Tank Car Integrated Database (TCID) Data Specification Manual

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TCID Fields and Inspection Report Data Rules

Batch and Interface Inspection Form Part 1

The following tables detail the allowable fields in a batch car submission to TCID and in the TCID interface. For batch upload, the Batch Field Name must be included in the first row of all batch file submissions. An example batch file is located on Railinc.com. The first field, INSP_ID is user assigned and designates rows of data that belong to the same event.

Types of fields for batch upload are described in the **Data Rules** column:

- **Required** fields contain (●). These fields must be included in the file submission with data that follow rule validations.
- **Optional** fields do not have to be included in the file submission, but when submitted, data must follow rule validations.
- **Conditional** fields contain (**¥**). These fields may be needed in the file submission to meet conditional requirements (for example, if one field may be dependent on data from another field) and data must follow rule validations.

	Batch Field Name	Interface Field Name	Description	Data Rules
1	INSP_INDICATOR		This field allows you to bulk add or bulk delete inspections via CSV upload.	A or blank = Add D = Delete
2	INSP_ID		Unique inspection ID, assigned by submitting party for each event, for batch upload files only	(●) Alpha-Numeric, 12 characters max
3	INSPREASON	Inspection/Report Type	Reason for Inspection	(●) Numeric, 2 digit max from 1 to 63 corresponding to the bitwise or one of these six options. When two reasons are applicable, enter the total value (e.g., Conversion and Alteration value [1+2] is 3): • Conversion: 1 • Alteration: 2 • Stub Sill Inspection: 4 • Tank Qualification: 8 • Other: 16 • Welded Repair: 32 Select appropriate checkbox(es) for this field.
4	CARMARK	Equipment Initial	The reporting mark stenciled on the car	(●) Alpha-Numeric, 4 characters max; If an additional mark is needed, contact the company administrator. See App C for details.
5	CARNUM	Equipment Number	The equipment number stenciled on the car	(●) Numeric, 6 digit max
6	CLASS	Stencil Class	Current car specification, as stenciled, prior to any R1 modifications	(●) Alpha-Numeric, 11 characters max; Select entry for this field from a drop-down list. See App A for details.
7	SHOPCOMP	Station Stencil	Station stencil of inspecting company or facility	(●) Alpha-Numeric, 7 characters max; Select entry for this field from a drop-down list. See App P for details.

	Batch Field Name	Interface Field Name	Description	Data Rules
8	SHOPCITY	Shop Location (City)	City name of facility performing the inspection	(●) Alpha-numeric, 30 characters max
9	SHOPSTATE	Shop Location (State)	State or Province of facility performing the inspection	(●) Alpha-Numeric, 30 characters max; Accepts dash. Select entry for this field from a drop-down list.
10	BUILTDATE	Built Date	Car built date, as per UMLER	(●) Numeric, 8 digits in YYYYMMDD format. Select entry for this field with calendar icon.
11	INSPDATE	Inspection Date	The date the Inspection occurred	(●) Numeric, 8 digits in YYYYMMDD format. Select entry for this field with calendar icon.
12	ISJACKET	Car Jacketed	Is the Car Jacketed? Yes = 1 No = 0	(●) Numeric, 1 digit (0 or 1). Select Yes or No for this field from a drop-down list.
13	RESERVE1	Reserved 1 (design specific)	Open field for text entry	Alpha-Numeric, 30 characters max. This field is for data a car owner or builder may have, specific for this design.
14	RESERVE2	Reserved 2 (design specific)	Open field for text entry	Alpha-Numeric, 30 characters max. This field is for data a car owner or builder may have, specific for this design.
23	ORIGCERT	Original AAR Cert of Construction No.	Original AAR Certificate of Construction number	(●) Alpha-Numeric, 8 characters max. Accepts dash.
24	BUILDER	Builder	Builder Code, as per UMLER	(●) Alpha-Numeric, 4 characters max; Select entry for this field from a drop-down list. See App B for details.
25	STUBSILLDESIGN	Stub Sill Design (as inspected)	Current Stub Sill Design, as per UMLER	(●) Alpha-Numeric, 7 characters max. Select entry for this field from a drop-down list. Use similar design if the correct sill design is not available. See App D for details.
26	STUBSILLDESIGNVARIATION	Stub Sill Design Variation	Type of inboard sill reinforcement: Continuous or Non-Continuous or N/A	(●) Alpha-Numeric, 14 characters max. Valid entries: • Continuous • Non-Continuous • N/A Select entry for this field from a drop-down list. Valid choice depends on boxes checked for Inspection Type/Reason. • Tank Qualification is checked: select Continuous or Non-continuous • Tank Qualification is not checked: select N/A
27	MILES	Miles (actual cumulative miles in thousands of miles)	Number of car miles in thousands. (e.g., enter 23 for 23,000 miles)	Numeric, 4 digit max of 0-1000 (0 to 1,000,000 miles). Any entry larger than 1000 produces an error message. This field is required for the application, and optional for the batch upload.

