
# 2024 Truck and Engine Manufacturers Association Compliance Workshop

**E-Cert Session**

April 24, 2024

# Year in Review for HD E-cert

- Manufacturer beta testing launched on August 3rd, 2023
  - Beta testing occurred from August 15th – September 15th
  - Webform was released and manufacturer uploader accounts were created
- 34 manufactures expressed commitment to manufacturer testing
  - Staff-level questions that were answered through documentation review were received from 10 manufacturers
  - Feedback and bugs received from 3 manufacturers
- CARB staff created test files

# Lessons Learned

- Webform and database have been modified to accommodate input from manufactures and staff
- Heavy-duty on-road and off-road engines are ready to be submitted this year, further updates will occur.
- Further updates to webform and database are needed for HD GHG section to require E-cert submission

# Status of the CIHD E-Cert Project

## Recent and Current Development Activity

- CARB has published an updated version of the system documentation on the E-Cert webpage as of 04/11/2024
  - Website: ww2.arb.ca.gov/e-cert
- We encourage manufacturers to create test files and look through documentation.

## Upcoming Development and Transition Activity

- The system will allow manufacturer submissions starting May 15th, 2024
- E-Cert will be mandatory stating August 1st, 2024
- Feedback during the transition period will be used to adjust the webform and database, as needed

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# E-Cert Application Process

## For Each Submission

Submissions include initial applications for certification and any subsequent amendments, including model additions, additional or corrected test data, running changes, and field fixes.

- Create a complete application data file
- Upload the application data file to the E-Cert system using the upload webpage
- Receive notification of the submission status via email
- Correct and resubmit application working with the certification engineer, as needed

# E-Cert Application Data File Creation

## Application Data Files

All submissions to E-Cert are contained in application data files.  Each file:

- Must contain a single, complete application
- Must be in XML format using manufacturer database or CARB webform
- Must conform with the published data requirements and rules, and XML schema

# E-Cert Application Data File Creation

## Application Data Files: Webform Creation Tool

Manufacturers may use the webform provided by CARB for data file creation.

Manufacturers are responsible for the content of the XML data file submitted to the E-Cert system, regardless of whether the webform is used to create the file.

CARB will update the webform on occasion and will notify manufacturers at such times. A notice will be sent out when updates occur.


