National Tank Truck Carriers

Tank Week

October 20, 2016

New Orleans, LA

FMCSA HM Update
Topics

- Investigations
- Safety Alerts
- Top 25 CT Manufacturing Violations
- National Hazardous Materials Route Registry
- Strobing Brake Lamps
- Research
- SMS Preview
Safety Alerts
● **E-Cigarettes**: notice and information to owners and operators of CMVs concerning incidents that have occurred relating to the possession and use of battery-powered portable electronic smoking devices
  

● **Fatalities Associated with Hot Work on Tankers**: Recognizing and understanding the job/hazards and the following of safe work practices can prevent potential fires, explosions, and health hazards,

Fisher PRD Safety Recall: pressure relief devices (PRD) that were not manufactured or intended for use on cargo tank motor vehicles. PRDs are an integral part of the safety mechanisms for U.S. Department of Transportation (DOT) specification cargo tank motor vehicles and are vital to ensuring the safety of hazardous materials transportation by highway.


Immediate Testing and Repair of Certain TYTAL Cargo Tanks: provides notice to owners and operators of TYTAL cargo tank motor vehicles (CTMVs) with a capacity of 8,400, 8,717 and 10,500 gallons and primarily used for the transportation of Petroleum Crude Oil, UN1267. These CTMVs are not in compliance with the Federal Hazardous Materials Regulations (HMRs) and do NOT meet the DOT 407.

Immediate Re-inspection and Retesting of Certain Cargo Tank Motor Vehicles Required: to provide notice to owners and operators of certain cargo tanks that they have been improperly inspected and tested, and must be re-inspected and retested before being used in Hazardous Materials specification tank service. The tanks in question were tested by H&W Tank Testing, CT#8083, Ohatchee, Alabama, and Christopher Humphries, CT#13131, Jacksonville, Alabama. Cargo tanks that have been inspected and/or tested by either company from April 2011 through March 2016, must be re-inspected and/or retested in accordance with 49 CFR § 180.407 immediately by a cargo tank facility registered with FMCSA.

Top 25 Cargo Tank Manufacturing Facility Violations
1. § 172.704(a) Training requirements: General awareness/familiarization, Function-specific, Safety and or Security awareness training; No HM employee training as required

2. § 172.704 (d) Recordkeeping: Insufficient training records or no training records

3. § 171.8 Design Certifying Engineer: Unqualified Design Certifying Engineers

4. § 171.8 Registered Inspector: Unqualified Registered Inspectors

5. § 178.345-8 (c)(1) Accident damage protection: Failing to meet applicable specifications, such as the overturn protection not meeting the required strength

6. § 178.345-8 (b) (1) Accident damage protection: Rear-end protection not rated at 155,000 lbs. when the piping is located in the lower 1/3 circumference of the tank

7. § 178.345-8 (c) Accident damage protection: Items extending outside of the overturn protection

8. § 178.345-8 (d)(2)(ii) Accident damage protection: Tanks with split rear end protection not having the required sacrificial device outboard of a shut-off valve
9. § 178.345-8 (a)(3) Accident damage protection: Improper methods of attachment of the accident damage protection devices

10. § 178.345-8 (d)(1) Accident damage protection: The rear-end cargo tank protection device must was not designed to deflect at least 6 inches horizontally

11. § 178.345-3(f)(3), § 178.337-3(f)(3), and § 178.3338-3(f)(3), Not using mounting pads when welding appurtenances to the wall of the cargo tank and or pnot extending at least 2 inches in each direction from any point of the appurtenance or attachment

12. § 178.337-3(a)(l), l 78.345-3(a)(l) and 178.338-3(a)(l): Structural integrity, general requirements and acceptance criteria: Not manufacturing to a design margin of 4:1 as required. The maximum calculated design stress at any point in the cargo tank wall may not exceed the maximum allowable stress value prescribed in Section VIII of the ASME Code (IBR, see §171.7 of this subchapter), or 25 percent of the tensile strength of the material used at design conditions.

