

Tank Car Application for Approval & Certification of Construction User Guide



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Tank Car Application for Approval and Certificate of Construction

AAR Manual of Standards and Recommended Practices, Section C Part III, Specifications for Tank Cars (M-1002) Chapter 1, section 1.4 General states the following: Paragraph 1.3.6 of this specification and U.S. Department of Transportation (DOT) and Transport Canada (TC) regulations require AAR Tank Car Committee (Committee) approval of designs and materials used for the construction, conversion, alteration, or welded repair of tank car tanks. The Committee has delegated to the AAR Safety and Operations Department the authority on its behalf to approve applications provided that they have been reviewed and deemed to be in accord with AAR, DOT, and TC requirements by an independent third party (ITP) that has been certified by the Committee in accord with paragraph 1.5, or, they meet the requirements for precedent approval outlined in Paragraph 1.4.2.3.

Procedures for Securing Approval can be found within Chapter 1 of the AAR Manual of Standards and Recommended Practices Section C-III Specifications for Tank Car (M-1002).

The Tank Car Application for Approval and Certificate of Construction makes it easier and more efficient for the Tank Car Builder, ITPs and the AAR to process tank car applications. The system provides a centralized location for all documents related to tank car application process including the application, drawings, Independent Third Party (ITP) checklists, as well as automated billing for certification services. This system makes it easier for AAR to effectively manage and respond to customer's needs. Features include:

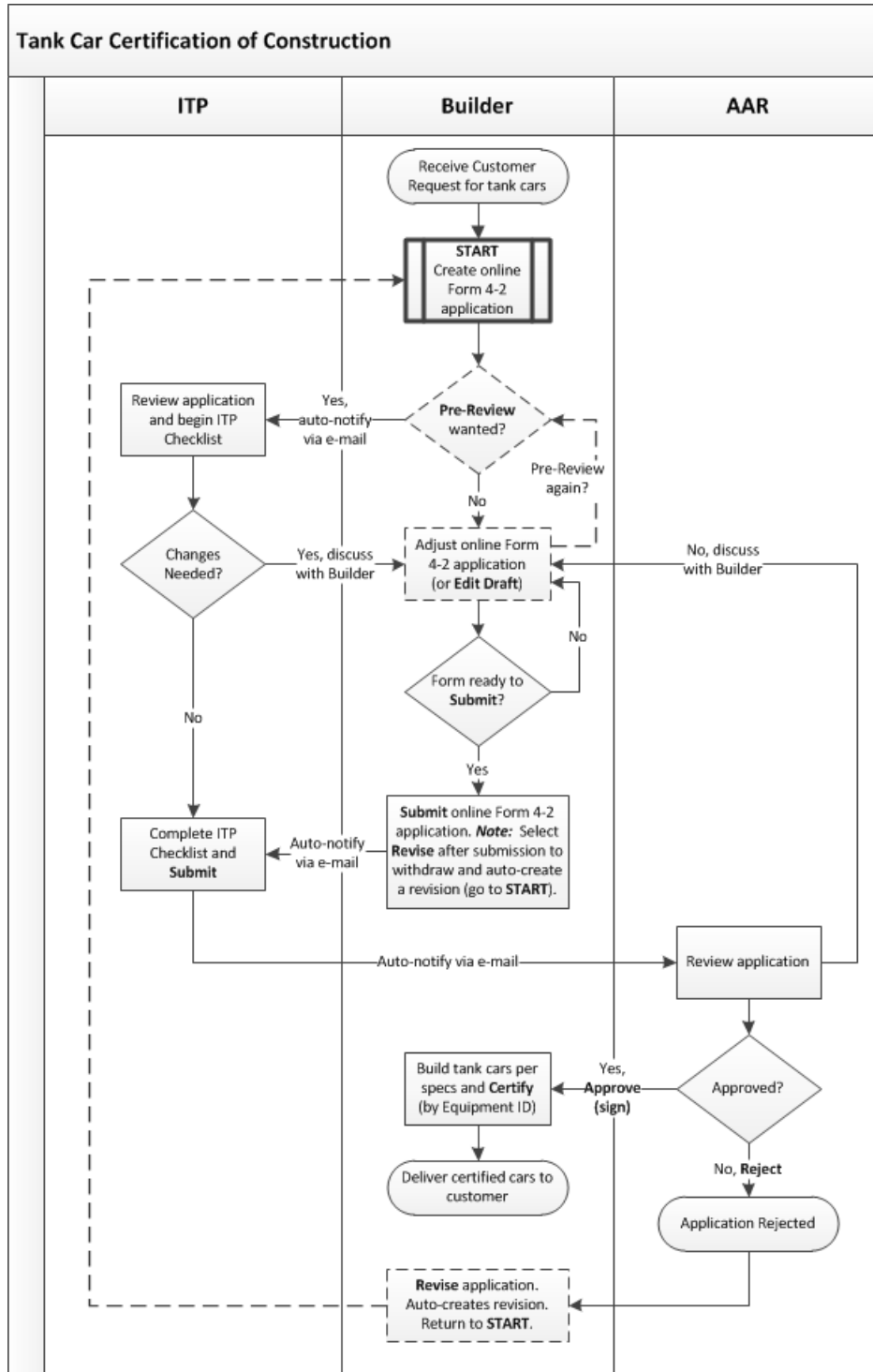
- Allows authorized tank car builders to electronically submit tank car applications (includes Form AAR 4-2 and Form 4-2.1 supplementary page), including drawings, for review and approval
- Allows authorized Independent Third Party engineers to review applications online and electronically complete the ITP checklist (Form AAR 4-2, Attachment 1) for each application
- Allows the AAR to review applications from the builders and approve or reject those applications
- Allows the AAR to review ITP checklist
- Allows the Railinc accounting department to create invoices for submission, revision, and review services
- Allows authorized users the ability to query their own applications
- Allows the builder to certify the AAR approved tank car application resulting in the tank car(s) certification of construction

This system has been built in such a way that it can be expanded to integrate other types of AAR applications and processes. Other expansion applications the AAR Safety and Operations Department might include in the future: PRD/valve/fitting new and renewal applications (AAR 4-3, 4-5 and 4-7 Forms), tank car facility certifications, tank car service trials, and remote monitoring equipment applications.

An overview of the system flow is shown in [Exhibit 1](#). Optional flows and activities are shown with dotted lines.

Tank Car Application for Approval and Certificate of Construction Workflow

Exhibit 1. Tank Car Application for Approval and Certificate of Construction Workflow



User Guide Structure

This document has been organized to reflect the application menu order of the Tank Car Application for Approval and Certificate of Construction. It describes use and interpretation of interface elements in the Tank Car Application for Approval and Certificate of Construction.

Railinc Single Sign-On (SSO) information is included, and references to the Railinc Single Sign-On User Guide added. SSO information for the Tank Car Application for Approval and Certificate of Construction administrators is also in the [*Railinc Single Sign-On User Guide*](#).

Whenever possible the term “select” is used to indicate making a choice using either the mouse or keyboard. Left-clicking generally activates a control or selects an item. Where a double-click is required, it is specified.

Underlined blue links are functional links that open another document or go to another location in the user guide.

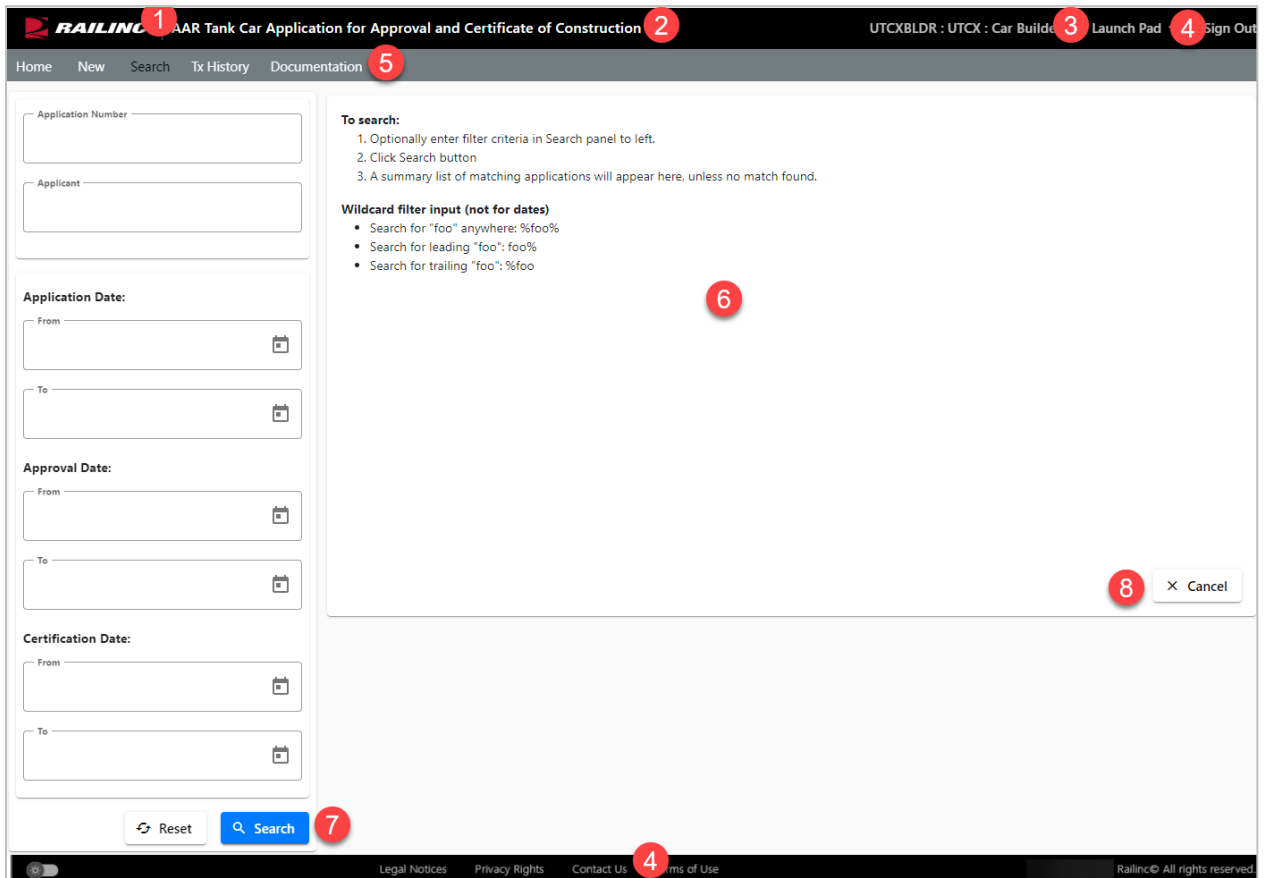
User Interface and System Requirements

The Tank Car Application for Approval and Certificate of Construction interface provides the same navigational tools found in most Windows applications and Internet sites. This section provides basic explanations of the elements and components that assist in moving through the various pages of the application to complete tasks. Mouse and keyboard equivalents are discussed for each element.

General user interface information (typical keyboard selection equivalents and shortcuts), as well as system requirements are available in the [Railinc UI Dictionary](#). Application-specific interface information is described in the next section.

Each page in Tank Car Application for Approval and Certificate of Construction has the same structure; however menu items are different depending on the user's role.

Exhibit 2. Application Page Layout



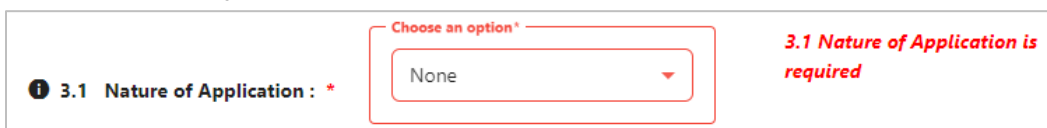
- 1 **Logo**—Railinc logo.
- 2 **Application Title**—Tank Car Application for Approval and Certificate of Construction.
- 3 **Sign-On Information**—Shows the logged in userid and company.
- 4 **Navigational Links**—Links at the top and bottom for the following functions:

- **Launch Pad**—opens user’s Launch Pad page in a new window. Close the window to return to the application.
 - **Contact Us**—opens a page of contact information for the Railinc Customer Success Center in a new window. Close the window to return to the application.
 - **Sign Out**—logs out of all SSO applications and returns to the Railinc SSO Login page.
- 5 Main Menu**—The options on this menu allow you to perform the functions of the application. This can include New, Search, and Documentation. Selecting a menu item populates the content area at the right. Different menu options are available depending on your assigned access rights.
- 6 Page Content Area**—The area of the page where data is displayed and tasks are executed. These vary and may include a number of different elements, which are described in the next sections.
- 7 and 8 Action Buttons**—Action buttons for the displayed content. This can include View, Search, Reset, Cancel, Revise, Clone, and Submit, depending on your role. See [Exhibit 7](#).

Mandatory Fields

Fields that are mandatory have a red asterisk beside the field name. Additionally, when submitting or exiting an incomplete mandatory field, a warning is displayed ([Exhibit 3](#)).

Exhibit 3. Mandatory Field



[Exhibit 4](#) contains general descriptions of buttons found throughout the Tank Car Application for Approval and Certificate of Construction interfaces.

Exhibit 4. Command Buttons

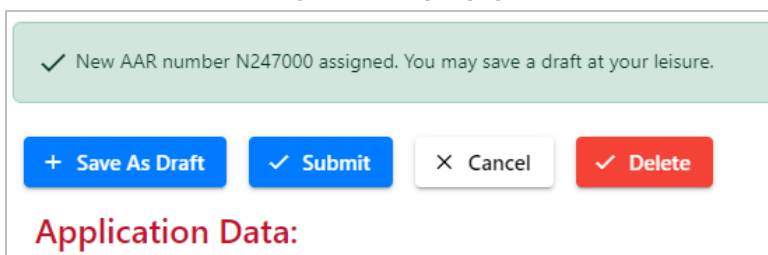
Name	Function
Add Row	Adds diagram row to application.
Apply Signature	Electronically signs approvals.
Cancel	Causes the system to discard any work performed on the current page. The system returns to the page representing the beginning of the current task or subtask.
Clear	The system clears data from a comment field text box.
Clone	The system copies an eligible selected application.
Edit Draft	Open an draft application in edit mode. Only available to builder role users.
Edit Note	Opens a supplemental note box for editable data and drawing fields.
ITP Preview	Send the draft application to ITP for a preliminary review.
OK	Confirms an action or acknowledges an action has taken place.
Remove Row	Removes diagram row from application.