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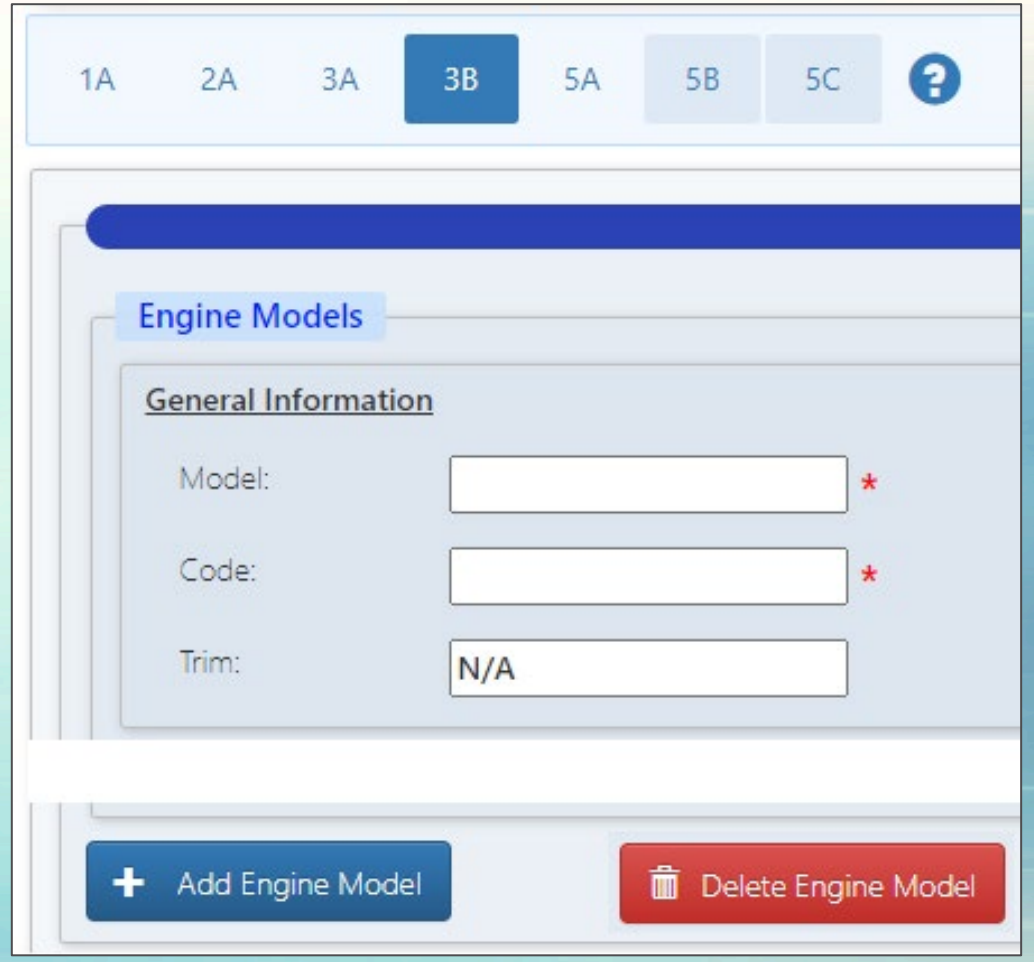
# E-Cert Application Data File Creation

## Application Data Files: Webform Creation Tool

Applications are divided in groupings of similar data, called Certification Summary Information (CSI) screens. In the webform, a user may navigate the CSIs by using the CSI identifier tabs.

Certain tables allow for records to be added and deleted using the 'Add …' and 'Delete …' buttons located with each record and below the table itself.

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# E-Cert Application Data File Creation

## Application Data Files: Webform Creation Tool

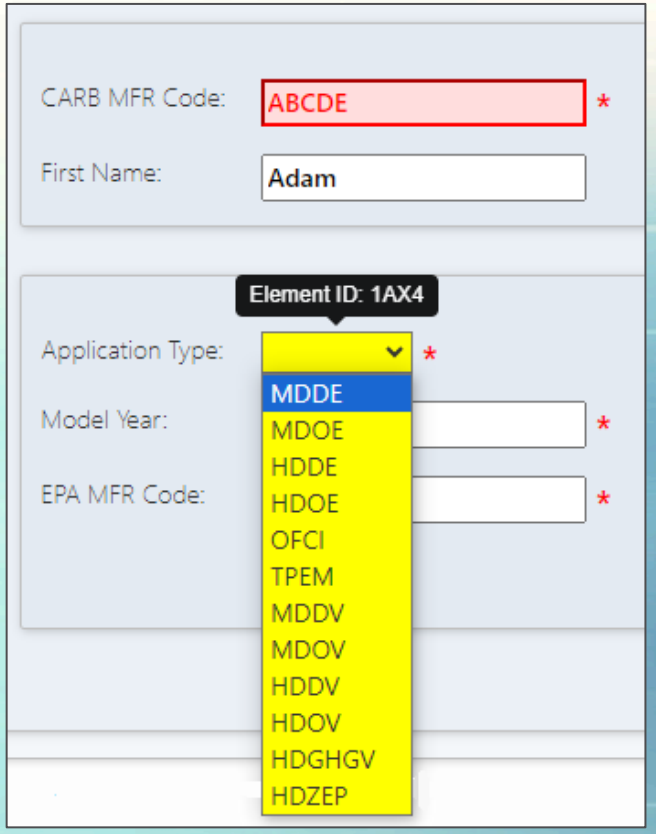
The webform provides some informational guidance:

- Fields in focus are highlighted in yellow
- Field tooltips indicate the Design ID for the expected data
- Certain fields provide selectable options from a drop-down list

The webform is capable of checking the data against many of the requirements and rules. The color scheme used is:

- Missing data is marked with a red asterisk
- Incorrect data is highlighted with a red background
- Correct data has no red marks or highlighting

Manufacturers are responsible for all data in an application to conform with all published requirements regardless of any webform guidance.

