl.org

TEST REPORT

DRAFT

Report Number: 002-253023 **Lab Project No.**: 46841

Report Issued: October 17, 2025

Client: TOTO USA Inc.
5351 E. Jurupa St.
Ontario. CA 91761

Source of Samples: The samples were shipped to IAPMO R&T Lab from TOTO USA Inc. and received in good condition on July 17, 2025.

Date of Testing: August 21, 2025, through October 16, 2025.

Sample Description: A vitreous China water closet. The unit was a one-piece, elongated bowl, 12" rough-in, single flush, 1.0 gpf gravity fed, high-efficiency water closet.

Model:

CST686CUF(G)	Toilet only
CST686CUFGAT40	Toilet only with special home punching on rim to conceal Washlet cable and hose
MS686124CUF(G)	Toilet + soft close seat contemporary
MS686234CUFG(A)	Toilet + soft close seat traditional
MW686****CUFG(A)	Toilet + various Toto Washlet bidet seat combinations

The fill valve was a TOTO model TSU900-A. The critical level of the fill valve was 8.5 in. as measured from the inside bottom of the tank. There are two flush valves involved, the rim wash valve TOTO model THU894-A, and the jet valve model THU895-A. The top of the overflow tube was 7.25 in. as measured from the inside bottom of the tank. The water level was marked at 6.88 in. as measured from the inside bottom of the tank. The water surface area of the bowl was 6.25 in from left to right and 9.25 in front to rear. The trap seal depth was 2.25 in, and the trap passed a 2 in. diameter ball.

Scope of Testing: The purpose of the testing was to determine if the samples tested of the water closet met the applicable requirements of EPA WaterSense Specification for Tank-Type Toilets, Version 1.2, June 2, 2014.

CONCLUSION: **The samples tested of the water closet, model as shown abovef, from TOTO USA Inc., COMPLIED with the applicable requirements of EPA WaterSense Specification for Tank-Type Toilets, Version 1.2, June 2, 2014.**

Tested by,

Victor M. Soria, Test Technician

Approved by,

Xuefeng (Jeff) Huang, Director-Fixture Testing

Primary Standard: EPA WaterSense Specification for Flushometer-Valve Water Closets, Version 1.0, December 17, 2015.

Sections Tested / Evaluated:

2.0 Water Efficiency Criteria
3.0 General Water Closet Fixture Requirements
4.0 General Flushometer Valve Requirements
5.0 Flush Performance Criteria*
6.0 Product Marking*

Appendix A Informative Annex for WaterSense Labeling

1.0 WaterSense Partnership
2.0 Conformity Assessment
3.0 Independent Labeling of Fixtures and Flushometer Valves
4.0 WaterSense Label Use

*Section 5.1 of EPA WaterSense refers to section 7.9 of ASME A112.19.2/CSA B45.1-18.
*Section 6 EPA WaterSense refers to the marking requirements of ASME A112.19.2-2018/CSA B45.1-18 and ASSE 1037/ASME A112.1037/CSA B125.37-15.

Reference Standards: ASME A112.19.2/CSA B45.1-2018.

7.9 Waste Extraction Test
9 Markings

ASSE 1037/ASME A112.1037/CSA B125.37-15

5 Markings, Packaging, and Installation Instructions

Note: Sections not specifically listed above were considered not applicable to the subject product.

Test Results: All tests and evaluations were conducted per the written procedures specified in the specification.

2.0 General Requirements – COMPLIED

2.1 COMPLIED. The single flush water closet shall conform to ASME A112.19.2/CSA B45.1.

Findings: The sample was a single flush water closet, and was tested and complied with ASME A112.19.2-2018/CSA B45.1-18. Refer to separated report for compliance.

3.0 Water Efficiency Criteria

3.1 Single-flush toilets – COMPLIED

The effective flush volume shall not exceed 1.28 gallons (4.8 liters) when evaluated in accordance with the sampling plan contained in 10 CFR 429.30. For single-flush toilets, the effective flush volume is the average flush volume when tested in accordance with ASME A112.19.2/CSA B45.1.

Finding: The effective flush volume was less than 1.28 gpf.