	Batch Field Name	Interface Field Name	Description	Data Rules
28	CONSTRCARSPEC	Constructed Car Spec.	Constructed car specification	(●) Alpha-Numeric, 11 characters max; Select entry for this field from a drop-down list. See App Q for details.
29	POSTR1CARSPEC	Car Spec. After Modification	Car specification after modification	Alpha-Numeric, 11 characters max; Select entry for this field from a drop-down list. See App R for details.
30	DAMAGETYPE	Nature of Damage	Cause of damage, accident or non-accident or N/A	(●) Alpha-Numeric, 12 characters max. Valid entries: • Accident • Non-Accident • N/A Select entry for this field from a drop-down list.
31	RAILRESP	Railroad Responsibility	Is Railroad Responsible? Yes = 1 – when any part of the cost is attributable to the railroad No = 0	(●) Numeric, 1 digit (0 or 1). Select Yes or No from a drop-down list.
32	STUBSILLDEFA	Stub Sill Deformation (A End)	Is Stub Sill Deformation at A-End? Yes = 1 No = 0	Numeric, 1 digit (0 or 1). Check none, one, or both options.
33	STUBSILLDEFB	Stub Sill Deformation (B End)	Is Stub Sill Deformation at B-End? Yes = 1 No = 0	Numeric, 1 digit (0 or 1). Check none, one, or both options.
34	LASTTANKQUALYEAR	Year of Last Tank Qualification	Year of last tank qualification	(●) Numeric, 4 digits in YYYY format. Select year from a drop-down list. If no last tank qualification, enter built date of car.
35	TANKFAIL	Tank Containment Failure	Failure to contain commodity? Yes = 1 No = 0	Numeric, 1 digit (0 or 1). Select yes or no from the drop-down list.
36	NUMCOMPARTMENTS	No. of Compartments	Number of compartments in the car	(●) Numeric, 1 digit (value from 1-6). This value impacts values for these fields: • Compartment No. • Compartment No. (Weld) • Compartment No. (Shell)
37	SUBMITTEDBY	Submitted By	The name and company submitting the inspection	(●) Alpha-Numeric, 30 characters max. Does not accept quotes. Accepts dash.
38	MANAGEMENTREP	Facility Rep Name	Name of Management Representative, typically the name of the person submitting the inspection	(●) Alpha-Numeric, 30 characters max. Does not accept quotes. Accepts dash.

Batch and Inspection Form Part 2

Alterations and Conversions				
39	COMPARTMENT_NO_CHANGE	Compartment No.	Compartment number associated with the change to the car	(¥) Numeric, 1 digit (value from 1-6 dependent on the No. of Compartments). If entered, must also include all Drawing required fields: • Compartment No Change • Change Category • Drawing Number • Approval Reference
40	CHANGE_CATEGORY	Change Category	Type of drawing used to support the R1 alteration/conversion	(¥) Alpha-Numeric, 20 characters max. See App E for details. If entered, must also include all Drawing required fields: • Compartment No Change • Change Category • Drawing Number • Approval Reference
41	DRAWING_NUMBER	Drawing Number	New drawing, part, document or commodity ID used to support the R1 alteration/conversion	(¥) Alpha-Numeric, 50 characters max. If the change category is set to Commodity, the text in this field should include either "Owner" or "AAR TCC". If entered, must also include all Drawing required fields: • Compartment No Change • Change Category • Drawing Number • Approval Reference
42	APPROVAL_REFERENCE	AAR Approval Reference No.	Number of the AAR approval that supports the alteration/conversion	(¥) Alpha-Numeric, 10 characters max. If the change category is set to Commodity, the text in this field should include either "Owner" or "AAR TCC". If entered, must also include all Drawing required fields: • Compartment No Change • Change Category • Drawing Number • Approval Reference
43	DRAWING_COMMENTS	Drawing Comments	Drawing comments field, free form text box	Alpha-Numeric, 350 characters max.