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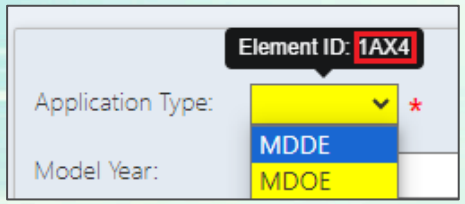
# E-Cert Application Data File Creation

## Application Data Files: Troubleshooting

Using the Design ID provided in the webform tooltip, the requirements and rules for that field can be found in the Data Requirements and Business Rules documentation and the XML schema. The CSI identifier is encoded in each design ID as the string before the character ‘X”.




```
<xs:complexType name="CIHDApplicationType">
  <xs:sequence>
    <xs:element id="_1AX3" name="application_name" type="AppNameType"/>
    <xs:element id="_1AX4" name="application_type" type="CIHDlkupAppTypeType"/>
```

**California Air Resources Board - CIHD E-Cert Data Requirements**

| ver | rev | applicability | | | | submitter | | | revisions |
|---|---|---|---|---|---|---|---|---|---|
| B | 1.071 | R=required | V=variable | O=optional | N=disallowed | M=mfr | A=arb | S=auto | modified |

**CSI-1A: Field Descriptions**

Fields Summary

| Design ID | TABLE TITLE (NAME) / Field Title (Name) Description | XML Schema Submitter | | Applicability: MDDE | MDOE | HDDE | HDOE | OFCI | TPEM | MDDV | MDOV | HDDV | HDOV | HDGHGV | HDZEP | Reserved |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1AX4 | Application Type (application_type) [AppType]<br>Entered by Manufacturer; Required for all records. This field is essential for review. The type of this application. This value is specified during the initial certification of this application, and any subsequent running changes, field fixes, or corrections must not change this value. Lookup values are in table CIHD_LKUP_APP_TYPE. | R | M | R | | | | | | | | | | | | |
| | Carryover Type (carryover_type) [AppCarryoverType]<br>Entered by Manufacturer; Required for all records. Indicates whether this | | | | | | | | | | | | | | | |

**RULE #ESSENTIAL-1A: REQUIRE ESSENTIAL FIELDS – ALL APPLICATIONS**

Each application must include information essential to field structure and validation.

REF: CIHD_APPLICATION TYPE: FIELD_STRUCTURE

| FIELDS | CONDITIONS | RESPONSES IF ALL TRUE |
|---|---|---|
| F(R) [1AX1] - Application Information | IS PRESENT | Require [1AX3-4+64-66] |
| F(R) [1AX3] - Application Name | - | |
| F(R) [1AX4] - Application Type | - | |
| F(R) [1AX64] - MFR Code - CARB | - | |
| F(R) [1AX65] - MFR Code - EPA | - | |
| F(R) [1AX66] - Model Year | - | |