Name	Function
Revise	Allows a user to create a revision for a rejected, approved, or certified application.
Save	Saves entered data changes in comment text boxes.
Save as Draft	Saves entered data changes (e.g., changes to drafts).
Search	Executes a specified search.
Submit	Submits completed actions to continue the application approval process.
Upload	Uploads selected related drawings to application.
View	Opens a View panel which allows the user to execute specific tasks.
Yes/No	Responses for Tank Car Application for Approval and Certificate of Construction confirmation panels, to either continue with the requested action or not.

Message Areas

When an action has been requested and confirmed, Tank Car Application for Approval and Certificate of Construction displays a success message at the top of the content area ([Exhibit 5](#)).

Exhibit 5. Success Message after drop equipment action



Messages in green are generally confirmations of success.





- Messages in red are warnings or errors (input validation errors).
- Messages in yellow are informational.

Icons

Icons are graphic images used to display conditions, status, or to invoke secondary searches.

Exhibit 6. Icons

Icon	Description
Table List Manipulation	
	Click on a column heading once to sort the column in <u>descending order</u> . Click on a column heading three times to remove the sort.
	Click on a column heading twice to sort the column in <u>ascending order</u> . Click on a column heading three times to remove the sort.
	Click or hover over a column heading and select the menu icon to filter a column.
Form Input	
	Click to insert a comment to clarify input. Appears when empty, toggles with pencil icon when there is a comment to edit.

Icon	Description
	Comment icon becomes a pencil icon after a comment is entered to show it is editable. The pencil icon also appears on editable action buttons.
	Click to remove both a drawing and the note for the related drawing. No removal confirmation is given.
	Click the information icon for details about a field.
	Click the calendar icon to choose a date.

- Tables longer than one screen have a scroll bar at the right.
- Some column headings provide *sorting* capability, ascending or descending.

Getting Started

The Tank Car Application for Approval and Certificate of Construction is accessed using Railinc Single Sign-On (SSO). If you have an SSO login, go to the Railinc portal at <https://public.railinc.com/> and log into SSO by selecting the **Customer Login** link in the top right corner. Enter your user ID and password in the fields and select **Sign In**.

Register to Use Railinc Single Sign-On (SSO)

Every user of the Tank Car Application for Approval and Certificate of Construction must register with Railinc for a SSO account. It is beyond the scope of this document to describe the use of SSO. Refer to [Railinc Single Sign-On User Guide](#). Once SSO registration is complete, then users must request access to Tank Car Application for Approval and Certificate of Construction within SSO.

Role-Based Application

Access and authorization for Tank Car Application for Approval and Certificate of Construction is determined when requesting access through Railinc SSO. Below is a complete list of Tank Car Application for Approval and Certificate of Construction roles as seen in SSO.

Exhibit 7. User Roles and Tasks

Roles	Task	Description
<ul style="list-style-type: none"> Tank Car AAR Reviewer 	View, Approve, or Reject tank car applications	<ul style="list-style-type: none"> Review applications Review ITP Checklists Approve applications Reject applications View applications and checklists
<ul style="list-style-type: none"> Tank Car Builder Tank Car Builder Assistant (assistant role cannot submit applications) <p>Note: A new tank car builder must contact AAR to obtain access to the application and become associated with an ITP. The main contact for each tank car builder will be contacted by AAR if any requests are made for additional tank car builder roles, tank car certifier role, and/or tank car builder assistant role to ensure that they are an approved agent for the company.</p>	Create, Modify, Query, View, and Certify tank car applications	<ul style="list-style-type: none"> Add (new or clone) application for Tank Car Certificate of Construction View applications Modify applications Request Pre-review Add/remove drawings Submit applications Withdraw submitted applications Certify Equipment IDs to an approved application
<ul style="list-style-type: none"> Tank Car Certifier Tank Car Builder 	Certify tank car applications	<ul style="list-style-type: none"> View applications Certify Equipment IDs to an approved application
<ul style="list-style-type: none"> Tank Car ITP Reviewer 	ITP Checklist activities and query applications	<ul style="list-style-type: none"> Create ITP Checklist Edit Checklist Submit to AAR for approval View applications View drawings for applications

Allowable Actions by Status and User Role

After locating a Tank Car application using a search (see [Search](#)), based on user role and the application's status, the following actions shown in [Exhibit 8](#) can be performed.

Exhibit 8. Role/Status-Based Actions

Status	Builder	ITP	AAR
Approved	V1, L, C, R, M	V1, V2, M	V1, V2, D, M
Certified	V1, L, M	V1, V2, M	V1, V2, D, M
Draft	E, V1, M, S	—	—
Pending AAR Review	V1, L, M, R	V1, V2, M	V1, V2, A, J, D, M
Ready for ITP Preview	E, V1, M, S	VI, V2, I, M	V1, V2, D, M
Rejected	V1, R, M	V1, V2, M	V1, V2, D, M
Submitted	L, R, V1, M	VI, V2, I, M	V1, D, M
Withdrawn	V1, M	V1, V2, M	V1, V2, D, M
Legend:		L = Clone (button)	M = Email (View panel)
A = Approve (View panel)		R = Revise (button, to withdraw)	S = Submit (button)
C = Certify (View panel)		V1 = View application/drawings (View panel)	V2 = View checklist (View panel)
D = Download CSV (View panel)			
E = Edit Draft (button)			
I = create/revise ITP checklist (View panel)			
J = Reject (View panel)			

Requesting Tank Car Application for Approval and Certificate of Construction Access

After authorization to use Railinc SSO is received, the user must request role access to Tank Car Application for Approval and Certificate of Construction following the instructions in the [Railinc Single Sign-On User Guide](#).

Exhibit 9. Request Application Access

Tank Car CoC
Tank Car Certificate of Construction Resource

1 Select Roles 2 Confirm 3 Done

Tank Car AAR Reviewer (MARK required)
This role will allows users to view, approve or reject Tank Car Applications

Tank Car Builder (MARK required)
This role will allows users to Create, Modify, Query, View and Certify Tank Car Applications

Tank Car Builder Assistant (MARK required)
This role allows the user to carry out all builder activities, except submitting an AAR 4-2 application, on behalf of the given builder company

Tank Car Certifier (MARK required)
This role allows the user to certify an AAR 4-2 application on behalf of the given builder company

Tank Car ITP Reviewer (MARK required)
This role will allow users to perform activities related to ITP checklist and query approved Tank Car Applications

Comments...

0/255

Return Next

Note: Requesting a role does NOT imply automatic approval for the selected roles.

When email notification of access to Tank Car Application for Approval and Certificate of Construction is received, the user can login and begin using Tank Car Application for Approval and Certificate of Construction.

Logging In

To log into Tank Car Application for Approval and Certificate of Construction:

1. Open your internet browser and enter <https://public.railinc.com> to open the Railinc website.
2. Select the **Customer Login** link in the upper right of the page. The Account Access page is displayed.
3. Enter your **User ID** and **Password**. Select **Sign In**. The Railinc Launch Pad is displayed.
4. In the My Applications section, select **Tank Car CoC**.
 - a. For the user who represents a *Builder*, the following Home page is displayed ([Exhibit 10](#)).

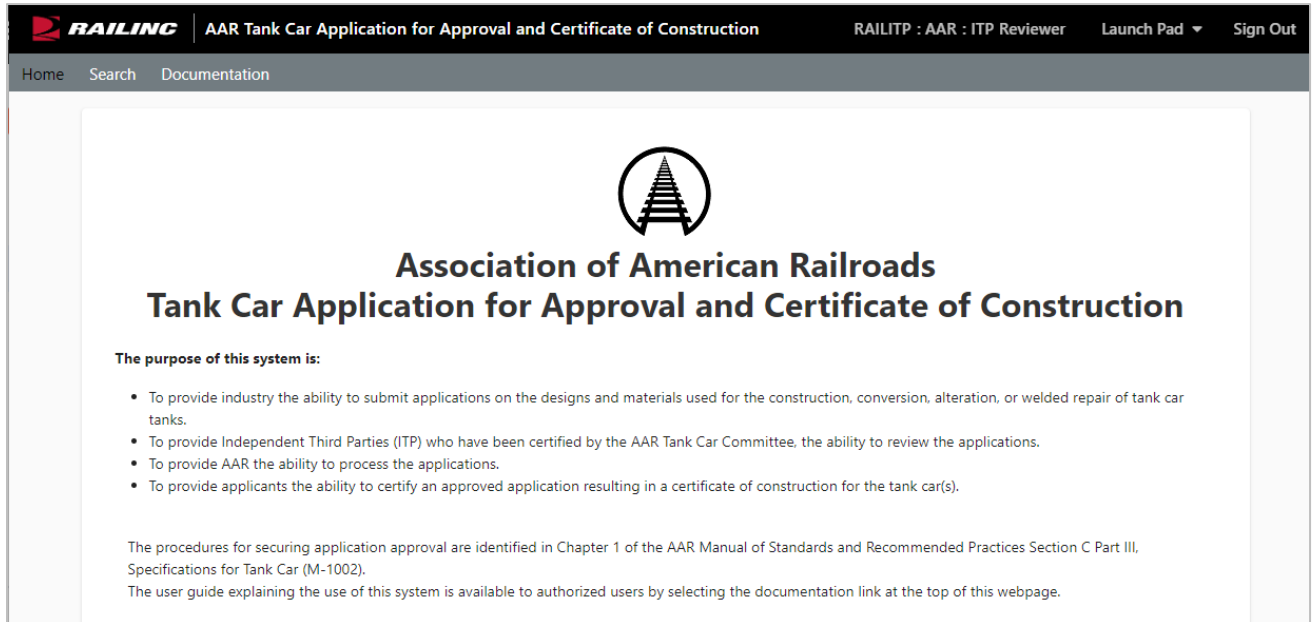
Exhibit 10. Home Page for the Car Builder



A main menu is displayed at the top. Continue by selecting a Tank Car Application for Approval and Certificate of Construction application menu item ([Exhibit 12](#)).

- b. For the user who represents an *ITP*, the following Tank Car Application for Approval and Certificate of Construction Home page is displayed ([Exhibit 11](#)).

Exhibit 11. Home Page for the ITP Reviewer



Continue by selecting a Tank Car Application for Approval and Certificate of Construction application menu item (refer to [Exhibit 12](#)).

The Tank Car Application for Approval and Certificate of Construction Home page can have the following menu items:

Exhibit 12. Menu Item Functions

Home	Returns to the Home Page (similar to Exhibit 10 or Exhibit 11)
New	Allows builders to create a new application (Exhibit 14)
Search	Allows all users to query tank car applications by various criteria (Exhibit 30)
Tx (Transaction) History	Allows builders to view the transaction history of their applications (Exhibit 53)
Documentation	Allows users to download the latest version of this User Guide (Exhibit 56) and

Note: Menu content varies based on SSO role-based permissions granted. Refer to [Exhibit 9](#).

Logging Out

Select the **Sign Out** link to end a Tank Car Application for Approval and Certificate of Construction session.

If multiple SSO applications are open (in separate browser windows), and the users wants to close only one, close the unwanted session window by **X**ing out or pressing **Alt +F4**. Do NOT select the **Sign Out** link. The Sign Out link ends the entire Single Sign-On session and closes *all* open SSO applications.

If the user session has been idle for over 30 minutes, the system will automatically time out and the user must log back in as directed.

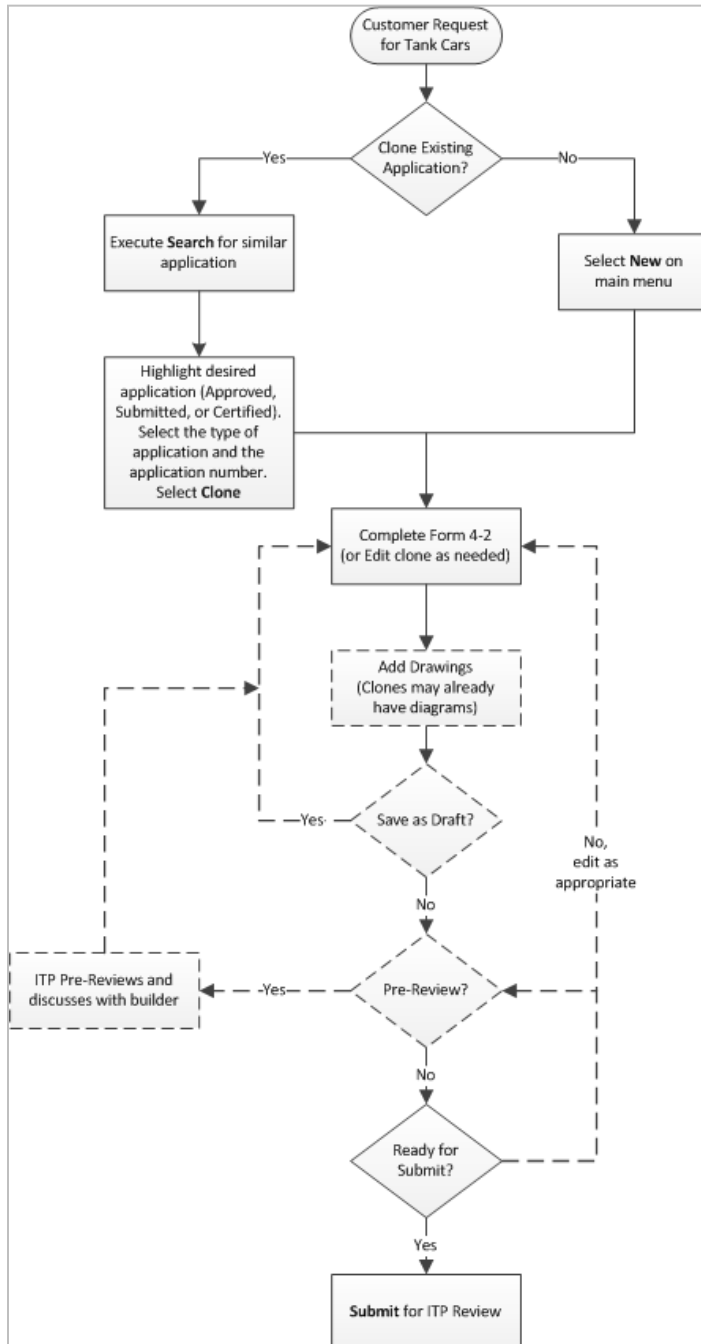
New Menu Item

You must be assigned either the SSO Tank Car **Builder** or **Builder Assistant** (except submitting applications) role to create a new application for approval and certificate of construction.

