

## Release Notes for December 6, 2018, Umler System Release

The Umler system release scheduled for Thursday, December 6, 2018, includes functional enhancements to Umler which includes docket implementation work as directed by the Umler Committee directed work to implement new elements, element changes/updates, as well as modifications to permissible values and business rules within the application.

Below are the complete details of this release.

- Element Updates (New Elements/Element Changes & Updates)
  - Load Limit (LDLT)
    - Equipment Group(s): PSGR
    - Element Description: The maximum permissible weight of the commodity that can be loaded into the equipment, reported in pounds
    - Permissible Value Range: Minimum 2,500 Maximum 145,000
    - Presentation Group: Weight
    - Mandatory
    - Added existing element to new equipment group
  - Gross Rail Load/Gross Weight (A266)
    - Equipment Group(s): PSGR
    - Element Description: The maximum permissible weight on rail of the equipment and the load, reported in pounds
    - Permissible Value Range: Minimum 42,500 Maximum 495,000
    - Presentation Group: Weight
    - Mandatory
    - Added existing element to new equipment group
  - Tare Weight (A259)
    - Equipment Group(s): PSGR
    - Element Description: The equipment weight on rail when empty, sometimes referred to as Light Weight, reported in pounds
    - Permissible Value Range: Minimum 2,500 Maximum 145,000
    - Presentation Group: Weight
    - Mandatory
    - Updated existing element to mandatory
  - Star Code (A247)
    - Equipment Group(s): PSGR
    - Element Description: Indicates a reduction of the Load Limit (LDLT) of the equipment per AAR Rule 70
    - Permissible Values:
      - R Body Capacity less than Truck Capacity
      - S Reduced Load Limit
    - Presentation Group: Weight
    - Added existing element to new equipment group

- Battery Composition (B556) \*
  - Equipment Group(s): EOTD
  - Element Description: Indicates the type of composition in the internal battery
  - Permissible Values:
    - A Lead Acid
    - P Lithium-Iron Phosphate
  - Presentation Group: Specification
- GPS Equipped (B557) \*
  - Equipment Group(s): EOTD
  - Element Description: Indicates presence of a global positioning device through the following communication method
  - Permissible Values:
    - 3G Cellular 3G
    - 4G Cellular 4G
    - 5G Cellular 5G
    - NE Not Equipped
    - SA Satellite
  - Presentation Group: Specification
  - New Rule: "3G" is NOT permissible for devices with a Build Date (BLDT)
    > 1/1/2019
- Radio Wattage (B558) \*
  - Equipment Group(s): EOTD
  - Element Description: This element is to identify the radio wattage
  - Permissible Values:
    - 2 2W
    - 5 5W
    - 8 8W
  - Presentation Group: Specification
- Remote Disable (B559) \*
  - Equipment Group(s): EOTD
  - Element Description: Indicates the device can be disabled remotely
  - Permissible Values:
    - N Not Equipped
    - Y Yes
  - Presentation Group: Specification
- Remote Asset Health Monitoring (B560) \*
  - Equipment Group(s): EOTD
  - Element Description: Indicates the equipment contains an asset health and status monitoring accessible remotely
  - Permissible Values:
    - E Equipped
    - N Not Equipped
  - Presentation Group: Specification

- New Rule: If Remote Asset Health Monitoring Equipment is Equipped then GPS Equipped (B557) cannot be Cellular 3G or Not Equipped
- Weight (B561) \*
  - Equipment Group(s): EOTD
  - Element Description: Total weight of the EOT Device including the air hose in pounds
  - Permissible Range of Values: Minimum 5 Maximum 45
  - Presentation Group: Specification
- Pressure Relief Valve Component ID (B360) \*
  - Equipment Group(s): TANK
  - Element Description: Identifies the CID Assigned to the Pressure Relief Valve
  - Presentation Group: Tank Car Component
  - System Generated
- Out of Use Credit Days (L002)
  - Equipment Group(s): LOCO
  - Element Description: Number of days of out of use credit
  - Presentation Group: Blue Card
  - Updated existing element as System Generated
- OOS Number of Days (L023)
  - Equipment Group(s): LOCO
  - Element Description: The number of out of service days for that occurrence
  - Presentation Group: Locomotive Out of Service
  - Updated existing element as System Generated
- Cab Signals Inspection Due Date (DU21) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive Periodic Inspection Due Date (DU22) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Qualified Locomotive Manual Inspection Due Date (DU23) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- AFMC Inspection Due Date (DU24) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection

- Locomotive Annual Inspection Due Date (DU25) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive Event Recorder Inspection Due Date (DU26) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive Hand Brake Inspection Due Date (DU27) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive Air Brake L1 Inspection Due Date (DU28) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive Air Brake L2 Inspection Due Date (DU29) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive Air Brake L3 Inspection Due Date (DU30) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L2 Vent Valve Front Inspection Due Date (DU31) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L2 Vent Valve Rear Inspection Due Date (DU32) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L2 Safety Valve 150 Inspection Due Date (DU33) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L2 Check Valve Main Res Inspection Due Date (DU34) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection

- Locomotive L2 Check Valve EQ RES Inspection Due Date (DU35) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 Brake Pipe Control Portion Inspection Due Date (DU36) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 Equalizing Reservoir Control Portion Inspection Due Date (DU37) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 DB Triple Valve Portion Inspection Due Date (DU38) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 16 Control Portion Inspection Due Date (DU39) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 20 Pipe Block Assy Inspection Due Date (DU40) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 Brake Cylinder Control Portion Inspection Due Date (DU41) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 13 Control Portion Inspection Due Date (DU42) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 21 Pipe Vent Valve Inspection Due Date (DU43) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 FastBrake MC-31 Control Valve Inspection Due Date (DU44) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection

- Locomotive L3 FastBrake Independent Application and Release Portion Inspection Due Date (DU45) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 FastBrake Quick Service Valve Inspection Due Date (DU46) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 FastBrake Dead in Train Portion Inspection Due Date (DU47) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 FastBrake 16 Control Portion Inspection Due Date (DU48) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 FastBrake 20 Control Portion Inspection Due Date (DU49) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 FastBrake Brake Cylinder Control Portion Inspection Due Date (DU50) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 FastBrake Brake Pipe Control Portion Inspection Due Date (DU51) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 20 Control Portion Independent Brake Inspection Due Date (DU52) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 DB-10 Service Portion Inspection Due Date (DU53) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Analog Converter ER Inspection Due Date (DU54) \*

- Equipment Group(s): LOCO
- Element Description: Scheduled Due Date
- Presentation Group: Inspection
- Locomotive L3 CCB1 Analog Converter 16 Inspection Due Date (DU55) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Cutoff Valve Assembly Inspection Due Date (DU56) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Brake Pipe Relay Valve Inspection Due Date (DU57) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Brake Pipe Cutoff Valve Inspection Due Date (DU58) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Brake Pipe Cutoff Valve Inspection Due Date (DU59) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Double Check Valve Inspection Due Date (DU60) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Emergency Limit Valve Inspection Due Date (DU61) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Emergency Magnet Valve Inspection Due Date (DU62) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Equalizing Reservoir Magnet Valve Inspection Due Date (DU63) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection

- Locomotive L3 CCB1 Bail Off Exhaust Magnet Valve Inspection Due Date (DU64) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Bail Off Supply Valve Inspection Due Date (DU65) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 16 Pipe Magnet Valve Inspection Due Date (DU66) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Brake Pipe Cutoff Pilot Inspection Due Date (DU67) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Emergency Detection Pilot Inspection (DU68) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Emergency Pilot Valve Inspection Due Date (DU69) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Backup Actuating Valve GE Inspection Due Date (DU70) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Backup Double Check Valve Inspection Due Date (DU71) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Emergency Detection Pilot Dynamic Brake Interlock Inspection Due Date (DU72) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date
  - Presentation Group: Inspection
- Locomotive L3 CCB1 Backup Actuating Valve EMD Inspection Due Date (DU73) \*
  - Equipment Group(s): LOCO
  - Element Description: Scheduled Due Date

Presentation Group: Inspection

## • Permissible Value Updates - Updates/Removals/New Values

- Equipment Builder (A035)
  - Equipment Group(s): EOTD
  - Removed Permissible Values:
    - 3 GLENAYRE
    - 6 HARMON
- Maintenance of Way Service Type (B403)
  - Equipment Group(s): MISC
  - New Permissible Value: R2 Welded Rail Gondola Car
- Insulation/Thermal Protection Type (A142)
  - Equipment Group(s): TANK
  - Updated Permissible Value Description:
    - Current: (or just +U+) for Unequipped
    - New: Unequipped
- OOS Number of Days (L023)
  - Equipment Group(s): LOCO
  - Removed Permissible Range of Values

