

California Environmental Protection Agency

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**Certification Procedure for Portable Fuel  
Container Systems**

**CP-501**

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**California Environmental Protection Agency  
Air Resources Board**

**CP-501**

**Certification Procedure For  
Portable Fuel Container Systems**

The definitions in section 2467.1, title 13 of the California Code of Regulations apply to this Certification Procedure. For the purposes of this procedure, the term "ARB" refers to the California Air Resources Board, and the term "Executive Officer" refers to the ARB Executive Officer or his or her authorized delegate.

**1. GENERAL INFORMATION AND APPLICABILITY**

This document specifies the criteria and procedures used by the Air Resources Board (ARB) to evaluate and certify portable fuel container systems or their components manufactured for sale, advertised for sale, sold, or offered for sale in California or that are introduced, delivered, or imported into California for introduction into commerce. An Executive Order will only be issued for a portable fuel container system that demonstrates compliance with all applicable certification requirements.

**1.1. Legislative and Regulatory Requirements of Other State Agencies**

The Executive Officer shall coordinate this Certification Procedures with the California State Fire Marshal.

**1.2. Requirement to Comply with All Other Applicable Codes and Regulations**

Compliance with the requirements of Article 6 of Cal. Code Regs., title 13, division 3, chapter 9 does not exempt portable fuel container systems from compliance with other applicable federal and state statutes and regulations such as state fire codes, safety codes, and other safety regulations, nor will the Air Resources Board test for or determine compliance with such other statutes or regulations.

**2. CERTIFICATION REQUIREMENTS**

The certification requirements and performance standards for portable fuel container systems are identified in Table 2-1. The test procedure for determining portable fuel container system durability and spout performance is TP-501, *Test Procedure for Determining Integrity of Portable Fuel Container Systems*, adopted July 26, 2006, and amended December 9, 2016. The test procedure for determining compliance with the diurnal emission standard is TP-502, *Test*

*Procedure for Determining Diurnal Emissions from Portable Fuel Container Systems*, adopted July 26, 2006, and amended December 9, 2016. Both test procedures are incorporated by reference herein and referred to as TP-501 and TP-502 hereafter. Certification tests shall be conducted using six (6) portable fuel container systems of the same product family. The same six portable fuel container systems shall be tested using TP-501 and TP-502. TP-501 sections 5.4 - 5.6 shall be conducted prior to TP-502. If more than six portable fuel container systems are tested, all must pass. An independent test laboratory accredited to ISO/IEC 17025 standards shall conduct all tests specified in this Certification Procedure. An independent test laboratory is one that is not owned, operated, or affiliated with the applicant seeking an Executive Order.

**Table 2-1  
Certification Requirements**

<b>Performance Specification</b>	<b>Requirement</b>			<b>Sec</b>	<b>Test Method</b>
Openings	Minimum release of hydrocarbon vapors Normally closed vent only			2.1	N/A
Fuel	Gasoline	Diesel	Kerosene	2.2	N/A
Color	Red	Yellow	Blue		
Diurnal	≤ 0.3 grams TOG per gallon-day			2.3	ARB TP-502
Durability	Spout and container durability			2.4	ARB TP-501& TP-502
Leakage	No leakage			2.5	ARB TP-501& TP-502
Automatic Closure	Spout automatically closes and seals when not dispensing fuel			2.6	ARB TP-501
Warranty	One year warranty, packaging requirements			2.7	N/A
Operating & Maintenance Instructions	Equipment and fueling specific instructions			2.8	N/A
Materials Compatibility with Fuels	Must be compatible with fuels			2.9	ASTM F852, & F976

## **2.1. Openings**

A portable fuel container system may incorporate a secondary opening (i.e. an opening other than the opening needed for the spout) provided the secondary opening is not easily tampered with by a consumer, and it does not emit hydrocarbon vapors in excess of the amounts specified in this procedure during fueling, storage, transportation, or handling events.

Any secondary opening that relieves pressure and improves fuel flow during dispensing shall be normally closed and must automatically return to the closed position when released.