New applications can be created in one of two ways:

- Select **New** menu item. Refer to [New Menu Item](#) or
- Select **Clone** from the Search menu item. Refer to [Clone](#).

Exhibit 13. Create New Application Flow



New Menu Item

1. Select **New** from the main menu, the Application Data panel is displayed.

Exhibit 14. New Application Data Fields 1–6

The screenshot shows the 'Application Data' panel with the following fields and controls:

- Buttons: + Save As Draft, ✓ Submit, × Cancel, ✓ Delete
- Section Header: Application Data:
- Field 1: Approval Requested of : * (Radio buttons: Precedent, Non-Precedent)
- Field 2: Type : - None (Dropdown menu icon)
- Field 3: AAR Number :
- Field 3.1: Nature of Application : * (Dropdown menu: Choose an option*, None)
- Field 3.2: Revision Number :
- Field 4: Date : 04/15/2024 (Dropdown menu icon)
- Field 4.1: Order Date : * (Calendar icon, Dropdown menu icon)
- Field 5: Applicants No : (Dropdown menu icon)
- Field 6: Applicant : * (Dropdown menu icon)

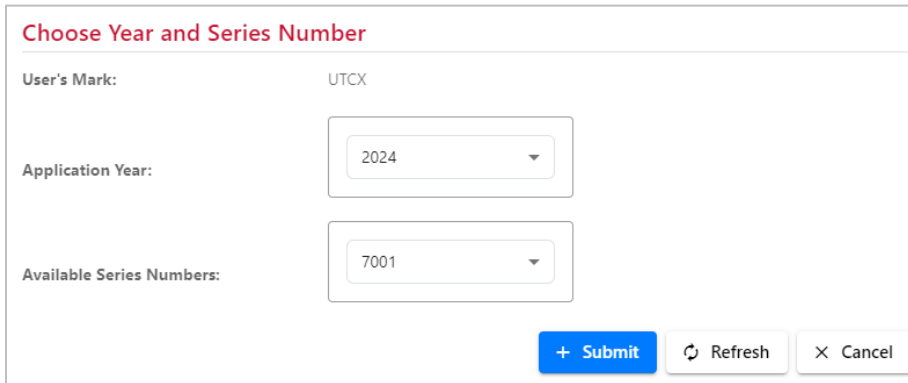
2. Complete the application. The application is divided into three sections:
 - [Application Data](#) (Fields 1–38)
 - [Drawings](#) (Fields 39–54)
 - [Supplement Data](#) (entries by field/drawing number, usually notes to provide additional detail)

Click the information icons to the left of each field for details about the field.

Application Data

All mandatory fields with a red asterisk are required.

1. First, select a **Nature of Application** (field 3.1).
2. The **Choose Year and Series Number** pop-up is displayed ([Exhibit 15](#)).

Exhibit 15. Choose Year and Series Number

Choose Year and Series Number

User's Mark: UTCX

Application Year: 2024

Available Series Numbers: 7001

+ Submit Refresh Cancel

3. Next, select the **Application Year** (up to five years in the future are available). Then, select an **Available Series Numbers** (two-hundred per chosen year are available). Next, select **Submit**. By setting these values, other fields in the form are automatically populated (notably fields 1, 2, and 3).
4. Complete the remaining **Application Data** fields using the guidance in [Field Definitions](#). For each field:
 - a. Optional: Add/remove comments as needed to clarify the application. Refer to the [Comments](#) section.
 - b. Optional: Select **Save as Draft** from the executable buttons provided at the bottom right hand corner of the web page to ensure no work is lost during input.
5. Before drawings can be added to the application, select the **Save as Draft** button at the top left of the page.
6. Add applicable drawings. See [Drawings](#) for details.
7. Select a processing option. See [Processing Options for New Applications](#) for details.

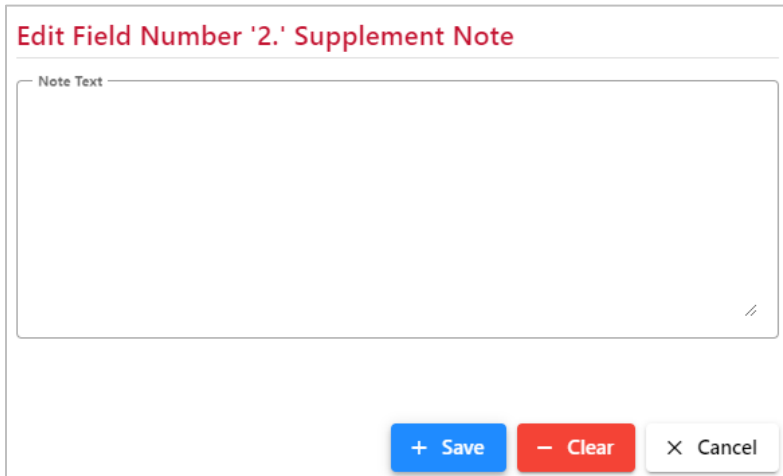
Comments

Most Tank Car Application for Approval and Certificate of Construction fields allow you to add comments to help clarify the application data, or provide an explanation of deviations.

Add Supplemental Data

To add a comment to a field:

1. Select the comment icon to the right of specific fields. A text input panel is displayed ([Exhibit 16](#)).

Exhibit 16. Supplement Note example

2. Enter the comment as needed and select **Save**. The panel closes, and the comment icon becomes a pencil icon. Entries can be found in the **Supplement Data** at the bottom of the entire New Application page (similar to [Exhibit 28](#)).

Edit Supplemental Data

To edit supplemental data:

1. Select the pencil icon to the right of the field. The **Edit Field** pop-up is displayed with the existing data (refer to [Exhibit 16](#)).
2. Overtyping or deleting sections of the text as needed.
3. When the content is entered, select **Save**. The pop-up closes. The data is changed in the Supplemental data section at the bottom of the application.

Remove Supplemental Data

To remove supplemental data:

1. Select the pencil icon beside the field. The **Edit Field** pop-up is displayed with the existing data ([Exhibit 16](#)).
2. Select **Clear** (or select the text and press the **Delete** key on your keyboard).
3. When the field is empty, select **Save**. The pop-up closes and the pencil icon changes back to the comment icon. The comment is removed from the Supplemental data at the bottom of the application (similar to [Exhibit 28](#)).

Drawings


Before any drawings can be added, an application must have the **Nature of Application** (Field 3.1) selected, and must be saved as draft. See [Exhibit 17](#). Most applications are submitted with drawing to assist the ITP with determining conformance with various AAR and DOT standards.

The size limit for uploading each file is **50 MB**.

Exhibit 17. Drawings for New Application

Drawings:

Prior to adding drawing information and/or attaching drawing to an application you must save the application as a draft. Please select the Save as Draft button at the top left of the form panel.

39. General Arrangement: 

ID	Drawing No	Drawing File Name	Prior Drawing No	Prior App/Cert No


To add a drawing:

1. Save the new application as a draft.
2. Scroll to the Drawings section of the application ([Exhibit 18](#)).

Exhibit 18. Drawings After Saved as Draft

Drawings:

[+ Add or Remove Drawings](#)

39. General Arrangement: 

ID	Drawing No	Drawing File Name	Prior Drawing No	Prior App/Cert No

3. Select the **Add or Remove Drawings** button. The Drawing Manager panel opens ([Exhibit 19](#)).

Exhibit 19. Drawing Manager

The screenshot shows the 'Railinc Tank Car Certification: Drawing Manager' interface. On the left, a dropdown menu titled 'Select a Drawing Type' is open, showing 'General Arrangement' as the selected option. Below the dropdown is a list of other drawing types: Tank Arrangement, Reinforced Openings, Including Calculations, Anchorage, Including Calculations, Fitting Arrangement, Manway Assembly, Protective Housing, and Venting, Loading, and... At the bottom right, there are four buttons: '+ Add Row', 'x Remove Row', '+ Save Rows', and 'x Close'.

General Arrangement				
ID	Drawing No	Drawing File Name	Prior Drawing No	Prior App/Cert No

4. Select a **Drawing Type** at the left (**General Arrangement** is the default).
5. Select **Add Row** from the executable buttons provided at the bottom right hand corner of the web page to add the first drawing. The first ID is automatically assigned and the Drawing Number field is active ([Exhibit 20](#)).

Exhibit 20. Drawing Manager after adding a row

The screenshot shows the 'Railinc Tank Car Certification: Drawing Manager' interface after a row has been added. The dropdown menu is now closed. The table has one row with ID '1'. The 'Drawing No' field contains 'TankCar', the 'Drawing File Name' field contains 'Choose File' and 'No fi...osen', and the 'Prior Drawing No' and 'Prior App/Cert No' fields are empty. The buttons at the bottom right are the same as in Exhibit 19.

General Arrangement				
ID	Drawing No	Drawing File Name	Prior Drawing No	Prior App/Cert No
1	TankCar	Choose File No fi...osen		

6. Enter up to 50 characters to label the builder's **Drawing No** for the drawing to be attached.

Note: More than one drawing number can be entered without having an associated uploaded drawing file. If multiple drawing numbers are entered they should be comma-delimited and the builder should ensure that these drawing numbers are included in the associated drawing file.

7. Click the **Choose File** button in the **Drawing File Name** field and the file selection panel opens (Exhibit 24).
8. Locate the correct drawing, click on it, and select **Open**.
9. Select **Save Rows** to complete the file upload ([Exhibit 21](#)).

Exhibit 21. Drawing Manager after successful upload of drawing file

General Arrangement				
ID	Drawing No	Drawing File Name	Prior Drawing No	Prior App/Cert No
1	TankCar	diagram1.pdf	<input type="text"/>	<input type="text"/>
2	8804-U1	diagram2.pdf	<input type="text"/>	<input type="text"/>

10. Optional: If the drawing has been used previously for another application:
 - a. Enter the previously used **Drawing No**. See the [Note](#) above.
 - b. Enter the approved application number or certification number.
11. **VERY IMPORTANT:** Select the **Save Rows** button after each row of information has been entered before taking any further actions. This will ensure that the file and entered information has been stored into the system correctly. Then select the **Close** button to close the Drawing Manager.
12. Optional: Add comments for the drawing by selecting the comment Icon. The Edit Field Supplement Note panel is displayed.

Exhibit 22. Add a Supplement Note

Edit Field Number '39' Supplement Note

Note Text

This is the same drawing used in F118803

//

+ Save
- Clear
× Cancel

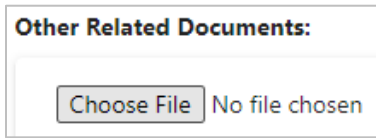
- a. Enter the appropriate information to clarify the drawing for the ITP review.
- b. Select **Save**. The pop-up closes. This note is displayed in the **Supplement Data** section at the bottom of the page ([Exhibit 28](#)).

13. Continue adding drawings, repeating steps 4–12 as needed.
14. To remove a drawing while in the Drawing Manager, click anywhere inside the drawing row and select **Remove Row**. A confirmation pop-up is displayed. Select **Yes** to remove the row and **No** to keep the row. When finished adding specified type drawings, select **Close**.
15. Optional: [Add Other Related](#) Drawings.

Add Other Related Drawings

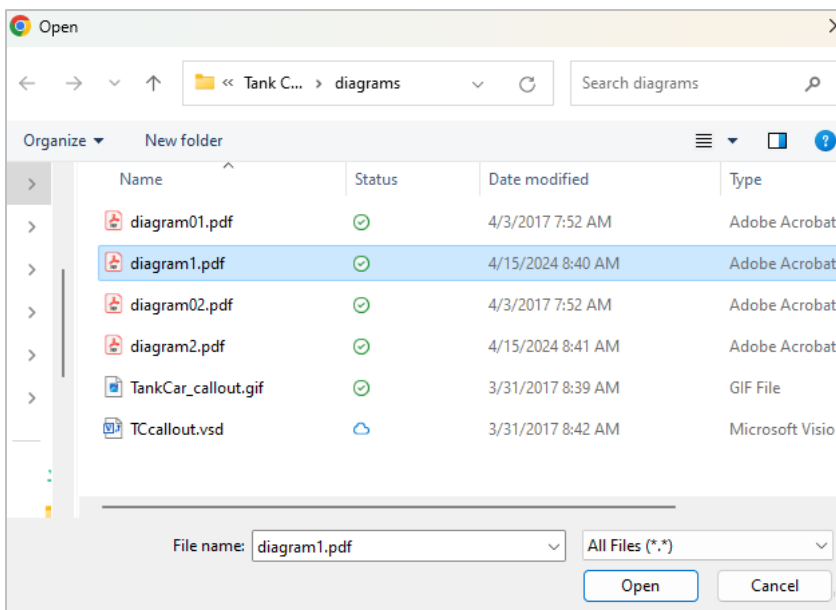
Occasionally, additional drawings might be needed that do not fall into the available drawing types in the Drawing Manager. Scroll down below Tank Qualification to **Other Related Drawings**.

Exhibit 23. Other Related Drawings



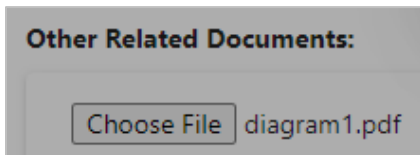
1. Select **Browse**. The file explorer pop-up is displayed ([Exhibit 24](#)).