13. § 178.345-15 (b)(1) and (c)(1) Certification: Not designed or signed by a Design Certifying Engineer (DCE)
14. § 178.345-1 General requirements: Not constructed and certified in conformance with the ASME Code:

15. § 178.345-4 Joints: Welds not in conformance with Section VIII of the ASME Code: Insufficient weld material, Welding on contaminated (dirt, rust, etc.) material

16. § 178.345-10 Pressure Relief and Venting: Insufficient venting per surface area

17. § 178.337-9(b)(6) Piping, Valves, Hose, and Fittings: Cargo tank manufacturers and fabricators failed to demonstrate that all piping, valves, and fittings on a cargo tank are free from leaks.

18. § 178.345-5 Manhole Assemblies: Not meeting labeling and or certification requirements.

19. § 178.346-5 Pressure and leakage tests: Incorrectly performing hydrostatic or pneumatic test
20. § 178.337-4(b), § 178.338-4 Joints: Welding procedure and or welder performance not in accordance with Section IX of the ASME Code

21. § 178.338-16 Inspection and testing: The welder and or the welding procedure are not qualified or followed in accordance with Section IX of ASME

22. § 178.320(b) General requirements applicable to all DOT specification cargo tank motor vehicles

23. § 178.345-14 Marking: (b) name plate and (c) specification plate – incorrect or missing required information

24. § 178.345-7(c) Circumferential reinforcements: Not in conformance when using baffles or baffle attachments as part of reinforcement

25. § 178.345-7 (d) Circumferential reinforcements: ring stiffener used as a circumferential reinforcement member not continuous around the circumference of the cargo tank shell
Hazardous Materials
Route Registry
§397.67(b): Placarded or marked HM not subject to NRHM routing designations, shall be transported over routes which do not go through or near heavily populated areas, places where crowds are assembled, tunnels, narrow streets, or alleys...

§397.73 (b): Each State or Indian tribe, through its routing agency, shall provide information identifying all NRHM routing designations that exist within its jurisdiction to the FMCSA...

- States shall also submit:
  - The current name of the State agency responsible for NHRM highway routing designations.
  - Descriptions of the routing designations.
  - The dates they were established.
  - Information on any subsequent changes or new NRHM routing designations within 60 days after establishment.

  - This information will be available from the FMCSA, consolidated by the FMCSA, and published annually in whole or as updates in the Federal Register.

(c) A State or Tribally-designated route is effective only after it is published in the Federal Register in FMCSA's Hazardous Materials Route Registry.
HRCQ RAM:

- §397.101(b): A motor vehicle containing a highway route controlled quantity (HRCQ) of Class 7 materials, shall be operated over preferred routes...
  - An Interstate System highway for which an alternative route is not designated by a State routing agency.
  - A designated route selected by a State routing agency.

- §397.103(c) A State-designated route is effective when—
  - The State gives written notice to the FMCSA.
  - Receipt thereof is acknowledged by the FMCSA.
  - The route is published in FMCSA's Hazardous Materials Route Registry.
Recent Federal Register Notices


- National Hazardous Materials Route Registry
  - Published April 29, 2015.
  - Comprehensive publication of the registry.

- National Hazardous Materials Route Registry Revisions and Procedures
  - Published August 8, 2016.
  - Latest revisions to the registry (California).
  - Established procedures for State routing agencies to report changes to their route listings.
FMCSA Website Additions

- Link to the April 29, 2015 Comprehensive FR Notice
- Link to the August 8, 2016 Revisions and Procedures FR Notice
- Link to the Route Registry Content by State
### National Hazardous Materials Route Registry by State

<table>
<thead>
<tr>
<th>State</th>
<th>Report Format</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Update</td>
</tr>
<tr>
<td>Alabama</td>
<td>Excel</td>
</tr>
<tr>
<td>Alaska</td>
<td>Excel</td>
</tr>
<tr>
<td>Arizona</td>
<td>Excel</td>
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<tr>
<td>Arkansas</td>
<td>Excel</td>
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<td>California</td>
<td>Excel</td>
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<td>Colorado</td>
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<td>Connecticut</td>
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<td>Delaware</td>
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<tr>
<td>District of Columbia</td>
<td>Excel</td>
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<tr>
<td>Florida</td>
<td>Excel</td>
</tr>
<tr>
<td>Georgia</td>
<td>Excel</td>
</tr>
</tbody>
</table>