## **2.2. Color**

Portable fuel containers shall be color coded for specific fuels:

- (a) Gasoline – red;
- (b) Diesel – yellow; and
- (c) Kerosene – blue.

Each portable fuel container system must have identification markings on the container and on the spout.

- (a) Red containers shall be permanently identified with the embossed language, or permanent durable label “GASOLINE” in minimum 34-point Arial font or a font of equivalent proportions.
- (b) Yellow containers shall be permanently identified with the embossed language, or permanent durable label “DIESEL” in minimum 34-point Arial font or a font of equivalent proportions.
- (c) Blue containers shall be permanently identified with the embossed language, or permanent durable label “KEROSENE” in minimum 34-point Arial font or a font of equivalent proportions.

## **2.3. Diurnal Emissions Standard**

- (a) Portable fuel container systems produced on or after January 1, 2009, must emit no more than 0.3 grams of TOG per gallon per day as determined by TP-502.
- (b) Portable fuel containers systems that share similar designs, that are constructed of identical materials, and that are manufactured using identical processes, but vary only in size or color may be considered for certification as a product family.

## **2.4. Durability**

Portable fuel container systems must comply with the specifications for durability in TP-501 and TP-502.

## **2.5. Leakage**

There shall be no fluid leakage from any point in the portable fuel container system as specified in TP-501 and TP-502.

## **2.6. Automatic Closure**

The portable fuel container system spout shall automatically close when the spout is removed from the target tank, seal, and remain completely closed when not dispensing fuel, as specified in TP-501. No liquid that may evaporate into the atmosphere, beyond wetted surfaces, shall be retained in the spout after fueling.

## **2.7. Warranty**

- (a) An applicant seeking an Executive Order pursuant to this procedure must warrant that its portable fuel container system is free from defects in materials and workmanship that cause such systems to fail to conform with each of the requirements specified in this procedure for a period of one year from the date of sale.
- (b) An applicant must supply a copy of the warranty language specified in section (a) above in the packaging for each portable fuel container system at the time of sale identifying the following minimum requirements:
  - 1) A statement of the terms and length of the warranty period; and
  - 2) The following statement: “THIS CONTAINER COMPLIES WITH CARB EMISSION REGULATIONS FOR PORTABLE FUEL CONTAINERS (13 CCR 2467 et seq.)” Additional information may be added to the emission control information label to identify other emission standards that the container meets or does not meet (such as U.S. EPA standards). Other information may also be added to ensure that the portable fuel container will be properly maintained and used.

## **2.8. Operating and Maintenance Instructions**

An applicant must supply a copy of the operating instructions intended for each portable fuel container system and fueling application. These instructions shall include, at a minimum, the following specifications:

- (a) A listing of any specific equipment types, such as passenger cars and trucks, lawn and garden equipment, off-road motorcycles and snowmobiles, industrial equipment, and marine vessels, that the portable fuel container system is not intended to refuel; and
- (b) Other instructions, such as the recommended fueling angle or special instructions such as venting prior to use.

### **2.9. Materials Compatibility with Fuels**

Portable fuel container systems and all components incorporated therein, such as spouts, gaskets, seals, or O-rings must demonstrate compliance with the requirements of ASTM F852-08 section 4 (July 1, 2008) and ASTM F976-08 section 4 (July 1, 2008) which are incorporated by reference herein.

## **3. SUBMITTING AN APPLICATION**

An applicant must submit the following information in their application for certification:

- (a) Fourteen (14) portable fuel container systems and the address of the independent testing laboratory chosen to perform certification testing. The applicant shall submit 14 portable fuel container systems from the product family for which certification is sought to ARB. All samples and certification related correspondence shall be forwarded to:

Chief  
Monitoring and Laboratory Division  
Air Resources Board  
1927 13<sup>th</sup> Street  
Sacramento, California 95811