Exhibit 24. Select File to Upload

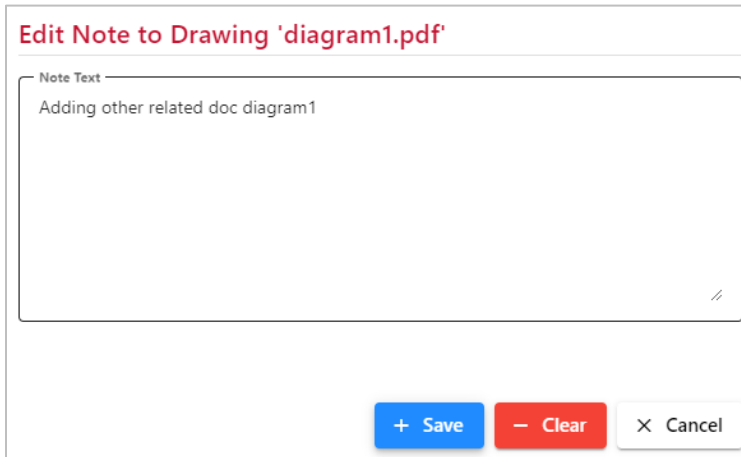


2. Find and select the correct drawing, and select **Open**. The pop-up closes and the selected file appears in the field.

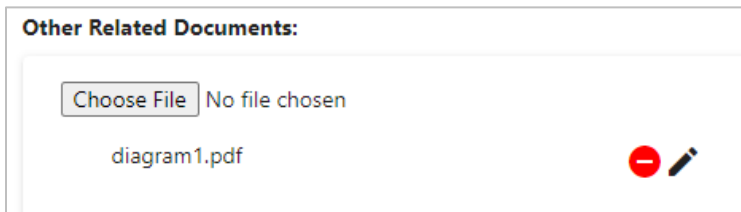
Exhibit 25. Other Related Drawings With File Selected





3. When the upload completes, the mandatory **Add Note to Drawing** pop-up is displayed ([Exhibit 26](#)). A comment must be added first before the file upload completes.

Exhibit 26. Add Note to Drawing


4. Enter clarifying details in the field and select **Save**. This entry appears in the **Other Related Drawings Notes** section located at the bottom of the screen ([Exhibit 28](#)). The pop-up closes and the file is shown in the **Other Related Drawings** field ([Exhibit 27](#)).

Exhibit 27. Other Related Drawings after successful upload


Two icons appear to the right of the drawing file name:

-  Select the delete icon to remove both the drawing and the note for the related drawing. No removal confirmation is given.
-  Select the pencil icon to edit the description for the drawing. This is similar to [Edit Supplemental Data](#). Select **Save** after editing.

5. Select **Save as Draft** at the top of the application to save your changes.

Supplement Data

Supplement Data is automatically added to the bottom of the application by comments as it is added to the Application Data or Drawing sections. These are identified by field numbers (to assist with editing or removal as needed. Refer to [Comments](#)). Changes to this data must be made by editing the comments in the Application Data section.

Exhibit 28. Supplemental Notes with Other Related Drawing Notes

Notes:	Field No.	Notes
	2	Alteration type comment
	39	This is the same drawing used in F118803
Other Related Drawing Notes:	Name	Notes
	diagram1.pdf	Adding other related doc diagram1

Note: Double-click an entry in the **Notes** field to open the **Edit Field Number** pop-up and edit the notes. Refer to [Comments](#). Double-clicking does not work in the **Other Related Drawing Notes** field. Use the icons shown in [Exhibit 27](#) to edit those notes.

Processing Options for New Applications

When all data has been entered for a new application, the user can choose from the following options:

Exhibit 29. Application Processing Options

ITP Preview	Send the application (for a fee) to the ITP for a preliminary review before submitting. ITP receives an email notifying them of the builders request to have them review before officially submitting the application to AAR. Status is Ready for Preview .
Save as Draft	Saves a draft (viewable only by builder) of the application. Status remains Draft .
Submit	Submit the application to the ITP for review. ITP receives an email that the application is ready to be reviewed and an ITP checklist needs to be created and submitted. Automatically sets the status to Submitted .
Cancel	Exit without saving.

Search

Search is the basic tool for finding applications that require additional work or specific actions. The search results you see are dependent on your role. A tank car builder receives only results for their company's applications based on the criteria entered. AAR receives results for all builders, and ITPs receive only results for the builders to which they are associated to perform reviews.

Simple Search

The simplest form of a search is to select **Search** without setting any criteria and accepting the default **Application Status = All**. A car builder only sees the results that include applications created by their company's users. ITP Reviewers are NOT able to see or use date criteria fields for searching.

1. On the main menu, select **Search**. The Search panel opens in the content area ([Exhibit 30](#)).

Exhibit 30. Search for Builder and AAR users

The screenshot shows a search panel with the following elements:

- Application Number:** A text input field.
- Applicant:** A text input field.
- Application Date:** Two date pickers labeled "From" and "To".
- Approval Date:** Two date pickers labeled "From" and "To".
- Certification Date:** Two date pickers labeled "From" and "To".
- Application Status:** A dropdown menu currently set to "All".
- Buttons:** "Reset" and "Search" buttons at the bottom left.
- Instructions:**
 - To search:**
 1. Optionally enter filter criteria in Search panel to left.
 2. Click Search button
 3. A summary list of matching applications will appear here, unless no match found.
 - Wildcard filter input (not for dates):**
 - Search for "foo" anywhere: %foo%
 - Search for leading "foo": foo%
 - Search for trailing "foo": %foo
- Cancel:** A button with an "X" icon and the text "Cancel" at the bottom right.

2. Choose criteria. See [Search Criteria](#).

Note: Use **Reset** to clear the selected fields and start over.

3. Select **Search**.
 - a. If the search is unsuccessful, a warning is displayed ([Exhibit 31](#)).
 - b. If the search is successful, the results are shown in the content area ([Exhibit 32](#)).

Search Criteria

Users can select various criteria for searching including:

Application number: A percent sign (%) wildcard can be entered into the Application number field to search when an exact number is unknown.

Applicant: Actual name of the user, the address, and any other relevant identifying information.

When the date field is provided, user can select the calendar icon to choose a single date for:

- **Application Date:** When the application was first entered
- **Approval Date:** When AAR approved the application
- **Certification Date:** When the Builder assigned Equipment IDs to the approved application.

To Be Built: Car Mark and Car Number of equipment to be built.

Now Certified: Car Mark and Car Number of certified equipment.

Application Status: Restrict the applications displayed to the status of the application. Valid values are:

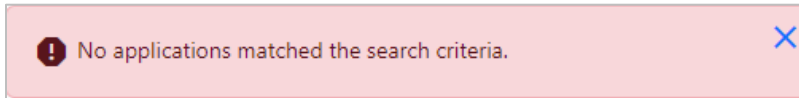
- *All*—Includes all statuses in the search. This is the default.
- *Approved*—Approved by AAR and Builder can begin building to those specifications.
- *Certified*—Equipment IDs have been assigned by Builder to the approved application.
- *Draft*—Builder has begun the application, which is editable by Builder.
- *Pending AAR Review*—ITP has completed the ITP Checklist and has sent the application to AAR for approval/rejection.
- *Ready for ITP Preview*—Builder has sent the draft application to ITP for a review prior to submission.
- *Rejected*—AAR has rejected the application. Builder cannot build to the application specifications.
- *Submitted*—Application is at ITP for review and ITP Checklist completion.
- *Withdrawn*—The Builder chose to revise a submitted application. A new lettered revision is created with a status of Draft.

Search Results

No Search Results

If criteria do not produce any results, the following warning is displayed ([Exhibit 31](#)).

Exhibit 31. No Search Results



User can choose less restrictive criteria (e.g., dates, or an application number), or perhaps use a wildcard where allowed.

Successful Search Results

Exhibit 32. Builder Search With No Criteria Selected

Applications						
AAR No	Revision	Applicant	Applic...	Appro...	Certifi...	Status
N247005			04/15/2024			Draft
N247000		UTCX	04/15/2024			Draft
N247137		Rory Test	04/04/2024	04/04/2024	04/04/2024	Certified
N247004			04/03/2024			Draft
L237010C	C	UTLX Manufacturing, LLC 6325 Highway 1 North Alexandria, LA 71303	04/03/2024			Draft
F237025		UTLX Manufacturing, LLC 6325 Highway 1 North Alexandria, LA 71303	10/12/2023			Submitted
L237026		UTLX Manufacturing, LLC 6325 Highway 1 North Alexandria, LA 71303	05/03/2023	11/28/2023	11/28/2023	Certified
L237024		UTLX Manufacturing, LLC 6325 Highway 1 North	04/27/2023			Pending

Total records: 534

Clear Filters

Cancel

Navigation: 1 2 3 4 5 50 100 250

Available actions for an application appear at the top when an application is selected ([Exhibit 33](#)).

Exhibit 33. Builder Search With Application Selected

Applications

View
 Edit Draft
 Delete
 Cancel

Total records: **534**
 Clear Filters

AAR No	Revision	Applicant	Applic...	Appro...	Certifi...	Status
L237010B	B	UTLX Manufacturing, LLC 6325 Highway 1 North Alexandria, LA 71303	04/20/2023	04/27/2023		Approved
F237013A	A	UTLX Manufacturing, LLC 6325 Highway 1 North Alexandria, LA 71303	04/10/2023			Pending AAR Review
L237022		UTLX Manufacturing, LLC 6325 Highway 1 North Alexandria, LA 71303	04/10/2023			Pending AAR Review
M237019		Union Tank Car Company 175 W. Jackson Blvd. Suite 2100 Chicago, IL 60604	03/31/2023			Draft
M237018		Union Tank Car Company 175 W. Jackson Blvd. Suite 2100 Chicago, IL 60604	03/30/2023			Submitted
L237010A	A	UTLX Manufacturing, LLC 6325 Highway 1 North	03/27/2023			Withdrawn

⏪
⏩
1
2
3
4
5
⏭

50
100
250

In [Exhibit 33](#), actions available include: **View**, **Edit Draft**, **Delete** and **Cancel**. Actions depend on the application status and are available when an application is selected. Other actions available are **Clone** and **Revise**.

Note: For ITPs, the application number of a selected application will carry over from here for viewing the [Tx \(Transaction\) History](#).

View Application Actions

After a successful search, and selecting an application, select **View** to open the View Application pop-up ([Exhibit 34](#)).

Exhibit 34. View Application Panel for AAR Reviewer

The screenshot shows a web form titled "View Application 'L237016'". It contains two main sections:

- 1. Select Application, Associated Drawing, or Document for viewing:** A dropdown menu is open, showing "Document - L237016" as the selected item.
- 2. Select Action to carry out:** Three radio buttons are present: "View" (which is selected), "Certify", and "Email".

At the bottom right of the form, there are three buttons: a green "Do It" button with a checkmark, a "Reset" button with a circular arrow icon, and a "Close" button with an 'X' icon.

The drop-down list offers a list of items for viewing.

Exhibit 35. View Application Panel drop-down list

This screenshot shows the same form as Exhibit 34, but with the dropdown menu expanded to show a list of items. The items are:

- Select
- Document - L237016 (with a blue checkmark)
- General Arrangement Drawing - 516034.pdf
- Protective Housing Drawing - 516063.pdf
- Bottom Outlet Valve Drawing - 511276.pdf
- Bottom Outlet Valve Drawing - 516070.pdf
- Tank Qualification Drawing - x9230.pdf

The dropdown menu has a scroll bar on the right side.

What is available for viewing can vary. For example, there may be no drawings attached, or a ITP checklist. The drop-down list in [Exhibit 35](#) shows the application, a checklist, and two drawings.

The radio button actions available on the panel can include:

- **View**—View the selection chosen in the drop-down list. This is the *default* radio button selection. See [Viewing Applications](#).
- **Email**—Send Email to ITP and/or Builder. See [Email](#).
- **Create Checklist**—Create the ITP checklist for preview or for a submitted application. See [Create Checklist](#).
- **Edit Checklist**—Opens a draft ITP checklist. See [Edit Checklist](#).
- **Certify**—Assigns Equipment IDs to an approved application. See [Certify](#).

When a radio button action has been selected, the user must select the **Do It** button to execute.

Viewing Applications

All users can view applications. To view an application:

1. After a successful search with an application selected, select **View** to open the View pop-up (similar to [Exhibit 34](#)). By default, the application is selected in the drop-down list.
2. Select **Do It**. The file downloads to your computer.
3. Select the downloaded file. The file opens the PDF in a new browser tab.