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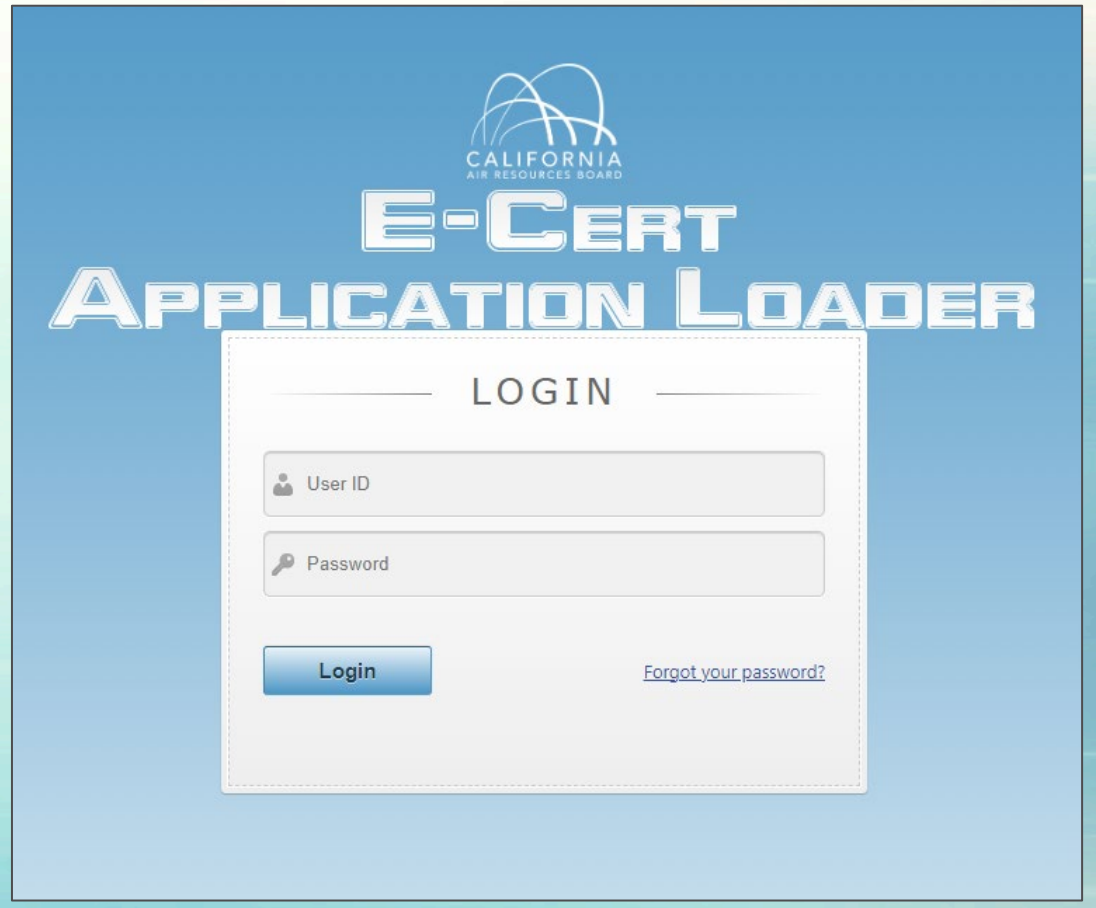
# E-Cert Application Data File Upload

Application data files are submitted using the App Loader webpage.

A user account is required to upload an application.

To make it easier for manufacturers, all e-File account users are registered users. Contact your certification engineer to get started.

