Commercial Motor Vehicle and Driver Safety

Deborah M. Freund, P.E.
Senior Transportation Specialist
FMCSA
Today’s Presentation

- FMCSA responsibilities
- USDOT, FMCSA organization
- Safety regulations for motor carriers, drivers and vehicles
  - Focus on hours of service regulations
- Enforcement of safety regulations
- Summary
FMCSA’s Responsibilities

- FMCSA is the agency in the U.S. Department of transportation responsible for commercial motor vehicle safety.
- FMCSA enforces the federal motor carrier safety regulations, and federal hazardous materials regulations for highway transportation.
Commercial Motor Vehicle:

- GVWR, GCWR, GVW, or GCW of 4,536 kg (10,001 lbs) or greater
- Designed or used to transport more than 8 passengers (including driver) for compensation
- … Or more than 15 passengers (including driver), not for compensation
- Used to transport hazardous material in quantities requiring placarding
Operations Subject to Regulation

- Motor carriers operating CMVs in interstate commerce
  - Basically, crossing a State line during transportation, or transportation originating or terminating outside the United States
- States must adopt comparable regulations to be eligible for MCSAP grants
  - 49 CFR 355 … includes hours of service
Motor Carrier Authority, Driver Licensing

- Operating authority – for-hire motor carriers of passengers and property
- Authority for brokers and freight forwarders
- Commercial driver’s license (CDL) & drug and alcohol testing rules (interstate, intrastate, federal and state employees, private-sector employees)
Motor Carrier, Vehicle, and Driver Safety

- Financial responsibility
- Driver qualifications & disqualifications (training, experience, medical)
- Safe driving of vehicles
- Vehicle parts and accessories
- Hours of service for drivers
- Inspection, repair and maintenance
Part 395 – Hours of Service for Drivers

The objectives of the rules are:

- To permit commercial motor vehicle (CMV) drivers additional opportunities for quality rest and restorative sleep, and

- To reduce the number of crashes caused by drowsy, tired, or fatigued CMV drivers.
### Hours of Service: Applicability

#### Old Rules
Apply to all motor carriers and CMV drivers, with some exceptions for specific operations including:
- Oil field
- Agricultural
- Ground water well drilling
- Construction Materials & Equipment
- Utility Service Vehicles

Apply only to property-carrying motor carriers and CMV drivers, with similar exceptions for specific operations including:
- Oil field
- Agricultural
- Ground water well drilling
- Construction Materials & Equipment
- Utility Service Vehicles
## Hours of Service: Limits

### Old Rules

*All CMV drivers may not drive:*

- More than 10 hours, following 8 hours off-duty.
- After 15 hours on-duty, following 8 hours off-duty.
- After 60/70 hours on-duty in 7/8 consecutive days.


*Property-Carrying CMV drivers may not drive:*

- More than 11 hours, following 10 hours off-duty.
- Beyond the 14th hour after coming on-duty, following 10 hours off-duty.
- After 60/70 hours on-duty in 7/8 consecutive days.
34-Hour Restart  Truck drivers may restart a 7/8 day consecutive day period after taking 34 or more consecutive hours off-duty.
16-Hour Exception

Drivers may extend the 14-hour on-duty period by 2 additional hours **IF THEY:**

- Are released from duty at the normal work reporting location for the previous 5 duty tours; **AND**
- Return to their normal work reporting location and are released from duty within 16 hours; **AND**
- Have not used this exception in the previous 7 days, except following a 34-hour restart of a 7/8-day period.

**BUT,** must not exceed 11 hours driving.
<table>
<thead>
<tr>
<th>Old Hours-of-Service Rules</th>
<th>New Hours-of-Service Rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>All CMV Drivers</td>
<td>Property-Carrying CMV Drivers</td>
</tr>
<tr>
<td>CMV driver may drive 10 hours after 8 hours off-duty.</td>
<td>CMV driver may drive 11 hours after 10 hours off-duty.</td>
</tr>
<tr>
<td>CMV driver may not drive after 15 hours on-duty, following 8 hours off-duty.</td>
<td>CMV driver may not drive beyond the 14th hour after coming on-duty, following 10 hours off-duty.</td>
</tr>
<tr>
<td>CMV driver may not drive after 60/70 hours on-duty in 7/8 consecutive days.</td>
<td>CMV driver may not drive after 60/70 hours on duty in 7/8 consecutive days.</td>
</tr>
<tr>
<td></td>
<td>A driver may restart a 7/8 consecutive day period after taking 34 or more consecutive hours off-duty.</td>
</tr>
</tbody>
</table>

**Compliance Required**

- Through January 3, 2004
- On & After January 4, 2004

Passenger-carrying carriers/drivers are not subject to the new hours-of-service rules. These operations must continue to comply with the "old" hours-of-service limitations specified in 49 CFR § 395.5.
16-Hour Exception For Property-Carrying Drivers

Drivers may extend the 14-hour on-duty period by 2 additional hours IF THEY:

Are released from duty at the normal work reporting location for the previous 5 duty tours, AND

Return to the normal work reporting location and are released from duty within 16 hours, AND

Have not used this exception in the previous 7 days, except following a 34-hour restart of a 7/8 day period.