Weld Inspection Results				
44	INSPECTION_RESULTS	Inspection Results	Used to indicate that defects were found or that no defects were found.	(**¥**) Alpha-Numeric, 19 characters max. Select from a drop-down list. • Defect(s) Found • No Exceptions Found Use 'No exceptions found' if all reportable welds have been inspected and no exceptions were found. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld
45	COMPARTMENT_NO_WELD	Compartment No. (Weld)	Component number associated with the weld inspection	(**¥**) Numeric, 1 digit (value from 1-6 dependent on the No. of Compartments). If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld
46	WELD_CODE	Weld Code	Identifies the weld that is defective	(**¥**) Alpha-Numeric, 19 characters max. See App K for details. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld

47	LOCATION	Weld Location	Identifies the location on the car of the weld defect	(¥) Alpha-Numeric, 19 characters max. See App L for details. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld
48	INSPECTION_TECHNIQUE	Inspection Technique	Technique used to identify the weld defect	(¥) Alpha-Numeric, 26 characters max. See App M for details. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld
49	NUM_DEFECTS	No. of Defects	Number of Defects	(¥) Numeric, 5 digits max; >=0 If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld
50	MAX_DEFECT_LENGTH	Max Defect Length (in.)	Length, measured to the hundredth of an inch, of the longest defect found during inspection	(¥) Numeric, 6 digits max; precision: 0.00. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld

51	DEFECT_AREA	Defect Area	Area of the defect found measured to the hundredth of an inch, from the two fartherest points of the defect.	(¥) Numeric, 6 digits max; precision: 0.00. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Defect Area • Defect Orientation Code • How Repaired Weld
52	DEFECT_ORIENTATION_CODE	Defect Orientation Code 1	Orientation of the Defect in the weld or parent metal. Detail about the weld.	(¥) Alpha-Numeric, 19 characters max. See App N for details. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld
53	DEFECT_ORIENTATION_CODE	Defect Orientation Code 2	Additional field for orientation of the Defect in the weld or parent metal. Detail about the weld.	Alpha-Numeric, 19 characters max. See App N for details.
54	DEFECT_ORIENTATION_CODE	Defect Orientation Code 3	Additional field for orientation of the Defect in the weld or parent metal. Detail about the weld.	Alpha-Numeric, 19 characters max. See App N for details.
55	HOW_REPAIRED_WELD	How Repaired (Weld)	Designation of the repair method (AAR Appendix R M-1002)	(¥) Alpha-Numeric, 42 characters max. See App O for details. If entered, must include all Weld required fields: • Inspection Results • Compartment No Weld • Weld code • Location • Inspection Technique • No. of Defects • Max Defect Length • Defect Orientation Code • How Repaired Weld

Shell/Sill Inspection Results				
56	COMPONENT	Failed Component	Tank component containing the damage	(**¥**) Alpha-Numeric, 100 characters max. See App F for details. If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method
57	COMPONENT_NO_SHELL	Compartment No. (Shell)	Compartment number associated with the shell inspection	(**¥**) Numeric, 1 digit (value from 1-6 dependent on the No. of Compartments). If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method
58	FAILURE_TYPE	Failure Type	Type of tank damage	(**¥**) Alpha-Numeric, 100 characters max. See App G for details. If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method
59	FAILURE_CAUSE	Failure Cause	Condition that caused the tank damage	(**¥**) Alpha-Numeric, 100 characters max. See App H for details. If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method

60	HOW_REPAIRED_SHELL	How Repaired (Shell)	The rule/procedure used to repair the tank damage (AAR Appendix R M-1002)	(**¥**) Alpha-Numeric, 62 characters max. See App I for details. If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method
61	DEFECT_LENGTH	Defect Length (in.)	Length, measured to the hundredth of an inch, of the longest Defect found during inspection	(**¥**) Numeric, 7 digits max; precision: 0.00. If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method
62	REPAIR_LOCATION	Repair Location	Location on car of the repair.	(**¥**) Alpha-Numeric, 25 characters max. See App J for details. If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method
63	INSPECTION_METHOD	Inspection Method	Method used to inspect the tank damage	(**¥**) Alpha-Numeric, 26 characters max. See App M for details. If entered, must also include all Shell/Sill required fields: • Component • Component No Shell • Failure Type • Failure Cause • How Repaired Shell • Defect Length • Repair Location • Inspection Method

Appendices

Rules for all Appendices are located in the Data Dependencies Matrix, available on Railinc.com.

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- Appendix B – Builders
- Appendix C – Car Marks
- Appendix D – Stub Sill Designs
- Appendix E – Change Categories
- Appendix F – Components
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