Exhibit 36. View Application PDF (top and bottom)

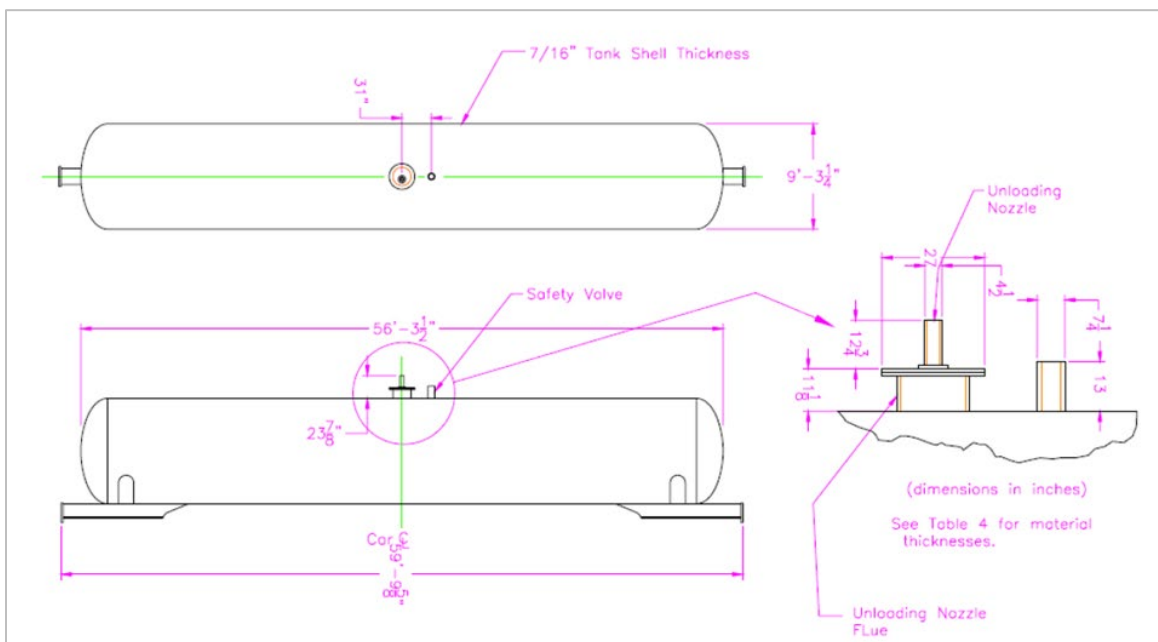
APPLICATION FOR APPROVAL AND CERTIFICATE OF CONSTRUCTION			
1 APPROVAL REQUESTED OF:		2 TYPE:	
6 APPLICANT:		3 AAR NO:	
9 REPORTING MARKS AND CAR NUMBERS:		4 DATE:	
		4.1 ORDER DATE:	
		5 APPLICANT'S NO:	
		7 TANK SPECIFICATION:	
		8 STENCILED SPEC:	
		10 NUMBER OF CARS:	
11	Initial Commodity	12	Density (LB Per Gallon)
13	Full Water Capacity (Gallons)	14	Dome Capacity or Outage (Gallons)
15	Material Type / Grade Heads	15.1	Tank Head Material Normalized
15.2	Tank Head Spliced	15.3	Charpy Requirements
16	Material Type and Grade Shell	16.1	Tank Shell Material Normalized
16.2	Charpy Requirements	17	Material Thickness Heads (Inches)
18	Material Thickness Shell (Inches)	19	Lining Type
20	Inside Diameter - Center (Inches)	21	Inside Diameter - End Rings (Inches)
22	Head Radius, Main (Inches if not 2:1)	23	Test Pressure (PSI)
24	Insulation Type	25	Insulation Thickness (Inches)
26	Thermal Conductivity (BTU – in/hr. –ft sq. – degree F)	27	Type of Safety Relief Devices
27.1	Number of Safety Relief Devices	28	Pressure Relief Device Start-to-Discharge (PSI)
29	Pressure Relief Device Flow Capacity (CFM Required)	30	Pressure Relief Device Flow Capacity (CFM Actual)
31	Tank Surface Area (Sq Ft)	32	Underframe or Stub Sill Type
33	Center of Gravity, Loaded (Inches)	34	Estimated Light Weight (lb)
35	AAR Clearance Diagram	36	Rail Load Limit (lb)
37	Truck Capacity (Tons)	38	Head Shield Type
38.1	Head Shield Thickness (inches)		
Notes:		Original Certificate:	
		Builder:	
		Date:	
		Former lading:	

Viewing Drawings

All users can view drawings in applications. To view a drawing:

1. After a successful search with an application selected, select **View** to open the View pop-up (similar to [Exhibit 34](#)).
2. Use the View drop-down list to select a drawing to view.
3. Select **Do It**. The file downloads to your computer.
4. Select the downloaded file. The drawing opens in a new browser tab.

Exhibit 37. View Drawing PDF



Scroll using scrollbars as needed. Use the zoom controls to enlarge the image for better viewing. It is beyond the scope of this user guide to describe printing large graphics.

5. When finished viewing, close the browser tab (**X**) to return to the View Application pop-up for other actions.

Viewing Checklists

Checklists can only be viewed by ITP Reviewers and AAR Reviewers. Builders cannot view the ITP checklist. To view a checklist:

1. After a successful search with an application selected, select **View** to open the View pop-up (similar to [Exhibit 34](#)).
2. Use the **View** drop-down and select the checklist to view.
3. Select **Do It**. The file is downloaded to your computer.
4. Select the downloaded file. The checklist opens in a new browser tab.

Exhibit 38. Checklist – Page 1

TRANSMITTAL/CHECKLIST FOR ITP REVIEW OF APPLICATIONS		Page 1 of 2
Application Number: <u>L226061A</u>	Applicant: _____	
TO(ITP): _____	Date sent to ITP: <u>05/02/2023</u>	
Date received by AAR from ITP: <u>05/02/2023</u>	Signed(ITP): _____	
FEE: Hours <u>0.45</u> Rate \$/hr _____	Expenses (Explain in Comments) <u>0.00</u>	TOTAL FEE: <u>54.00</u>
<input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Not Acceptable (Explain in comments) <input type="checkbox"/> Discrepancies not resolved (Explain in comments)		
Acceptable - No Comment Acceptable - See Comment Insufficient Data to Evaluate - See Comment Not Acceptable - See Comment Not Applicable <input checked="" type="checkbox"/> - - - - 1. Check Form 4-2 for accuracy and completeness. Be sure drawing numbers and revisions listed on Form 4-2 match those submitted. - <input checked="" type="checkbox"/> - - - - 2. Verify that the tank car specification is authorized for the initial commodities in accord with 49CFR 172.101 and the applicable requirements in Parts 173 and 179. - - - - <input checked="" type="checkbox"/> 3. For new and untried designs, verify from the car builder that the structural design conforms to Chapter 6 of M-1002 (which encompasses the applicable portions of M-1001), the applicable AAR Interchange Rules, M-1002 Appendix S (Safety		

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. Verify that all precedent Certificates of Construction were approved in the preceding 10 years (M-1002 Section 1.4.2.3 & A1.2).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. Verify that the fittings drawings list the approval Certificate of Construction for each fitting and that it was approved in the preceding ten years (M-1002 Section A1.2).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. Verify the materials used comply with M-1002 Appendix M.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. Verify that tank shell and head thickness meet the specification requirements.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. Verify that reinforcement calculations meet minimum requirements (M-1002 Section E3.0).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Verify that the stub sill design has been approved and that the style designation is shown on line 32 of Form 4-2.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10. Verify that the tank of a full sill car is anchored and in accord with M-1002 Section 5.2.1.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	11. Verify that rupture disc, if used, has a protection device installed (M-1002 Section A4.7.4).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12. Verify that cars equipped with thermal protection as part of the specification comply with Part 179.18 for manufacturer and thickness of the material. If listed by PHMSA it must be identified as such. Verify that cars equipped with insulation list the thermal conductivity and thickness of the material. The requirements are found in Part 179.100-4(b) for pressure cars and Part 179.200-4(b) for general specification cars.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. Verify for cars to transport Vinyl Fluoride that the insulation is compatible with the product and service, reference 179.102-4(b).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Verify for Class DOT-115 cars that the insulation complies with 179.220-4.

Review the checklist as needed. The PDF is a printable format.

6. Once you have reviewed or printed the PDF, close the browser tab (X) to return to the View Application pop-up for other actions.

Create Checklist

Only ITP users can create drafts and submit final ITP checklists. To create a checklist for an application:

1. After a successful search with an eligible application selected in **Submitted** or **Ready for ITP Preview** status, select **View**. The View application pop-up is displayed (similar to [Exhibit 34](#)). By default, the application appears in the drop-down list.
2. Select the **Create Checklist** radio button and select **Do It**. The Transmittal Check List for ITP Review of Application panel is displayed.

Exhibit 39. Transmittal Check List for ITP Review of Applications (top)

Transmittal/Check List For ITP Review of Applications

Application No.:	N243276	Applicant:	Date Received By AAR:
To(ITP):	ROBRIEN2 April Test		Date Sent to ITP: 04/17/2024
Date Received by ITP:	04/17/2024	Date Returned to AAR:	Date Rec'd by AAR from ITP:
Signed ITP:			Date:
FEE (Hours):	<input type="text" value="0"/>		Rate (\$/hr): \$114.11
Expenses(\$) (Explain in Comments):	<input type="text" value="0"/>		TOTAL Fee(\$): \$0.00
Application Status:	<input type="text" value="Blank"/>		

1. Check Form 4-2 for accuracy and completeness. Be sure drawing numbers and revisions listed on Form 4-2 match those submitted.	<input type="text" value="Blank"/>
2. Verify that the tank car specification is authorized for the initial commodities in accord with 49CFR 172.101 and the applicable requirements in Parts 173 and 179.	<input type="text" value="Blank"/>
3. For new and untried designs, verify from the car builder that the structural design conforms to Chapter 6 of M-1002 (which encompasses the applicable portions of M-1001), the applicable AAR Interchange Rules, M-1002 Appendix S (Safety Appliance Standards) and the Power Brake requirements (49CFR232).	<input type="text" value="Blank"/>
4. Verify that all precedent Certificates of Construction were approved in the preceding 10 years (M-1002 Section 1.4.2.3 & A1.2).	<input type="text" value="Blank"/>

Comments:

Item No.	Comments

Note: When Expenses are entered, a Comment is required.

Exhibit 40. Transmittal Check List for ITP Review of Applications (bottom)

Transmittal/Check List For ITP Review of Applications

30. Verify that Class DOT-117R tank cars not in compliance with M-1002 paragraph E9.2.1 are in compliance with 179.202-13(h).	Blank
31. Verify that interior piping is adequately supported.	Blank
32. Verify that repair procedures comply with Appendix R requirements.	Blank
33. Verify that applications for other than new construction are clear with respect to what is being requested.	Blank

Comments:

Item No.	Comments

- Complete the checklist in accordance with AAR standards. Valid values for the checklist drop-down are pictured in [Exhibit 41](#). If any selection other than **Acceptable - No Comment** is chosen, a **Comment** must be entered. Refer to [Comments](#). Submitting is not allowed if comments have not been entered. Drafts can be saved with omissions, but a warning is given.

Exhibit 41. ITP Checklist Drop-Down

Note: The **Accept All N/C** button at the bottom of the screen can be used to automatically fill fields 1-22 with acceptable/no comment.

Comments entered appear at the bottom of the checklist beside the corresponding Item Number.

- When all items have been addressed, select a processing option:

Exhibit 42. Checklist Processing Options

Submit	Send your application to AAR for approval/rejection. Automatically sets the status to Pending AAR Review .
Save as Draft	Save a draft checklist (viewable only by ITP and AAR). Status does not change.

Accept All N/C	Automatically fills fields 1-22 with acceptable/no comment.
Cancel	Exit without saving.

Edit Checklist

Only ITP users can edit ITP checklists. To edit a checklist for an application:

1. After a successful search with an eligible application selected (either **Submitted** or **Ready for ITP Preview**), select **View**. The View application pop-up is displayed (similar to [Exhibit 34](#)). By default, the application appears in the drop-down.
2. Select the **Edit Checklist** radio button and select **Do It**. The Transmittal Check List for ITP Review of Application panel is displayed ([Exhibit 39](#) and [Exhibit 40](#)).
3. Continue work on the checklist as described in [Create Checklist](#) (steps [3](#) and [4](#)).

Email

All users can send emails about any application, no matter the status. To send an email regarding an application:

1. Search for the eligible application and select it, then select **View**. The View application pop-up is displayed (similar to [Exhibit 34](#)). By default, the application appears in the drop-down.
2. Select the **Email** radio button. Two checkboxes appear to indicate who should receive the email. Email recipients vary depending on your role:
 - Builders see ITP and AAR
 - ITP Reviewers see AAR and Builder
 - AAR sees Builder and ITP

Exhibit 43. View Application with Email Selected

View Application "N247000"

1. Select Application, Associated Drawing, or Document for viewing:

Document - N247000

2. Select Action to carry out:

View

Certify

Email ITP AAR

Do It

3. Check either or both recipient boxes and select **Submit**. The Send Notification pop-up opens.

Exhibit 44. Send Notification Example

The recipients are preselected (cannot be changed) and the Subject contains the Application number and a timestamp.


4. Enter the text in the **Body** field below the formatting options.
5. Select **Send**. A confirmation is displayed ([Exhibit 45](#)).





Exhibit 45. Email Confirmation

6. Select **OK** to close the confirmation and return to the search results.
7. As the sender, you'll receive a copy of the email generated from Tank Car Application for Approval and Certificate of Construction, similar to the one shown in [Exhibit 46](#).

Exhibit 46. Email Generated Example

Discussion about application N247000 on 04/15/2024 02:24:34

 No-Reply@railinc.com
To

 Reply  Reply All  Forward 

Mon 4/15/2024 2:31 PM

Cc Tank Car Services
Retention Policy [Inbox - Delete older than 90 days \(90 days\)](#) Expires 7/14/2024

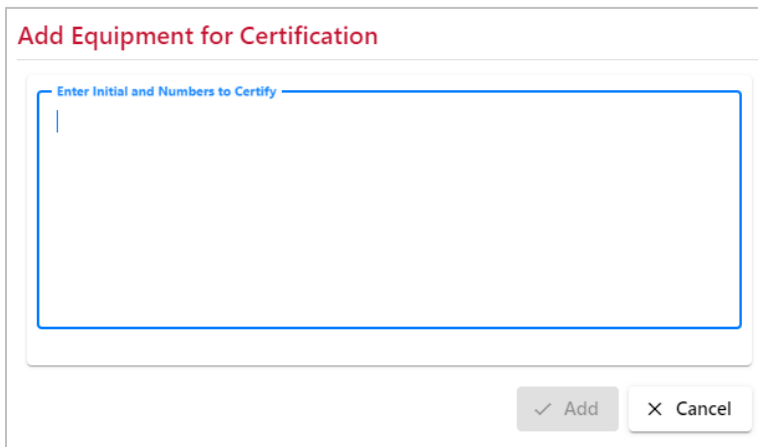
Enter your email text to address issues with this application or explain interpretation of the submitted application.

Certify

Only Builders can certify Equipment IDs to an approved application. To associate newly built tank cars with their Equipment IDs, they must be certified. To certify equipment:

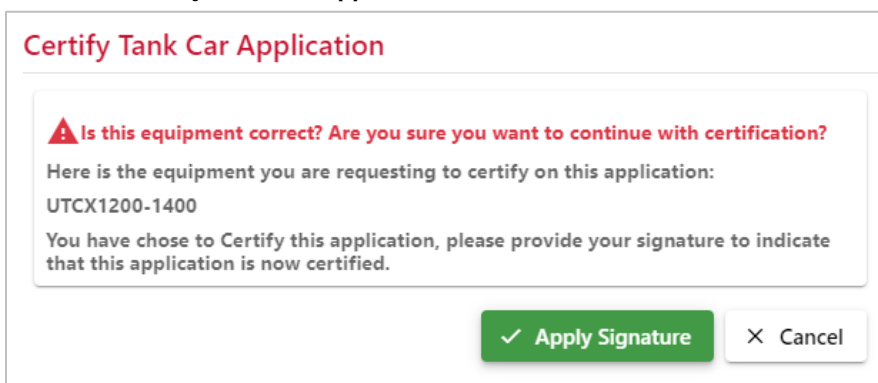
1. After a successful search with an eligible application in **Approved** status selected, select **View**. The View application panel is displayed (similar to [Exhibit 34](#)). By default, the application appears in the drop-down.
2. Select the **Certify** radio button and select **Do It**. The Add Equipment for Certification panel is displayed.