	Ave. Effective Flush Volume per ASME A112.19.2 / CSA B45.1 (gpf)
Sample 1	0.92
Sample 2	0.94
Sum	1.86
Mean (X_1)	0.93

Unit	Standard Deviation (S_1)	Max. Allowed Consumption (EPS)	90% one-tailed confidence interval	UCL of true mean divided by 1.1	Mean (X_1)
gpf	0.01	1.28	3.08	0.87	0.93

Largest value (UCL of true mean divided by 1.1 or Mean): 0.93 gpf

Required: Mean and UCL of true mean divided by 1.1 must be less than or equal to EPS

3.3 FOLLLOWED : Samples with average flush volume in excess of 0.10 gallon (0.4 liter) greater than their rated flush volume shall be deemed to fail testing requirements due to excessive flush volume.

3.4 FOLLOWED: Samples with average flush volumes less than or equal to 0.10 gallon (0.4 liter) greater than their rated flush volume shall be adjusted, if possible, to their rated flush volume prior to performance testing.

3.5 FOLLOWED: Samples with average flush volumes less than their rated flush volume shall be tested at measured volume and this volume shall be recorded on the test report.

4.0 Flush Performance Criteria – COMPLIED

When set-up and tested per the waste extraction test protocol provided in ASME A112.19.2/CSA B45.1, the toilet successfully and completely cleared all the test media (7 test specimens, 50 grams each, soy bean paste forming a 'sausage') and 4 loosely crumbled balls of toilet paper from the fixture in at least four of five attempts. The unit successfully and completely cleared all the test media in 5 of 5 attempts.

5.0 Product Marking

5.1 COMPLIED Toilet fixtures shall be marked in accordance with requirements in ASME A112.19.2/CSA B45.1 with the exception identified in Section 5.1.1.

Findings: Refer to ASME A112.19.2/CSA B45.1 sections of this report. In addition, the water closet was not marked with the wording "or less".

5.2 COMPLIED. Toilet tanks shall not be packaged, marked, nor provided with instructions directing the user to an alternative water use setting that would override the rated flush volume, as established by this specification. Any instruction related to the maintenance of the product shall direct the user on how to return the product to its rated flush volume.

Findings: The toilet tank was not packaged, marked, or provided with instructions directing the user to an alternative water-use setting that would override the rated flush volume, as established by this specification.

Appendix A: Requirements for WaterSense Labeling

1.0 WaterSense Partnership – COMPLIED

The manufacturer of the product must have a signed partnership agreement in place with EPA.

Findings: The manufacturer has a signed partnership agreement in place with EPA and is currently certified by IAPMO R&T, File no. 5283.

2.0 Conformity Assessment – INFORMATION ONLY

Conformance to this specification must be certified by an EPA licensed certifying body accredited for this specification in accordance with the WaterSense Product Certification System.

3.0 Clarifications

3.1 Adjustability – COMPLIED

Toilet tanks with adjustable water use settings that can be identified and activated by a user or plumbing professional to override the rated flush volume, as established by this specification, do not comply with the intent of this specification or the WaterSense program and do not qualify for use of the WaterSense label.

Findings: The toilet tank did not have adjustable water use settings and can be identified that would override the rated flush volume.

3.2 Tanks and Bowls Manufactured and Sold by Different Companies – NOT APPLICABLE

WaterSense requires every combination tank and bowl to be tested and certified for conformance to this specification in order to ensure that the toilet as a whole provides the expected water efficiency and performance. Wall-hung bowls and in-wall carrier systems manufactured and sold by different companies can earn the WaterSense label, provided that the combination unit is tested and certified. However, since these products might not necessarily be sold as a unit, WaterSense has established some additional certification requirements that these products must meet in order to earn the WaterSense label. Both manufacturers must agree to have their products tested and certified together in order for the tank and bowl combination to receive the WaterSense label.

Findings: The water closet is a one piece and manufactured by, "TOTO". The combination tank and bowl were tested and certified for conformance to this specification.

Certification Listing – INFORMATION ONLY

In order to control the use of the WaterSense label, EPA is requiring each manufacturer (e.g., the tank manufacturer and the bowl manufacturer) to obtain a certification listing with one of EPA's licensed certifying bodies to show that the toilet, formed by the combination tank and bowl, was certified for conformance to the specification. The listings must identify both components, along with the respective manufacturers' names, brand names, model names, and model numbers by which the products are identified and sold. Separate listings will allow the licensed certifying body to directly authorize each manufacturer to use the WaterSense label on their tanks or bowls. Note that though a certification listing is required for each manufacturer, WaterSense is not requiring the combination toilet to be tested more than once. The licensed certifying body must ensure that the listing information is complete prior to issuing the certification and the WaterSense label to either manufacturer.