The portable fuel container systems submitted to ARB shall have the highest diurnal emissions relative to the applicable emission standard as determined by the manufacturer. Additionally, all submitted portable fuel container systems shall be from different production molds, if possible. For example, if portable fuel containers are produced from six production molds, at least two containers from each mold shall be submitted. The Executive Officer will select six (6) portable fuel container systems and one (1) reference container from different production molds, identify each portable fuel container system with a tamper-proof label, and ship the portable fuel container systems to the independent laboratory of the applicant's choice within 30 days. The applicant is responsible for the cost of certification testing, including any testing for Executive Order renewal. Following certification testing, the portable fuel container systems shall be returned from the independent laboratory to ARB. The Executive Officer reserves the right to perform evaluation testing on all or none of the sample containers. Test results from



any evaluation testing performed by ARB will not be substituted for certification test results generated by the independent test laboratory and will therefore not affect the timing of certification. The seven (7) untested sample containers and/or three (3) tested containers will be returned to the manufacturer after certification testing is completed, upon request. Care shall be taken to only air-dry the containers prior to shipment;

- (b) Model numbers and sizes of portable fuel container systems for which certification is requested. The applicant must supply test data that demonstrate the portable fuel container systems comply with each of the certification requirements identified in Table 2-1;
- (c) Engineering drawings of the portable fuel container system detailing dimensions specific to each system component (i.e., container and spout). If more than one type or size of portable fuel container system is included in the application, separate dimensioned drawings are required for each system component;
- (d) The language, symbols, or patterns that will be permanently embossed on the portable fuel container system. This shall include examples of the date code as well as all other permanent markings and their locations on the container and spout. Once an Executive Order is issued for a portable fuel container system, these permanent markings cannot be altered or modified in any way without first obtaining the approval of the Executive Officer;
- (e) The language or labels that may be affixed to the portable fuel container system at the time of sale;
- (f) The manufacturer's recommended instructions, instruction decals, or any other type of placard attached to the portable fuel container system at the time of sale. Include examples of actual decals or placards if available. Proposed placards or decals are sufficient if actual samples are not available. Once an Executive Order is issued for a portable fuel container system, these decals or placards cannot be altered or modified in any way without first obtaining the approval of the Executive Officer;
- (g) The manufacturer warranty as defined in section 2.7;
- (h) A description of the materials used in the construction of the portable fuel container system. Material compositions of gaskets, O-rings, and seals must be described. The barrier type, minimum barrier thickness, and molding method shall also be included. If the source of origin of any of the materials described above change during the duration of the certification term, the applicant shall notify the Executive Officer of the change with a statement confirming that the system is identical to what was certified;

- (i) A detailed description of the Quality Assurance/Quality Control (QA/QC) protocols used by the manufacturer to ensure the production versions of the portable fuel container systems meet and maintain the certification standard; and
- (j) The application shall be signed by an authorized representative of the applicant stating that all the information submitted is accurate and complete.

#### **4. APPLICATION REVIEW AND ACCEPTANCE**

The Executive Officer will review the certification application upon receipt of all results from all tests performed on the containers submitted to ARB for certification, including those from invalid tests or from any other tests, whether or not they were conducted according to TP-501 and TP-502. The applicant shall direct the independent test laboratory to concurrently transmit all certification test results directly to the Executive Officer and to the applicant.

If any failure occurs, after notifying the Executive Officer, the applicant must complete the following actions before an Executive Order will be issued:

- (1) Identify the source of the failure;
- (2) Make changes, as necessary, to the manufacturing process to remedy the nonconformity;
- (3) For containers with failures that cannot be repaired without the use of tools, sealant, etc., demonstrate that the portable fuel container system conforms to the evaporative emission standards by submitting a new set of fourteen portable fuel container systems to ARB for testing in accordance with TP-501 and TP-502; and
- (4) Submit a written report to the Executive Officer that contains a description of the source of the failure and the remedy for the portable fuel container system.

If the application for certification contains all of the information required by this procedure, including passing results, it shall be deemed to be complete and will be processed for certification. The application shall not be deemed complete until each of the minimum requirements listed in section 3 of this Certification Procedure is completed.

The Executive Officer may find it necessary to request additional information of the applicant in order to complete the application and/or evaluate specific portable fuel container systems.

Applications will be processed in accordance with the procedures and time periods set forth in Cal. Code Regs., title 17, section 60030 et seq. The time periods may be extended upon mutual agreement between the Executive Officer and applicant, as deemed reasonable.