Exhibit 47. Add Equipment for Certification



3. Enter or paste in the Equipment IDs for the new tanks cars built under this approved application. Ranges can be used as well as comma-delimited entries. The **Add** button becomes active after the first entry.
4. Select **Add**. The Certify Tank Car Application panel is displayed.

Exhibit 48. Certify Tank Car Application



5. If unsure about the approval, select **Cancel**. Otherwise, select **Apply Signature**.

When the application is certified, the pop-up closes and the user returns to the Search, where the status is shown as **Certified**. When the certified application is viewed by others, the user who certified the application is shown in the application.

Command Button Actions

Some actions can be selected directly from the Search Results list. These include:

[Edit Draft](#)—Opens a Draft application in Edit mode.

[Clone](#)—Creates a Draft copy of a **Submitted**, **Certified**, or **Approved** application with a new application number.

[Revise](#)—Creates a Draft revision of a selected **Approved**, **Certified**, or **Rejected** application.

Edit Draft

Only Builders can edit application details. To edit an application draft:

1. After a successful search with an eligible application selected (**Draft** status), select **Edit Draft**. The Application Data page is displayed (refer to [Exhibit 14](#)). Data is partially or completely entered.
2. Complete the remaining Application Data fields using the guidance in [Field Definitions](#). For each field:
 - a. Optional: Add/remove Comments as needed to clarify the application. Refer to [Comments](#).
 - b. Optional: Select **Save as Draft**, to ensure no work is lost during input.
3. Add drawings as needed. Refer to [Drawings](#).
4. Select a processing option. See [Exhibit 29](#).

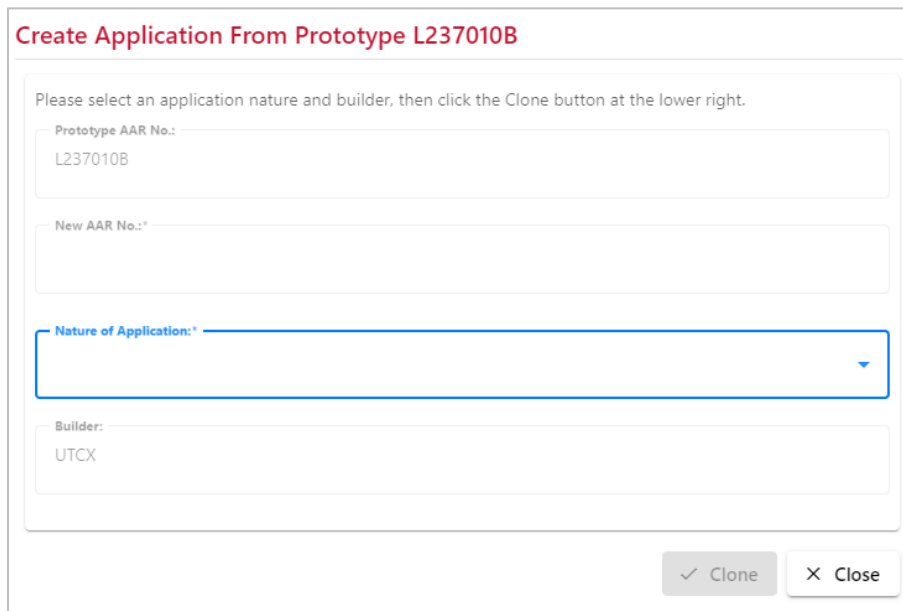
Clone

Only Builders can clone existing Approved, Submitted, or Certified applications. Cloning saves a great deal of time completing a new application. For example, if a customer had previously ordered 25 cars, and wants 25 more of the same, the builder can clone the original application and submit the new application with the new Equipment IDs, referencing the original approved request.

To clone an application:

1. Search for the appropriate application, which must be in the **Approved**, **Submitted**, or **Certified** status. Select the application and select **Clone**. The Create Application from Prototype pop-up is displayed.

Exhibit 49. Create Application from Prototype



Create Application From Prototype L237010B

Please select an application nature and builder, then click the Clone button at the lower right.

Prototype AAR No.:
L237010B

New AAR No.:

Nature of Application:

Builder:
UTCX

✓ Clone ✕ Close

2. Select the **Nature of Application** from the drop-down list. Confirmation of the assigned AAR number is displayed.

Exhibit 50. Create Application from Prototype Confirm

Create Application From Prototype L237010B

New AAR Number N247009 has been assigned
You may click the Clone button to edit your new draft

Please select an application nature and builder, then click the Clone button at the lower right.

Prototype AAR No.:
L237010B

New AAR No.*
N247009

Nature of Application:*
N - Alteration Nonprecedent AAR Approve

Builder:
UTCX

✓ Clone × Close

3. Select **Clone**. The Edit Draft Application <New Number> panel is displayed (not shown, similar to [Exhibit 14](#)). Data is partially or completely entered.
4. Complete the remaining Application Data fields using the guidance in [Field Definitions](#). For each field:
 - a. Indicate the new **Reporting Marks/Car Numbers** for the application.
 - b. Optional: Add/remove **Comments** as needed to clarify the application. Refer to [Comments](#).
 - c. Optional: Select **Save as Draft** to ensure no work is lost during input.
5. Add drawings as needed. Refer to [Drawings](#).
6. Select a processing option. See [Exhibit 29](#).

Revise

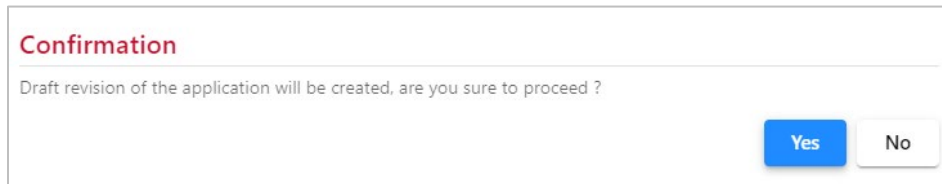
Only Builders can revise existing Approved, Rejected or Submitted applications. An application can only be revised once. After that, all work must be done on subsequent revisions. If an application is rejected and the builder wants to submit the application again with required changes, or an approved application needs equipment IDs added (that were not originally specified), then the application can be revised.

Approved or Rejected Status Revision

To revise an Approved or Rejected application:

1. Search for the eligible application, which must be in the **Approved** or **Rejected** status. Select the application and select **Revise**. A Confirmation panel is displayed ([Exhibit 51](#)).

Exhibit 51. Confirmation for Revising an Approved Application



The image shows a confirmation dialog box with a white background and a thin border. At the top left, the word "Confirmation" is written in red. Below it, a horizontal line separates the title from the main text. The main text reads "Draft revision of the application will be created, are you sure to proceed ?". At the bottom right of the dialog, there are two buttons: a blue button labeled "Yes" and a white button with a grey border labeled "No".

2. If unsure about the new draft, select **No**. Otherwise, select **Yes**. The Edit Draft Application <New lettered revision Number> pop-up is displayed (not shown, similar to [Exhibit 14](#))
3. Complete the remaining Application Data fields using the guidance in [Field Definitions](#). For each field:
 - a. Optional: Add/remove **Comments** as needed to clarify the application. Refer to [Comments](#).
 - b. Optional: Select **Save as Draft** to ensure no work is lost during input.
4. Add drawing as needed. Refer to [Drawings](#).
5. Select a processing option. See [Exhibit 29](#).

Submitted Status Revision

To revise a Submitted application:

1. After a successful search with an eligible application highlighted (Submitted status), select **Revise**. A Confirmation panel is displayed.

Exhibit 52. Confirmation for Revising a Submitted Application

Confirmation

Are you sure you want to withdraw and revise this previously submitted application or revision?
There will be a revision fee and a revision letter associated if you proceed

2. If unsure about the new draft, select **No**. Otherwise, select **Yes**. The Edit Draft Application <New lettered revision Number> panel is displayed (not shown, similar to [Exhibit 14](#))
3. Complete the remaining Application Data fields using the guidance in [Field Definitions](#). For each field:
 - a. Optional: Add/remove **Comments** as needed to clarify the application. Refer to [Comments](#).
 - b. Optional: Select **Save as Draft** to ensure no work is lost during input.
4. Add drawings as needed. Refer to [Drawings](#).
5. Select a processing option. See [Exhibit 29](#).

Tx (Transaction) History

The Tank Car Application for Approval and Certificate of Construction application allows builders to view the history of the transactions for their own records.

1. Select **Tx History** from the main menu. The Tx History search page is displayed.

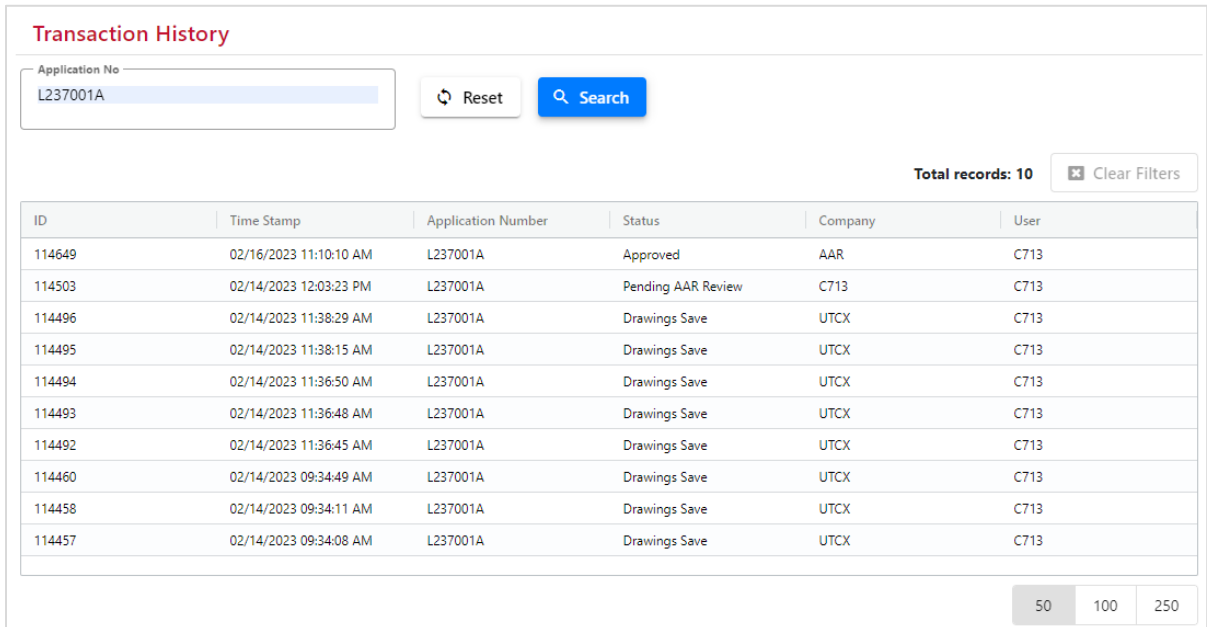
Exhibit 53. Transaction History Search



The screenshot shows a search interface titled "Transaction History". It features a text input field labeled "Application No" which is currently empty. To the right of the input field are two buttons: a "Reset" button with a circular arrow icon and a "Search" button with a magnifying glass icon.

2. A specific application number must be entered into the **Application No** field. Wildcards are not allowed for this search.
3. Select **Search**. A summary list of matching application is displayed ([Exhibit 54](#)).

Exhibit 54. Transaction History Search Results



The screenshot displays the search results for the application number "L237001A". The search box contains "L237001A" and the "Search" button is highlighted. The results are shown in a table with the following columns: ID, Time Stamp, Application Number, Status, Company, and User. There are 10 records listed. At the top right of the results area, it says "Total records: 10" and "Clear Filters". At the bottom right, there are pagination controls with "50", "100", and "250" options.

ID	Time Stamp	Application Number	Status	Company	User
114649	02/16/2023 11:10:10 AM	L237001A	Approved	AAR	C713
114503	02/14/2023 12:03:23 PM	L237001A	Pending AAR Review	C713	C713
114496	02/14/2023 11:38:29 AM	L237001A	Drawings Save	UTCX	C713
114495	02/14/2023 11:38:15 AM	L237001A	Drawings Save	UTCX	C713
114494	02/14/2023 11:36:50 AM	L237001A	Drawings Save	UTCX	C713
114493	02/14/2023 11:36:48 AM	L237001A	Drawings Save	UTCX	C713
114492	02/14/2023 11:36:45 AM	L237001A	Drawings Save	UTCX	C713
114460	02/14/2023 09:34:49 AM	L237001A	Drawings Save	UTCX	C713
114458	02/14/2023 09:34:11 AM	L237001A	Drawings Save	UTCX	C713
114457	02/14/2023 09:34:08 AM	L237001A	Drawings Save	UTCX	C713

4. Select a listed result to view details of the transaction. The Transaction History Detail page is displayed ([Exhibit 55](#)).

Exhibit 55. Transaction Detail

L237001A Transaction Detail

Transaction ID: 114649
Timestamp ID: 02/16/2023 11:10:10 AM
Application number: L237001A
Status: Approved
Company: AAR
User: C713

Field #	Name	Transaction Element Value	Previous Element Value
N/A	Approval Date	2023-02-16	
N/A	Approvers Name	Kenneth Dorsey	
N/A	Calculations-SPC-20001-drawingFileName	COC-SPC-20001.pdf	COC--TFP-22001 (EO).pdf
N/A	Calculations-SPC-20001-priorAppCertificateNo	L-207064A	
N/A	Calculations-TFP-22001-drawingFileName	COC--TFP-22001 (EO).pdf	COC-SPC-20001.pdf

< Previous Next > X Close

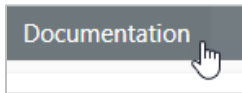
5. As desired, use scroll bar and the **Previous** and **Next** buttons to view additional detail records. Select **Close** to close the Transaction Detail pop-up.