As an alternative to separate listings, and at the discretion of the licensed certifying body, the manufacturer of one of the components (e.g., either the tank or bowl manufacturer) can become listed as an additional company under the certification listing of the manufacturer of the corresponding component (e.g., the bowl or tank). However, both components, along with the respective manufacturer's names, brand names, model names, and model numbers by which the products are identified and sold, must be identified under both the certification file owner's listing and the additional company's listing. This will ensure that there is no confusion about which products were certified in combination to earn the WaterSense label.

3.3 Product Packaging Marking and Labeling – COMPLIED

Though every combination tank and bowl must be tested and certified for conformance to this specification in order to ensure that the toilet as a whole provides the expected water efficiency and performance, in some cases the tank and bowl might be packaged individually and/or sold separately. To ensure that it is clear to the purchaser that a particular combination tank and bowl is labeled, EPA is providing clarification regarding how the packaging must be marked and how the WaterSense label must be used. These marking and labeling requirements apply to tanks and bowls made by the same company and those made by different companies, as is the case for some wall-hung bowls and in-wall carrier systems.

Manufacturers must adhere to the following product packaging marking and labeling requirements for toilet tanks and bowls packaged and sold individually:

• In all cases, the toilet tank and toilet bowl packaging must bear the WaterSense label.

• Toilet bowl packaging must indicate all of the specific brand names, model names, and model numbers, as applicable, of the counterpart tanks it can be used with to form a WaterSense labeled tank-type toilet. For example, the toilet bowl packaging might say:

"This [insert description of bowl] is WaterSense labeled when used with [list brand names, model names, and model numbers, as applicable, of the tank(s) that the bowl can be used with to form a WaterSense labeled tank-type toilet]."

• Product specification sheets or other product documentation for both the toilet tank and bowl must indicate all of the specific brand names, model names, and model numbers, as applicable, of the counterpart products (e.g., the bowl or tank) that the product can be used with to form a WaterSense labeled tank-type toilet.

Note that for toilet tanks and bowls packaged and sold together as a unit, the packaging must bear the WaterSense label.

Findings: The one-piece package was marked with the WaterSense label.

ASME A112.19.2-2018/CSA B45.1-18

9 Markings

Section 9.1 General– COMPLIED

The bowl and tank were marked with the manufacturer's name or trademark, "TOTO". The marking was permanent, legible, and visible after installation.

Section 9.3.1 Close-Coupled Water Closets – N/A

The model number should be marked on both the bowl and the tank of close-coupled water closets.

Findings: The toilet was a one-piece type.

Section 9.3.2 Water Consumption – COMPLIED

Water closets shall be marked with the water consumption in liters and gallons per flush.

Findings: The water closet was marked with the water consumption in both litters and gallons per flush

Section 9.3.3 Water Level Mark in Gravity Flush Tank Water Closets – COMPLIED

The water level mark "WL" was visible inside on the overflow tube inside the tank. The vertical distance between water level mark and overflow did not exceed 38 mm (1.5"). The actual distance was 16 mm (0.62 in.).

Note: Water level was marked at 175 mm (6.88 in) as measured from the inside bottom of the tank.

Section 9.3.4 Water Closet Tank Repair Parts – COMPLIED

The water closet tank had a label indicating at least the following:

(a) the telephone number of a service department from which end-users can obtain replacement parts,
(b) the serial or part number of the flush valve seal; and
(c) information on procuring replacement parts for maintaining the original flush volume.

Section 9.5 Packaging – COMPLIED

The packaging contained the manufacturer's name and the water consumption. The model number and the litter were marked in the packaging.