- **Spreadsheet for State Routing Agencies to update their listings**
- **PDF of each State’s listings as published in the FR**
- **Map of each State’s listings**
- **States highlighted in Red currently have no routes in the Registry**
Sample Update Spreadsheet (Contact Info)

<table>
<thead>
<tr>
<th>Revise</th>
<th>Contact</th>
<th>Additional Contact (Optional/As Needed)</th>
<th>Additional Contact (Optional/As Needed)</th>
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<tbody>
<tr>
<td>9</td>
<td>State Agency: CA Highway Patrol</td>
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<td></td>
</tr>
<tr>
<td>10</td>
<td>POC Name [optional]: Tian-Ting Shih</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>POC email:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Address: Commercial Vehicle Section</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Address: P.O. Box 942898</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>City: Sacramento</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>State: CA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Zip Code: 94298-0001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Phone: (916) 843-3400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Fax: (916) 322-3154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Web Address: <a href="http://www.chp.ca.gov">www.chp.ca.gov</a></td>
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<td></td>
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<tr>
<td>20</td>
<td>Comment:</td>
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Individual tabs to display specific information
### Sample Update Spreadsheet (HRCQ RAM Routes)

<table>
<thead>
<tr>
<th>Designation Date</th>
<th>Route Order</th>
<th>Route Description</th>
<th>City</th>
<th>County</th>
<th>Designation(s) (A,B,I,P)</th>
<th>Comments</th>
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<tbody>
<tr>
<td>10/15/1994</td>
<td>A</td>
<td>SR 905 from Mexican Border to Interstate 805</td>
<td></td>
<td></td>
<td>P</td>
<td></td>
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<tr>
<td>10/19/1994</td>
<td>B1</td>
<td>Interstate 805 from Interstate 5 [north of the City of San Diego] to State Route 905</td>
<td>San Diego</td>
<td></td>
<td>P</td>
<td>Revised 4/1/2014</td>
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<tr>
<td>10/19/1994</td>
<td>B2A</td>
<td>Interstate 15 from State 163 to Interstate 8</td>
<td>San Diego</td>
<td>San Diego</td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>10/19/1994</td>
<td>B2B</td>
<td>Interstate 8 from Arizona to Interstate 5 [San Diego]</td>
<td></td>
<td></td>
<td>P</td>
<td></td>
</tr>
<tr>
<td>10/19/1994</td>
<td>B3</td>
<td>Interstate 5 from Interstate 405 [MP 93-Irvine] to State 78 [MP 78 - Carlsbad]</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10/19/1994</td>
<td>B3A</td>
<td>Interstate 15 from State 60 [Mira Loma] to State 163 [San Diego]</td>
<td></td>
<td></td>
<td>P</td>
<td></td>
</tr>
</tbody>
</table>
### Alaska – Designated NRHM routes

<table>
<thead>
<tr>
<th>Designation Date</th>
<th>Route Order</th>
<th>Route Description</th>
<th>City</th>
<th>Designation(s) (A,B,I,P)</th>
<th>FMCSA QA Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/01/05 A1</td>
<td></td>
<td>Pasagshak Rd. from Chiniak Highway south to end of road</td>
<td>Kodiak</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>11/01/05 A2</td>
<td></td>
<td>Chiniak Highway from West Rezanof Dr. to Pasagshak Rd.</td>
<td>Kodiak</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>
Sample Map
Update Instructions for Routing Agencies

- Update the spreadsheet information as necessary.
- Save the revised spreadsheet to a different location.
- Email the revised spreadsheet to: HMRouting@dot.gov
Brake-Actuated Rear Warning Lamps
§393.25 Requirements for lamps other than head lamps.