## Business Rule Changes - New/Changed or Updated/Removed Rules

- Thermal Protection System (B555)
  - Equipment Group(s): TANK
  - New Rule: "Thermal Protection System is mandatory if the 4th character of the Stencil Shipping Specification (A237) is equal to J, T, P, or R."
  - New Note in Umler Data Specification Manual: When the fourth character of the Stencil Shipping Specification (A237) is equal to J, T, P, or R the system will generate a value of 'E'.
  - New Note in Umler Data Specification Manual: This element is used to identify when a tank car is equipped with a thermal protection system that meets the requirements of 49 CFR 179.18.
  - New Note in Umler Data Specification Manual: The applicability of the element is mandatory when specified by one of the following subparts of 49 CFR.
    - § 173.31(b)(4) (Thermal protection requirements for pressure tank cars)
    - § 173.314(k) (Special requirements for chlorine)
    - § 179.202-6 (DOT117J)
    - § 179.202-12 (DOT117P)
    - § 179.202-13 (DOT117R)
  - New Note in Umler Data Specification Manual: This element is used in determining major tank class 17. See Appendix N for explanation.

- Top Fittings Protection (A264)
  - Equipment Group(s): TANK
  - Updated Rule: Updated from "Tank Top Fittings Protection is required for Tanks with a Built/Rebuilt (Birth) Date on or after July 1, 1997" to "Top Fittings Protection is required for tank cars with a Built/Rebuilt (Birth) Date on or after July 1, 1997"
  - Updated Rule: Updated from "Tanks built on or after July 1, 1997 cannot have a Tank Top Fittings Protection setting of Z (unknown)" to "Tank cars built on or after July 1, 1997 cannot have a Top Fittings Protection value of Z (unknown)"
  - Updated Rule: Updated from "Tank Top Fittings Protection cannot be reported as N or Z for Tank Major Classes of 37 62, 64 65, 67, 80 81, 86 97 if the Built/Rebuilt Date is on or after July 1, 1997" to "Top Fittings Protection cannot be reported as A, E, F, N, or Z for Tank Major Classes of 37 62, 64 65, 67, 80 81, 86 97 if the Built/Rebuilt Date is on or after July 1, 1997"
  - Removed Rule: Permissible value E may be reported only if A237
    Stenciled Shipping Specification begins with 111, 117 or 211
  - New Rule: If Stenciled Shipping Specification (A237) begins with 117R, the Top Fittings Protection must be E or F.
  - New Rule: If Stenciled Shipping Specification (A237) begins with 117J or 117P, the Top Fittings Protection must be E.
  - Updated Rule: Updated from "Tanks built on or after December 1, 2015 cannot have a Tank Top Fittings Protection setting of Y" to "Tank cars built on or after December 1, 2015 cannot have a Top Fittings Protection value of Y"
  - New Note in Umler Data Specification Manual: This element is used in determining major tank class 17. See Appendix N for explanation
  - New Note in Umler Data Specification Manual: Permissible value N is intended for tank cars unequipped with top fittings protection or as described by 49 CFR 179.200-16(g), which are only for weather protection
  - New Note in Umler Data Specification Manual: Permissible value R is intended for pressure tank cars built on or after March 16, 2009 used for the transportation of PIH materials and marked in accordance with 49 CFR 173.22(e). (Example: DOT105J600I)
  - New Note in Umler Data Specification Manual: Refer specifically to 49 CFR Part 179, AAR Specification M-1002, and the approved Certificate of Construction to identify the type of top fitting protection appropriate to the tank class
- Insulation/Thermal Protection Type (A142)
  - Equipment Group(s): TANK
  - Updated Rule: Updated from "If Insulation/Thermal Thickness is not reported, Insulation/Thermal Protection Type must not be reported or must be Unequipped" to "If Insulation/Thermal Protection Thickness (B259) is blank, then Insulation/Thermal Protection Type must be blank or Unequipped"