## **5. ENGINEERING EVALUATION**

The ARB Executive Officer shall evaluate each application for certification of a portable fuel container system to determine if the portable fuel container system complies with the criteria for issuance of an Executive Order.

Any portable fuel container system that does not comply with the requirements of this Certification Procedure shall be denied certification, and the application shall be returned to the applicant with the reason for denial. ARB will not evaluate an applicant's re-submittal of an application for certification of a portable fuel container system unless the applicant can demonstrate to the Executive Officer that it has addressed and/or corrected deficiencies identified by ARB during the initial evaluation.

The procedures for, and results of, any bench test or operational test contained in the application shall be reviewed to determine if such procedures comply with the required test methodology, and to ensure that the results comply with the certification requirements described in this procedure.

## **6. ALTERNATE TEST AND INSPECTION PROCEDURES**

Alternative test procedures other than those specified in this Certification Procedure may be used only if prior written approval is obtained from the Executive Officer. The alternative test procedure contains methodology used to determine, with a high degree of accuracy, and precision, the value of a specified parameter. Once the alternative test procedure is utilized to generate test data, the results are compared to the applicable certification requirements.

An applicant may request advance ARB Executive Officer approval to utilize an alternative test procedure. This request shall describe the proposed alternative test procedure, including equipment specifications necessary to conduct the test. If training is required to properly perform a test, a proposed training program shall be included.

The Executive Officer shall respond within sixty (60) days of receipt of a request, indicating a formal response will be sent within one hundred twenty (120) days. This time period will allow for a detailed analysis of the proposed test procedure. If the Executive Officer determines that he or she cannot adequately evaluate the request within the specified time periods, he or she shall notify the applicant of said determination along with a projected date that a decision will be made.

All testing to determine the acceptability of the procedure shall be conducted by ARB staff, or by an independent test laboratory under the direction of ARB. Testing shall be conducted in accordance with good engineering judgment as defined in 40 C.F.R. Part 59 Subpart F.

Alternative test procedure approval shall be granted on a case-by-case basis, only after all necessary comparison testing has been conducted. Because of the evolving nature of technology and test procedures, such approval may or may not be granted in subsequent cases without a new request for approval and additional testing to determine equivalency. If, after approval is granted, subsequent information demonstrates that equivalency between the two methods no longer meet the USEPA Method 301 requirements "*Field Validation of Pollutant Measurement Methods from Various Waste Media*", Appendix A to Part 63, title 40 Code of Federal Regulations (July 26, 2006), which is incorporated by reference herein, the Executive Officer may revoke the alternate status of the procedure.

Any approvals to use alternative test procedures, and the supporting evaluation test results, shall be maintained by the Executive Officer.

## **7. DURATION AND CONDITIONS OF CERTIFICATION**

Documentation of portable fuel container system certification shall be in the form of an Executive Order. The Executive Officer shall issue an Executive Order specifying the duration and conditions of certification.

### **7.1. Duration of System Certification**

Portable fuel container systems shall be certified for a period of four years. The certification Executive Order shall specify the date on which the certification shall expire if it is not renewed as specified in Section 8.

### **7.2. Revocation of Certifications**

The certification of any system determined not to be achieving the applicable performance standards and specifications listed in CP-501 may be revoked. The Executive Officer may conduct testing for the purpose of investigation of or verification of potential system deficiencies.

## **8. CERTIFICATION EXECUTIVE ORDER RENEWAL**

At least eighteen months prior to the expiration of the certification period, the applicant may request to renew the certification. During the four-year certification period, system deficiencies shall be identified through periodic audits, compliance investigations, certification or compliance tests, surveys, or other sources of information. If deficiencies are documented, they shall be resolved to the satisfaction of the ARB Executive Officer or the certification shall expire. The ARB

Executive Officer may extend certifications, for up to one year, if resolution of system deficiencies appears likely or if additional time is required to gather and evaluate information.