(e) Lamps to be steady-burning. All exterior lamps (both required lamps and any additional lamps) shall be steady-burning with the exception of turn signal lamps; hazard warning signal lamps; school bus warning lamps; amber warning lamps or flashing warning lamps on tow trucks and commercial motor vehicles transporting oversized loads; and warning lamps on emergency and service vehicles authorized by State or local authorities.
Who uses strobing warning lamps?

- School Buses
- MetroAccess
- Paratransit
Introduction Into The Tank Truck Industry – Request for Exemption

**PROPOSED EXEMPTION CONDITIONS**

- Brake-actuated
- High-mounted
- Amber
- Strobing/Flashing
We’re looking for information such as:

• Which carriers are currently using rear warning lamps? Why?
• What color are these lamps?
• Where are these lamps located?
• Are they brake-actuated or always on?
• What changes are carriers seeing after the addition of these lamps (i.e., data showing a reduction in being rear-ended)?
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Cargo Tank Research
Human Factors in CT Rollover Prevention:

- Inter-agency agreement with PHMSA
- Conducted by Volpe Center
- Follow-up to PHMSA’s current research
- Focus will be on best practices for prevention – not “why did the crash occur”
- Scheduled to begin in the next few weeks
- Will be looking for industry participation
Triple Issues Study:

- The issues:
  - Roadside Identification of Cargo Tank Facilities
  - Cargo Tank VIN’s for Tracking
  - Adequacy of Mobile Testing Facilities
- Kick-off meeting occurred on October 17
- Industry groups were invited to attend
- Will be setting up an oversight panel
- Will be looking for input from industry groups
CSA / SMS Preview
Welcome to the SMS Enhancements Public Preview!

At FMCSA, we know that strong, reliable data means smarter safety decisions—and ultimately safer roads for everyone.

This is why we recently proposed enhancements to the SMS that put our latest analysis and your input to work to more effectively prioritize and intervene with carriers that post the greatest safety risk.

- Review these materials for a primer on the preview and proposed changes and register for a Q&A session
- Visit the Help Center to get your questions answered
- Submit your comments on the Federal Register Notice
Welcome to the SMS Enhancements Public Preview!

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Review these materials for a primer on the proposed changes and visit for a CTA to send your comments to the Federal Motor Carrier Safety Administration.

See the Six Proposed Enhancements Below

See our proposed enhancements in action. Select a proposed enhancement below to see an example carrier that shows you how that proposed change may impact SMS results. You can also select Learn More, or review the Proposed SMS Enhancements Fact Sheet for a summary of each proposed change.

- Improving Our Focus on Carriers with High Crash Rates by Adjusting Intervention Thresholds
- Focusing Our Investigative Resources on Carriers with More Crash Involvement
- Sharpening Our Focus on Carriers with Recent Violations
- A More Accurate Picture of Carrier Exposure on Our Roads
- A More Effective HM Compliance BASIC
- More Effectively Identifying Driver Safety Problems Related to OOS
● **Objective 1:** Make the SMS more effective at prioritizing carriers that pose the greatest safety risk for interventions by:
  ● Expanding the range over which the Utilization Factor is applied;
  ● Simplifying the data sufficiency standards by only assigning BASIC percentiles to companies that have had an inspection with a violation in the past year; and
  ● Segmenting the Hazardous Materials (HM) Compliance BASIC by cargo tank and non-cargo tank operations.

● **Objective 2:** Improve FMCSA’s focus on carriers with high crash rates and serious safety problems by:
  ● Adjusting the Intervention Thresholds for the Vehicle Maintenance, Controlled Substances/Alcohol, Driver Fitness, and HM Compliance BASICs; and
  ● Moving all operating while out-of-service (OOS) violations to the Unsafe Driving BASIC.

● **Objective 3:** Prioritize FMCSA’s investigative resources on carriers with more crash involvement by:
  ● Increasing the number of crashes required to assign a percentile in the Crash Indicator BASIC from two to three.
Questions/Discussion

Thanks for your attention. I will take questions at this time.

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Chief
Hazardous Materials Division

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202-493-0027