- Updated Rule: Updated from "-Insulation/Thermal Thickness requires Insulation/Thermal Protection Type, and the Protection Type cannot be Unequipped" to "If Insulation/Thermal Protection Thickness (B259) is reported, then Insulation/Thermal Protection Type must be populated with a permissible value other than UE (Unequipped)"
- Updated Rule: Updated from "-When Insulation/Thermal Protection Type is Cork (CK), then Compartment Count must be 1" to "When Insulation/Thermal Protection Type is CK - Cork, then Compartment Count (A052) must be 1"
- Updated Rule: Updated from "Insulation Type cannot be Unequipped if Stencil Class is 105Axxx, 105Sxxx, 111A100W3, 111A100W4, 113xxx, 115xxx, 204W, 206W" to "Insulation/Thermal Protection Type is mandatory if Stenciled Shipping Spec (A237) is 105Axxx, 105Sxxx, 111A100W3, 111A100W4, 113xxx, 115xxx, 204W, 206W (permissible value cannot be UE-Unequipped)"
- Updated Rule: Updated from "-Insulation Type must be Unequipped if Stencil Class is 112Axxx, 112Sxxx, 114Axxx, or 114Sxxx" to "Insulation/Thermal Protection Type must be reported as UE-Unequipped if Stenciled Shipping Spec (A237) is 112Axxx, 112Sxxx, 114Axxx, or 114Sxxx"
- Updated Rule: Updated from "Insulation Type is mandatory if the 4th character of the Stencil Class is equal to J" to "Insulation/Thermal Protection Type is mandatory if the 4th character of the Stenciled Shipping Spec (A237) is equal to J, P, or R (permissible value cannot be UE-Unequipped)"
- Updated Rule: Updated from "Insulation Type must be Spray On Foam (SP) if 4th character of the Stencil Class is T" to "Insulation/Thermal Protection Type must be reported as SP-Spray On Foam if 4th character of the Stenciled Shipping Spec (A237) is T"
- Removed Rule: Head Protection Type (A118) must not be reported as C if the 4th character of the Stenciled Class Shipping Spec (A237) is T
- Design Shipping Cont Spec (A072)
  - Equipment Group(s): TANK
  - New Rule: The original Built date (BLDT) for a DOT117R must occur before 10/1/2015
  - New Note in Umler Data Specification Manual: "This element is used in determining major tank class 17. See Appendix N for explanation."
  - New Note in Umler Data Specification Manual: "Selection of DOT117P requires approval from the FRA per 49 CFR 179.202-12(a)"
- Stenciled Shipping Spec (A237)
  - Equipment Group(s): TANK
  - New Note in Umler Data Specification Manual: "If equipment operates with removable cover Roof Type (A226) code 2, report dimension with cover installed."
- Bottom Outlet Valve Actuation (B543)
  - Equipment Group(s): TANK

- Updated Rule: Updated from "Bottom Outlet Valve Actuation is required when Bottom Outlet Valve Type (B542) equals A and the Tanks with a Built/Rebuilt date is on or after July 1, 2015" to "Bottom Outlet Valve Actuation is required when Bottom Outlet Valve Type (B542) equals A and the tank car Built/Rebuilt date is on or after July 1, 2015"
- New Rule: If Stenciled Shipping Specification (A237) begins with 117J, 117P, or 117R, reporting of Bottom Outlet Valve Actuation (B543) becomes conditionally mandatory when:
  - Bottom Outlet/Fitting Type (A308) equals B, C, E, or G; and
  - Bottom Outlet Valve Type (B542) equals A, B, C, or E
- Removed Rule: DOT 117 tank cars populated with Bottom Outlet Valve Type (B542) of A, B, C or E, are required to populate Bottom Outlet Valve Actuation
- New Note in Umler Data Specification Manual: "This element is used in determining major tank class 17. See Appendix N for explanation"
- Head Protection Type (A118)
  - Equipment Group(s): TANK
  - New Rule: Head Protection Type (A118) must not be reported as C if the 4th character of the Stenciled Class Shipping Spec (A237) is T
- Appendix N Major Tank Class and DOT117 Requirements
  - Updated Validation Rule Matrix for Tank Major Class 17
    - Updated Jacket Thickness (B541)
    - Added Thermal Protection System (B555)
    - Added Insulation / Thermal Protection Thickness (B259)
    - Updated Top Fittings Protection (A264)
    - Removed Footnote: Bottom Outlet Valve Actuation (B543) is only required when Bottom Outlet/Fitting Type (A308) equals B, C, E, or G and Bottom Outlet Valve Type (B542) equals A, B, C, or E.
    - Added Footnote: Permissible value shall be "as built" based on the approved AAR Certificate of Construction
    - Added Footnote: Approved by FRA Selection of DOT117P requires approval from the FRA per 49 CFR 179.202-12(a)
    - Added Footnote: The original built date for a DOT117R must occur before 10/1/2015

## Got Questions? Get Answers.

If you have any questions about Railinc's Umler system or this release, contact the Railinc Customer Success Center by email at csc@railinc.com or by phone at 877-724-5462.