Section 9.6 Installation Instructions and Other Literature

9.6.1 General

9.6.1.1 Installation instructions – COMPLIED

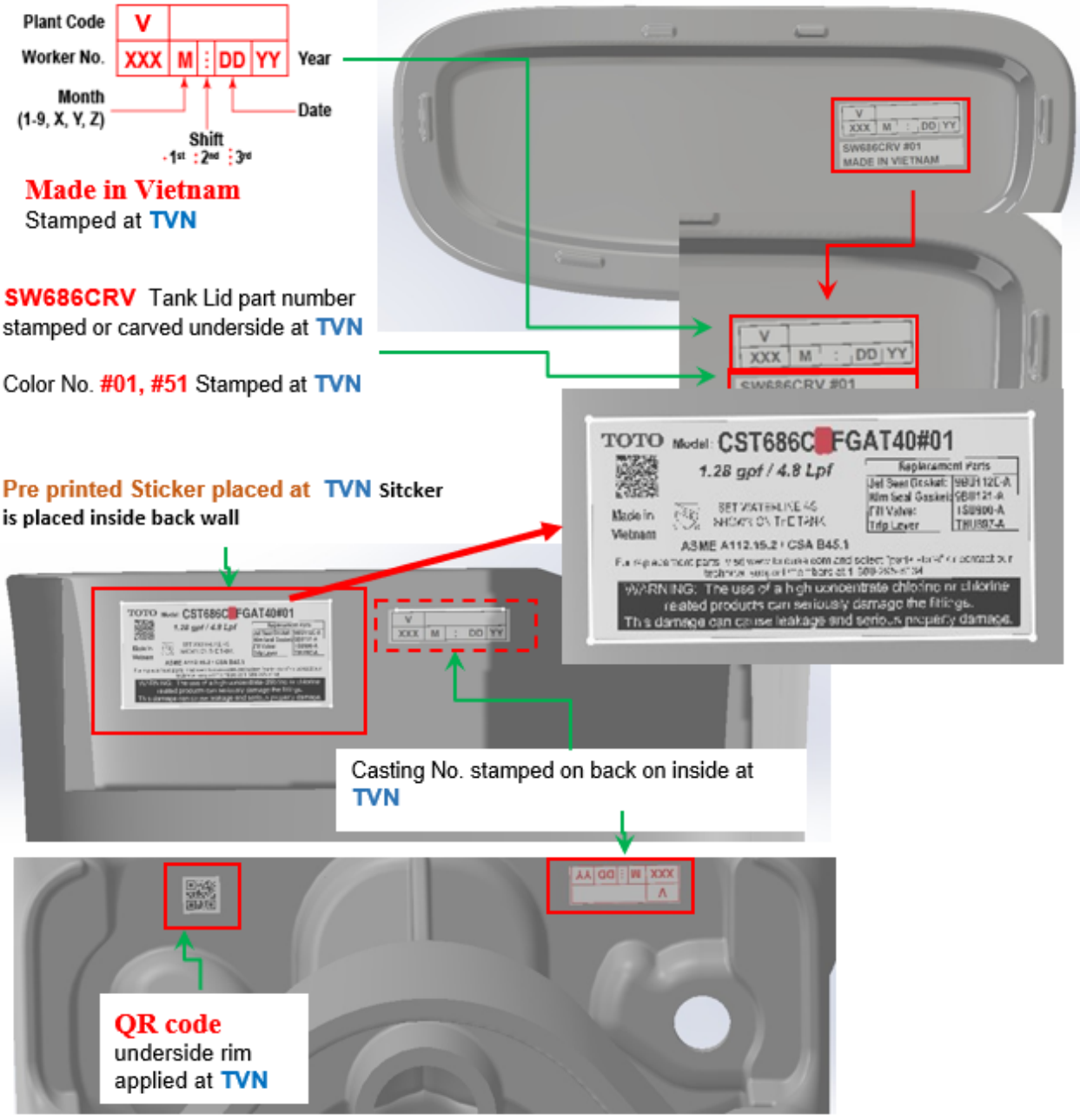
The manufacturer provided installation instructions with water closets (except for flushometer valve water closets).

Photographs of the Sample Tested:

Markings & Labeling

Date:	3/6/2025	Product No.:	CST686CEF(R)(G)	Product Type:	1PC
OEM	Toto Vietnam	Prepared By:	Gary Tan	Revision No.:	00

Casting No. stamped or Carved underside tank at **TVN**



I understand that intentionally submitting false information to the U.S. government or its agent is a criminal violation of the False Statements Act, Title 18 U.S.C. section 1001.