The renewal process, along with the sections of this document that describe them, are outlined below:

- (a) Request for Renewal Section 8.1
- (b) Review of the Request Section 8.2
- (c) Evaluation of System Deficiencies Section 8.3
- (d) Letter of Intent Section 8.4
- (e) Renewal of Executive Order Section 8.5

If no request for renewal is received by the ARB within eighteen (18) months of the certification expiration date, the Executive Officer shall send a "Notice of Pending Expiration" to the holder of the Executive Order.

### **8.1. Request for Renewal**

The request for renewal shall be written and signed by an authorized representative, and shall include the items listed below:

- (a) The Executive Order Number to be renewed;
- (b) Identification of any system or component deficiencies through warranty claims or other information such as:
  - 1) User feedback
  - 2) Third party test data
  - 3) Distributors
- (c) Amendments to the Executive Order such as:
  - 1) Warranty information
  - 2) System or component drawings
  - 3) Component modifications
- (d) Agency approvals or determinations, if any system modifications have been made since the original approval/determinations; and
- (e) Other information such as the Executive Officer may reasonably require.

### **8.2. Review Request**

The Executive Officer shall review the request and determine if any information provided warrants further evaluation/testing or if amendments to the Executive Order are needed. The applicant will be notified within 60 days of the receipt of the request and whether the submission of additional information is required.

### **8.3. Evaluation of System Deficiencies**

In addition to the information provided in Section 8.1, the Executive Officer shall solicit information on system or component deficiencies through equipment audits, complaint investigations, certification or compliance tests, surveys, any deficiencies identified by ARB staff, or other sources of information. The Executive Officer may conduct testing to investigate and/or verify system or component deficiencies. Testing to evaluate component modifications or to demonstrate compatibility will be subject to the applicable sections of CP-501. If potential deficiencies are noted, an evaluation will be conducted to determine if:

- (a) The deficiency has been or is in the process of being resolved;
- (b) System/component modification(s) are necessary;
- (c) Executive Order modifications are necessary;
- (d) Additional testing by an independent laboratory is required.

### **8.4. Letter of Intent**

After the review has been completed, a letter of intent will be issued to either 1) renew the Executive Order or 2) allow the Executive Order to expire. The letter of intent should be issued prior to the Executive Order expiration date but will not be issued prior to completion of the evaluation process described in Sections 8.1, 8.2, and 8.3.

The Executive Officer may allow up to a 1-year extension if:

- (a) resolution is likely but renewal time is insufficient; or
- (b) additional time is necessary to gather and evaluate information.

### **8.5. Renewal of Executive Order**

Executive Orders approved for renewal shall be valid for a period of four years.

Table 8-1  
Estimate Timeline for the Renewal Process

Action	By	Time before Expiration
Submittal of renewal request	Applicant	18 months
Notice of pending expiration (if no renewal request received)	ARB	18 months
Solicitation of system information	ARB	18 months (or at time of receipt of request)
Application review and initial response	ARB	16 months
Renewal request documentation completed	ARB/Applicant	15 months
Submittal of system information for other agency approval/determinations	Applicant	12 months
<b>If testing is required</b>		
Sample submittal and laboratory identification	ARB/Applicant	14 months
Start test	ARB	12 months
End testing	ARB	11 to 6 months
<b>Administrative</b>		
Letter of Intent and draft Executive Order	ARB	3 months
Final Executive Order	ARB	0 months

### 8.6. Denial of Executive Order Renewal

System certifications shall not be renewed if the Executive Officer determines that the performance standards and/or specifications in the Executive Order and CP-501 fail to be met.

## 9. REFERENCES

*ARB Test Procedure for Determining Integrity of Portable Fuel Container Systems, TP-501.*

*ARB Test Procedure for Determining Diurnal Emissions from Portable Fuel Container Systems, TP-502.*

*Standard Specification for Portable Gasoline Containers for Consumer Use, ASTM F852-08.*

*Standard Specification for Portable Kerosene and Diesel Containers for Consumer Use, ASTM F976-08.*

*Field Validation of Pollutant Measurement Methods from Various Waste Media.*  
Title 40, Code of Federal Regulations, Part 63. United States Environmental Protection Agency, Appendix A.

*General requirements for the competence of testing and calibration laboratories.*  
ISO/IEC 17025:2005.