Documentation and Information Icons

User Guide

Select **Documentation** from the main menu to open the Tank Car Application for Approval and Certificate of Construction User Guide in a new browser tab.

Exhibit 56. Documentation Menu Item

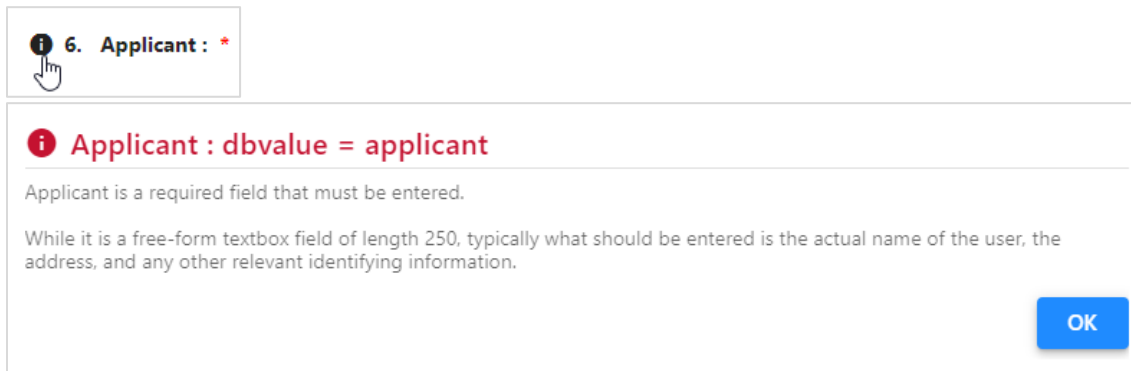


To exit the user guide, close the document tab.

Information Icons

For a detailed explanation about an application field, select the information icon next to the field name. [Exhibit 57](#) shows an example of the field details when the Applicant field information icon is selected. Select **OK** to close the information pop-up.

Exhibit 57. Applicant Field Information



Glossary

Abbreviation or Term	Description
AAR	Association of American Railroads
Application	Application Form AAR 4-2. Once the form is approved and the builder certifies the application and Form AAR 4-2 becomes the tank cars certification of construction.
Certify	Applicant signs and dates Form AAR 4-2 stating that the foregoing conforms to all applicable DOT and AAR requirements, including specifications, regulations, rules of interchange, and the DOT Railroad Safety Appliance Standards.
Certification	The cars enumerated conform to the approved description and to all applicable DOT and AAR requirements, including specifications, regulations, rules of interchange, and the DOT Railroad Safety Appliance Standards. Copy of this Certificate of Construction will be furnished to the owner and others as required by 49 CFR Part 179.5 before these cars are placed in service.
ITP	Independent Third Party that has been certified by the AAR Tank Car Committee in accordance with Chapter 1 section 5 of the AAR Manual of Standards and Recommended Practices Section C-III Specifications for Tank Car (M-1002). ITP Engineers responsible for examining tank car applications to ensure they are in accordance with AAR, DOT, and TC requirements.
ITP Checklist	Form AAR 4-2, Attachment 1, which is prepared by the ITP and submitted to AAR prior to a review for approval or rejection of a tank car certificate of construction.
Mark	The 2–4 character abbreviation for a railroad, shipper, lease agent, shop, etc.

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
1	Approval Requested of <i>(auto-populated by field 3.1)</i>	Radio button	1	One of the following: P – Precedent <i>(default)</i> N – Nonprecedent	M	<i>Not editable</i>
2	Type <i>(auto-populated by field 3.1)</i>	Dropdown	1	One of the following Blank <i>(default)</i> C – Construction A – Alteration V – Conversion W – Welded Repairs O - Other	M	<i>Not editable</i>
3	AAR No. <i>(auto-generated)</i>	Text Box	10	All	M	<i>Not editable.</i> First letter indicates the nature of the application, next 2 numbers indicate the year of application, last 4 numbers indicates next available number in applicant's series

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
3.1	Nature of Application	Dropdown	1	A – Construction–Nonprecedent Committee Ballot B – Conversion–Nonprecedent Committee Ballot C – Alteration–Nonprecedent Committee Ballot D – Welded Repair–Nonprecedent Committee Ballot E – Other–Nonprecedent Committee Ballot F – Construction–Precedent AAR Approve G – Conversion–Precedent AAR Approve H – Alteration–Precedent AAR Approve J – Welded Repair–Precedent AAR Approve K – Other–Nonprecedent AAR Approve L – Construction–Nonprecedent AAR Approve M – Conversion–Nonprecedent AAR Approve N – Alteration–Nonprecedent AAR Approve P – Welded Repair–Nonprecedent AAR Approve Q – Other–Nonprecedent AAR Approve	M	<i>Not editable.</i> First letter indicates the nature of the application, next 2 numbers indicate the year of application, last 4 numbers indicates next available number in applicant's series
3.2	Revision Number		3			<i>Not editable</i>
4	Original Application Date <i>(auto-generated)</i>	Date	10	Date (MM/DD/YYYY)	M	Date of Original application
4.1	Order Date	Date	10	Date (MM/DD/YYYY)	M	The value specifies the date which the customer placed an order with the Tank Car Builder to build tank cars made to the specifications of the application. This date can be in the future.
5	Applicants No.	Text Box	10	All	O	Builder lot number
6	Applicant	Text Box	1000/100	All	M	Applicant must be the tank car builder

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
7	Tank Specification	Dropdown	50	One of the following: None (default) Refer to Appendix A	M	Subset of field A072 in Umler. Output value will not include DOT or AAR in front of the specification
8	Stenciled Specification	Dropdown	50	One of the following: None (default) Refer to Appendix A	M	Subset of field A237 in Umler. Output value will not include major class nor DOT/AAR in front of the specification
9	Reporting Marks/Car Numbers	Text Box	300	All	M	Reporting marks and car numbers covering the cars in question at time of applying for approval
10	Number Of Cars (auto-generated)	Numeric	4	Number		Total number of cars represented by the car numbers or series shown on line 9
11	Initial Commodity	Text Box	50	All	M	If the checkbox is selected instead of typing in commodity, note contains default note regarding products authorized by DOT Part 173
12	Density (lbs. per gallon)	Numeric	12/7	All (including decimal and fractions)	M	Valid range is 0 to 9999.99 lbs/gallon
13	Full Water Capacity (gallons)	Numeric	12/5	All (including decimal and fractions)	M	Numeric in the range of 0 to 99999 gallons
14	Dome Capacity or Outage (Gallons)	Dropdown	30	All (including decimal and fractions)	M	Provided in dropdown
15	Material Type and Grade Heads	Dropdown	50	One of the following: None (default) Refer to Appendix B	M	Provided in dropdown and output file
15.1	Tank Head Material Normalized	Dropdown	50	One of the following: None (default) N – No Y – Yes	O	Provided in dropdown
15.2	Tank Head Spliced	Dropdown	50	One of the following: None (default) N – No Y – Yes	M	Provided in dropdown
15.3	Charpy Requirements	Dropdown	50	One of the following: None (default) -30F Longitudinal, -30F Transverse, -50F Longitudinal	O	Provided in dropdown
16	Material Type and Grade Shell	Dropdown	50	One of the following: None (default) Refer to Appendix B	M	Provided in dropdown and output file

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
16.1	Tank Shell Material Normalized	Dropdown	50	One of the following: None (<i>default</i>) N – No Y – Yes	O	Provided in dropdown
16.2	Charpy Requirements	Dropdown	50	One of the following: None (<i>default</i>) N – No Y – Yes	O	Provided in dropdown
17	Material Thickness Heads (Inches)	Numeric	12/8	All (including decimal and fractions)	M	Valid range is .25 to 1.3 inches
18	Material Thickness Shell (Inches)	Numeric	12/8	All (including decimal and fractions)	M	Valid range is .1875 to 1.3
19	Lining Type	Dropdown	200	One of the following: None (<i>default</i>) Refer to Appendix C	O	Provided in dropdown and output file
20	Inside Diameter – Center (Inches)	Numeric	12/9	All (including decimal and fractions)	M	Valid range is 0 and 999999.9999
21	Inside Diameter – End Rings (Inches)	Numeric	12/9	All (including decimal and fractions)	M	Valid range of 0 and 999999.9999
22	Head Radius, Main (Inches If Not 2:1)	Text Box	12	All (including decimal and fractions)	M	Valid number in inches and parts of inches
23	Test Pressure (PSI)	Numeric	12/6	All (including decimal and fractions)	M	Valid range of 60-600 psi, 100 psi or 300+ psi
24	Insulation Type	Dropdown	50	One of the following: None (<i>default</i>) Refer to Appendix D	O	Provided in dropdown and output file
25	Insulation Thickness (Inches)	Numeric	12/5	All (including decimal and fractions)	O	Valid range of .5 to 12 inches
26	Thermal Conductivity, (BTU-IN/HR- FT ² -°F)	Numeric	12/7	All (including decimal and fractions)	O	Valid range of 0 to 9999999
27	Type Of Safety Relief Devices	Dropdown	50	Valve (<i>default</i>), Combination, Vent or Total Controlled Prod	M	Provided in dropdown and output file
27.1	Number of Safety Relief Devices	Numeric	12/1	All (including decimal and fractions)	M	Valid value for Total Controlled Product is 0; for other devices, valid range of >0 and <=9
28	Pressure Relief Device Start-To- Discharge (PSI)	Text Box	12/8	All (including decimal and fractions)	M	Valid range of 0 to 99999999
29	Pressure Relief Device Flow Capacity (CFM Required)	Text Box	12/8	All (including decimal and fractions)	M	Valid range of 1 and 999999999
30	Pressure Relief Device Flow Capacity (CFM Actual)	Text Box	12/11	All (including decimal and fractions)	M	Valid range of 1 and 999999999
31	Tank Surface Area (Sq Ft.)	Text Box	12/8	All (including decimal and fractions)	M	Valid range of 0 and 9999.999

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
32	Underframe Or Stub Sill Type	Dropdown	50	One of the following: None (<i>default</i>) Refer to Appendix E	M	Provided in dropdown and output file
33	Center Of Gravity, Loaded, (Inches)	Numeric	12/7	All (including decimal up to 3 decimal places)	M	Valid range of 1 and 999
34	Estimate Light Weight (Lb.)	Numeric	12/6	All (including decimal and fractions)	M	Valid range of 31000 and 200000
35	AAR Clearance Diagram	Dropdown	50	One of the following: B (<i>default</i>), C, E or F	M	Provided in dropdown and output file
36	Rail Load Limit (Lb.)	Dropdown	12	One of the following: 263000, 286000	M	Provided in dropdown and output file
37	Truck Capacity (Tons)	Dropdown	12	One of the following: 100, 125	M	Provided in dropdown and output file
38	Head Shield Type	Dropdown and Text Box	50	One of the following: None (<i>default</i>) Refer to Appendix F	O	Provided in dropdown and output file
38.1	Head Shield Thickness	Text Box	12/8	All (including decimal and fractions)	O	Required if Head Shield Type is F, H or T; valid range of .5 and 1.0
39	General Arrangement Drawing	Table	100/50	All (including decimal and fractions)	O	Drawings apply to Application
40	Tank Arrangement Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
41	Reinforced Openings, Including Calculations Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
42	Anchorage, Including Calculations Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
43	Fitting Arrangement Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
44	Manway Assembly Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
45	Protective Housing Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
46	Venting, Loading, And Discharge Valves Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
47	Pressure Relief Devices Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
48	Heater Systems Interior Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
49	Heater Systems Exterior Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
50	Gauging Devices Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
51	Bottom Outlet Valve Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
52	Repairs Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
53	Manway Cover Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
54	Calculations Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
55	Tank Qualification Drawing	Text Box	100/50	All (including decimal and fractions)	O	Drawings apply to Application
N/A	Other Related Drawings					
N/A	Supplement	Text Box	4000	All (including decimal and fractions)	O	<i>Not editable.</i> This field captures all information provided on the Form AAR 4-2.1
N/A	Notes	Text Box	300	All (including decimal and fractions)	O	<i>Not editable.</i> This field captures entered comments by field
N/A	Original Certificate	Text Box	12		M	Applications for conversion, alteration, or repair must indicate current specification, former lading, date built new, and previous certificate number(s) under "Notes" and must show specification and new commodity on line 7 and line 11, respectively. Supply a supplemental sheet, if necessary, to associate the car numbers with their previous certificate numbers.
N/A	Builder	Text Box	250	All	M	When a modification is made to an existing car the original builder is provided here
N/A	Date	Date	10	Date (MM/DD/YYYY)	O	When a modification is made to an existing car the original certificate date is provided here
N/A	Former Lading	Text Box	50	All	O	When a modification is made to an existing car the formal lading is provided here
N/A	Revisions	Text Box	100	All	O	Dates of revisions to the application must be shown in this field.

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
N/A	Application By <i>Auto-populated from tank car builder info within application.</i>	Text Box	100	All	O	Applicants full name certifying that the AAR 4-2 application conforms to all applicable DOT and AAR requirements, including specifications, regulations, rules of interchange, and the DOT Railroad Safety Appliance Standards.
N/A	Signature <i>Auto-populated from tank car builder info within application.</i>	Assigned Image	100		O	Applicants signature certifying that the AAR 4-2 application conforms to all applicable DOT and AAR requirements, including specifications, regulations, rules of interchange, and the DOT Railroad Safety Appliance Standards
N/A	Title <i>Auto-populated from tank car builder info within application.</i>	Text Box	100	All	O	Applicants full job title certifying that the AAR 4-2 application conforms to all applicable DOT and AAR requirements, including specifications, regulations, rules of interchange, and the DOT Railroad Safety Appliance Standards.
N/A	Date Of Approval <i>Auto-populated.</i>	Date	10	Date (MM/DD/YYYY)	O	
N/A	Approval Signature <i>Auto-populated info from AAR within the application.</i>	Assigned Image				Signature on behalf of the Tank Car Committee (AAR Executive Director of Tank Car Safety, currently Ken Dorsey)
N/A	Certification Initials And Car Numbers	Text Box	50	All		

Field Definitions

ID	Field Name	Type	Field Length*	Values/Format	Mandatory / Optional	Other Rules/Notes
68	Name Of Person Certifying Application <i>Auto-populated from tank car builder info within application.</i>	Text Box	50	All		Typically performed by the applicants QA manager. Applicants certifying that the AAR 4-2 application conforms to all applicable DOT and AAR requirements, including specifications, regulations, rules of interchange, and the DOT Railroad Safety Appliance Standards.
69	Certification <i>(auto-populated)</i>	Date	10	Date (MM/DD/YYYY)		
70	Title Of Person Certifying Application	Text Box	50	All		

*When database field length and UI input length are identical, only one value appears representing both. Otherwise two values will appear, the length of the field stored in the database/the length of the UI input bounding of the field.