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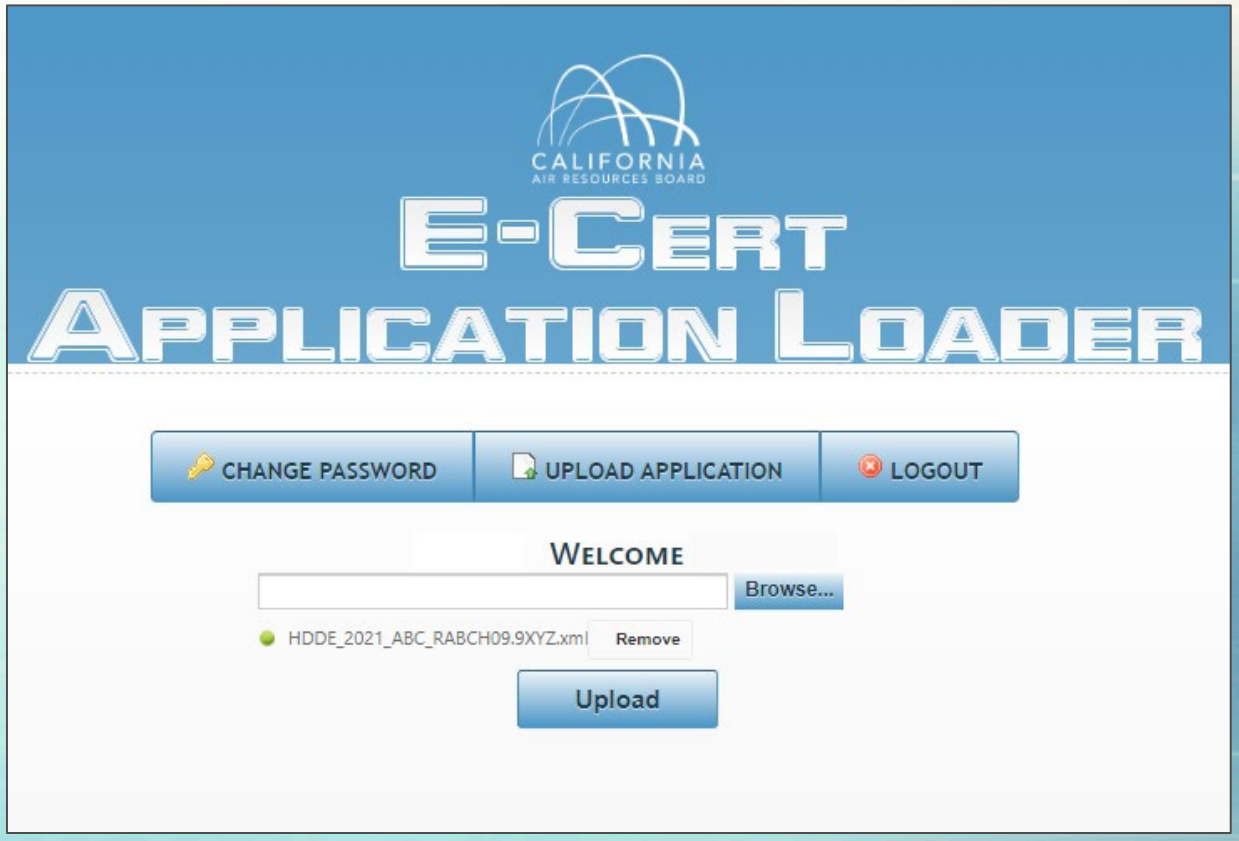
# E-Cert Application Data File Upload

Application data files are selected for upload using the ‘Browse’ button that triggers a file selection dialog.

Selected files are uploaded into the system using the ‘Upload’ button.

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# E-Cert Application Data File Troubleshooting

The system will validate application data files against the published data requirements, business rules, and XML schema.  Any errors will be listed in a notification email.

It is encouraged, before submitting to the system, that data files be reformatted to be “pretty” XML that is human-readable (there are free online tools that do this) instead of a single line.  Doing so will vastly decrease the time and effort to understand any error notifications.

CARB will be posting videos online and additional resources to get ready for HD E-Cert

# Contacts and Resources for Information

**Contacts:**

Manufacturers are asked to first contact their assigned certification engineer with questions and feedback. As needed, the certification engineer will elevate issues to the lead staff and management.

**Resources:**

https://ww2.arb.ca.gov/e-cert

# Collaborative Effort

## E-cert Advantages

- The data elements that manufacturers are submitting has not changed, it's a new format to submit data
- The second year will be easier on both the cert engineer and manufacturer
- It should be faster to process applications the second year

## E-cert Challenges

- For manufactures and staff this is something new and there is a learning curve
- A lot of documentation to look through
- Errors to troubleshoot