Appendices

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Appendix A Tank Specification

Value	Description of Value provided in dropdown (e.g., 103 = DOT 103)	Value	Description of Value provided in dropdown (e.g., 103 = DOT 103)	Value	Description of Value provided in dropdown (e.g., 103 = DOT 103)
203DW	AAR 203DW	105S100W	DOT 105S100W	112A200W	DOT 112A200W
203W	AAR 203W	105S200W	DOT 105S200W	112A340W	DOT 112A340W
204W	AAR 204W	105S300W	DOT 105S300W	112A400W	DOT 112A400W
206W	AAR 206W	105S400W	DOT 105S400W	112A500W	DOT 112A500W
207A20W	AAR 207A20W	105S500W	DOT 105S500W	112J200W	DOT 112J200W
207A28W	AAR 207A28W	105S600W	DOT 105S600W	112J340W	DOT 112J340W
207A40W	AAR 207A40W	106A500X	DOT 106A500X	112J400W	DOT 112J400W
207A40W6	AAR 207A40W6	106A800X	DOT 106A800X	112J500I	DOT 112J500I
207A48ALW	AAR 207A48ALW	107A	DOT 107A	112J500W	DOT 112J500W
207A48W	AAR 207A48W	109A100ALW	DOT 109A100ALW	112S200W	DOT 112S200W
207A60ALW	AAR 207A60ALW	109A200ALW	DOT 109A200ALW	112S340W	DOT 112S340W
207A60W	AAR 207A60W	109A300ALW	DOT 109A300ALW	112S400W	DOT 112S400W
207A80ALW	AAR 207A80ALW	109A300W	DOT 109A300W	112S500W	DOT 112S500W
207A80W	AAR 207A80W	110A1000W	DOT 110A1000W	112T200W	DOT 112T200W
208	AAR 208	110A2000W	DOT 110A2000W	112T340W	DOT 112T340W
211A100ALW1	AAR 211A100ALW1	110A500W	DOT 110A500W	112T400W	DOT 112T400W
211A100W1	AAR 211A100W1	110A600W	DOT 110A600W	112T500W	DOT 112T500W
211A100W3	AAR 211A100W3	110A800W	DOT 110A800W	113A60W	DOT 113A60W
211A100W5	AAR 211A100W5	111A100ALW	DOT 111A100ALW	113A90W	DOT 113A90W
211A100W6	AAR 211A100W6	111A100ALW1	DOT 111A100ALW1	113C120W	DOT 113C120W
211A200W1	AAR 211A200W1	111A100ALW2	DOT 111A100ALW2	114A340W	DOT 114A340W
211A60ALW1	AAR 211A60ALW1	111A100W1	DOT 111A100W1	114A400W	DOT 114A400W
211A60W1	AAR 211A60W1	111A100W2	DOT 111A100W2	114J340W	DOT 114J340W
211A60W7	AAR 211A60W7	111A100W3	DOT 111A100W3	114J400W	DOT 114J400W
211J100W1	AAR 211J100W1	111A100W4	DOT 111A100W4	114S340W	DOT 114S340W
103	DOT 103	111A100W5	DOT 111A100W5	114S400W	DOT 114S400W
105A100ALW	DOT 105A100ALW	111A100W6	DOT 111A100W6	114T340W	DOT 114T340W
105A100W	DOT 105A100W	111A100W7	DOT 111A100W7	114T400W	DOT 114T400W
105A100W	DOT 105A1DOW	111A60ALW	DOT 111A60ALW	115A60W1	DOT 115A60ALW
105A200ALW	DOT 105A200ALW	111A60ALW1	DOT 111A60ALW1	115A60W1	DOT 115A60W1
105A200W	DOT 105A200W	111A60ALW2	DOT 111A60ALW2	115A60W6	DOT 115A60W6
105A300W	DOT 105A300ALW	111A60W1	DOT 111A60W1	120A100W	DOT 120A100W
105A300W	DOT 105A300W	111A60W2	DOT 111A60W2	120A200ALW	DOT 120A200ALW
105A400W	DOT 105A400W	111A60W5	DOT 111A60W5	120A200W	DOT 120A200W
105A500W	DOT 105A500W	111A60W6	DOT 111A60W6	120A300W	DOT 120A300W
105A600W	DOT 105A600W	111A60W7	DOT 111A60W7	120A400W	DOT 120A400W
105J100W	DOT 105J100W	111J100W1	DOT 111J100W1	120A500W	DOT 120A500W
105J200ALW	DOT 105J200ALW	111J100W3	DOT 111J100W3	120A600W	DOT 120A600W
105J200W	DOT 105J200W	111J100W4	DOT 111J100W4	120J100W	DOT 120J100W
105J300ALW	DOT 105J300ALW	111S100ALW2	DOT 111S100ALW2	120J200W	DOT 120J200W
105J300W	DOT 105J300W	111S100W1	DOT 111S100W1	120J600W	DOT 120J600W
105J400W	DOT 105J400W	111S100W2	DOT 111S100W2		
105J500I	DOT 105J500I	111S100W5	DOT 111S100W5		
105J500W	DOT 105J500W	111S100W6	DOT 111S100W6		
105J600I	DOT 105J600I	111S60ALW1	DOT 111S60ALW1		
105J600W	DOT 105J600W	111S60ALW2	DOT 111S60ALW2		

Appendix B: Material Type and Grade—Head & Shell

Value	Description of Value provided in dropdown (e.g., 115 = AAR M115)
115	AAR M115
128A	AAR TC128 Gr. A
128B	AAR TC-128, Gr. B
129	AAR TC-129
130	AAR TC-130
131	AAR TC-131
132	AAR TC-132
133	AAR TC-133
134	AAR TC-134
15565	ASTM A515, Gr. 65
162	ASTM B162
201A	ASTM A201, Gr. A
201B	ASTM A201, Gr. B
2095052	ASTM B209, ALLOY 5052
2095083	ASTM B209, ALLOY 5083
2095086	ASTM B209, ALLOY 5086
2095154	ASTM B209, ALLOY 5154
2095254	ASTM B209, ALLOY 5254
2095454	ASTM B209, ALLOY 5454
2095652	ASTM B209, ALLOY 5652
212A	ASTM A212, Gr. A
212B	ASTM A212, Gr. B
240304	ASTM A240, TYPE 304

Value	Description of Value provided in dropdown (e.g., 115 = AAR M115)
240304L	ASTM A240, TYPE 304L
240316	ASTM A240, TYPE 316
240316L	ASTM A240, TYPE 316L
285A	ASTM A285, Gr. A
285B	ASTM A285, Gr. B
285C	ASTM A285, Gr. C
302B	ASTM A302 Gr. B
304L	ASTMA515, Gr. 70 -- 304L (DOT113)
316L	ASTMA516, Gr. 70 -- 316L (DOT115)
353	ASTM A353
51555	ASTM A515, Gr. 55
51560	ASTM A515, Gr. 60
51570	ASTM A515, Gr. 70
5157128	A -- 515, Grade 70 and AAR TC-128
51655	ASTM A516, Gr. 55
51660	ASTM A516, Gr. 60
51665	ASTM A516, Gr. 65
51670	ASTM A516, Gr. 70
5167128	A -- 516, Grade 70 and AAR TC-128
5371	ASTM A537, C1.1
537A	ASTM A537, Gr. A
537B	ASTM A537, Gr. B
89	ASTM A89

Appendix C: Lining Type

Value	Description of Value provided in dropdown [e.g., L = Lead lined (any thickness)]
B	Nickel electroplating, e.g., Bart, (Not applicable to Major Class 19)
F	Fiberglass
K	Electroless plating, e.g., Kanigen
L	Lead lined (any thickness)
R	Rubber (applied in sheet form). Applicable to Carbon Steel cars only
T	Paint, Phenolic, Epoxy and metal spray deposits such as Lithcote, Amercoat, Hersite, PPG Columbia #7 Neoprene Rubber Latex
V	PolyVinyl Chloride

Appendix D: Insulation Type

Value	Description of Value provided in dropdown (e.g., CF = Ceramic Fiber)
CF	Ceramic Fiber
CK	Cork
CR	Cork and Closed Cell Rubber Foam
FC	Fiberglass & Ceramic Fiber
FG	Standard Fiberglass
FS	Fiberglass and Spray On Foam
FT	High Temp Fiberglass
MW	Mineral Wool
PC	Polyurethane Foam and Ceramic Fiber
PE	Perlite
PF	Polyurethane Foam
PI	High Temperature Polyurethane Foam
RF	Rubatex
SP	Spray On Exterior Thermal Protection
UE	(or just +U+) for Unequipped

Appendix E: Underframe or Stub Sill Type

Value	Description of Value provided in dropdown (e.g., ACF100 = ACF100 Stub Sill Design)
ACF100	ACF100 Stub Sill Design
ACF200	ACF200 Stub Sill Design
ACF230	ACF230 Stub Sill Design
ACF270	ACF270 Stub Sill Design
ACF300	ACF300 Stub Sill Design
AMFABC	AMFABC Stub Sill Design
AMFJKL	AMFJKL Stub Sill Design
ARI300	ARI300 Stub Sill Design
CNC001	CNC001 Stub Sill Design
CNC002	CNC002 Stub Sill Design
DSLABC	DSLABC Stub Sill Design
DSLJKL	DSLJKL Stub Sill Design
EVAEVA	EVAEVA Stub Sill Design
EVAWBR	EVAWBR Stub Sill Design
FULL	FULL Sill Design
GAT016	GAT016 Stub Sill Design
GAT017	GAT017 Stub Sill Design
GAT018	GAT018 Stub Sill Design
GAT020	GAT020 Stub Sill Design
GAT090	GAT090 Stub Sill Design
GAT095	GAT095 Stub Sill Design
GAT096	GAT096 Stub Sill Design
GAT097	GAT097 Stub Sill Design
GAT098	GAT098 Stub Sill Design
GAT099	GAT099 Stub Sill Design
GAT100	GAT100 Stub Sill Design
GAT101	GAT101 Stub Sill Design
GAT102	GAT102 Stub Sill Design
GAT18A	GAT18A Stub Sill Design
GAT18B	GAT18B Stub Sill Design
GUL270	GUL270 Stub Sill Design
GULGUL	GULGUL Stub Sill Design
GULWBR	GULWBR Stub Sill Design
GUN001	GUN001 Stub Sill Design
HARHAR	HARHAR Stub Sill Design
HST080	HST080 Stub Sill Design
HST081	HST081 Stub Sill Design
HST098	HST098 Stub Sill Design
HSTABC	HSTABC Stub Sill Design
HSTJKL	HSTJKL Stub Sill Design
LOXLOX	LOXLOX Stub Sill Design
NACABC	NACABC Stub Sill Design
NACDEF	NACDEF Stub Sill Design
NACGHI	NACGHI Stub Sill Design
NACJKL	NACJKL Stub Sill Design
NACZBN	NACZBN Stub Sill Design
PENPEN	PENPEN Stub Sill Design

Value	Description of Value provided in dropdown (e.g., ACF100 = ACF100 Stub Sill Design)
PRO00F	PRO00F Stub Sill Design
PROCBO	PROCBO Stub Sill Design
PROCBR	PROCBRS tub Sill Design
PROCWO	PROCWO Stub Sill Design
PROFBR	PROFBR Stub Sill Design
PROZBA	PROZBA Stub Sill Design
PROZBD	PROZBD Stub Sill Design
PROZBF	PROZBF Stub Sill Design
PROZBG	PROZBG Stub Sill Design
PROZBH	PROZBH Stub Sill Design
PROZBI	PROZBI Stub Sill Design
PROZBL	PROZBL Stub Sill Design
PROZBN	PROZBN Stub Sill Design
PROZBR	PROZBR Stub Sill Design
RICRIC	RICRIC Stub Sill Design
RICWBR	RICWBR Stub Sill Design
RILRIL	RILRIL Stub Sill Design
RILWBR	RILWBR Stub Sill Design
TEXTEX	TEXTEX Stub Sill Design
TRN021	TRN021 Stub Sill Design
TRN022	TRN022 Stub Sill Design
TRN023	TRN023 Stub Sill Design
TRN024	TRN024 Stub Sill Design
TRNTY1	TRNTY1 Stub Sill Design
TRNTY2	TRNTY2 Stub Sill Design
TRNTY3	TRNTY3 Stub Sill Design
TRNTYA	TRNTYA Stub Sill Design
TWLTWL	TWLTWL Stub Sill Design
UTL00F	UTL00F Stub Sill Design
UTLCBO	UTLCBO Stub Sill Design
UTLCBR	UTLCBR Stub Sill Design
UTLCWO	UTLCWO Stub Sill Design
UTLFBR	UTLFBR Stub Sill Design
UTLZBA	UTLZBA Stub Sill Design
UTLZBB	UTLZBB Stub Sill Design
UTLZBC	UTLZBC Stub Sill Design
UTLZBD	UTLZBD Stub Sill Design
UTLZBE	UTLZBE Stub Sill Design
UTLZBF	UTLZBF Stub Sill Design
UTLZBG	UTLZBG Stub Sill Design
UTLZBH	UTLZBH Stub Sill Design
UTLZBI	UTLZBI Stub Sill Design
UTLZBL	UTLZBL Stub Sill Design
UTLZBN	UTLZBN Stub Sill Design
UTLZBR	UTLZBR Stub Sill Design

Appendix F: Head Shields

Value	Description of Value provided in dropdown (e.g., F = Full Shield)
C	No Head Shield, but Head Protection
F	Full Shield
H	Half Shield
T	Trapezoid Shield
U	Unequipped