Total hours driving may not exceed 11 hours.

U.S. Department of Transportation
Federal Motor Carrier Safety Administration
www.fmcsa.dot.gov
Exceptions and Exemptions

Oil Field Operations
Ground Water Well Drilling Operations,
Construction Materials and Equipment,
and Utility Service Vehicles

These motor carriers retain the 24-hour restart for 7/8-day duty periods, but must comply with the new rules:

- 10 consecutive hours off-duty;
- 11-hour driving limitations; and,
- 14-hour on-duty limitation  
  (including 16-hour exception).
Part 395 - Logbooks

- Every motor carrier must require its drivers to record his/her duty status for each 24-hour period.
- Drivers must use a graph grid to record their hours:
- Logbooks must be current up to the last change of duty status.
- Automatic on-board recorders may be used.
Air Quality Analyses

Source: Environmental Assessment for Hours of Service Rule, December 2002

Docket FMCSA-1997-2350-23303
## CMV Operating Data
(Source: EA Table 3)

<table>
<thead>
<tr>
<th>Vehicle Operating Data</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total vehicles in service</td>
<td>1,125,000</td>
</tr>
<tr>
<td>Vehicle miles traveled (VMT)</td>
<td>101,152,550,000</td>
</tr>
<tr>
<td>Vehicle hours idling (VHI)</td>
<td>2,059,000,000</td>
</tr>
</tbody>
</table>
Criteria Air Pollutant Emissions Factors For CMV Operations
(Source: EA Table 4; Compilation of Air Emission Factors. EPA Publication AP-42, Vol. II Pending 5th Ed.)

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>CO</th>
<th>NOx</th>
<th>PM</th>
<th>VOC</th>
<th>CO₂</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-haul vehicle travel, g/VMT</td>
<td>4.80</td>
<td>19.21</td>
<td>0.73</td>
<td>0.75</td>
<td>1677.0</td>
</tr>
<tr>
<td>Short-haul vehicle travel, g/VMT</td>
<td>9.48</td>
<td>28.01</td>
<td>1.46</td>
<td>1.73</td>
<td>1677.0</td>
</tr>
<tr>
<td>Long-haul vehicle idling, g/hr</td>
<td>53.2</td>
<td>69.5</td>
<td>1.6</td>
<td>5.8</td>
<td>10,799.0</td>
</tr>
<tr>
<td>Short-haul vehicle idling, g/hr</td>
<td>105.2</td>
<td>102.0</td>
<td>3.4</td>
<td>13.4</td>
<td>10,799.0</td>
</tr>
</tbody>
</table>
### Baseline Air Pollutant Emissions From CMV Operations by Driver/ Vehicle Type (Metric Tons/ year)

(Source: EA Table 5)

<table>
<thead>
<tr>
<th>Emissions Source</th>
<th>CO, MT/yr</th>
<th>NOx, MT/yr</th>
<th>PM 2.5, MT/yr</th>
<th>PM 10, MT/yr</th>
<th>VOC, MT/yr</th>
<th>CO₂, MT/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>VMT</td>
<td>485,532</td>
<td>1,943,140</td>
<td>65,446</td>
<td>73,740</td>
<td>75,864</td>
<td>169,632,826</td>
</tr>
<tr>
<td>Vehicle Idling Hours</td>
<td>109,474</td>
<td>143,135</td>
<td>3,057</td>
<td>3,331</td>
<td>11,941</td>
<td>22,231,511</td>
</tr>
<tr>
<td>Total All CMV Types in Service</td>
<td>595,006</td>
<td>2,086,275</td>
<td>68,503</td>
<td>77,071</td>
<td>87,805</td>
<td>191,864,338</td>
</tr>
</tbody>
</table>
## Truck VMT Analysis

(Source: EA Table 13)

<table>
<thead>
<tr>
<th></th>
<th>No Action</th>
<th>Full Compliance</th>
<th>PATT</th>
<th>ATA</th>
<th>FMCSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total truck VMT (MM)</td>
<td>101,053</td>
<td>100,300</td>
<td>99,788</td>
<td>100,882</td>
<td>100,701</td>
</tr>
<tr>
<td>Net Δ VMT (MM) (re No Action)</td>
<td>0</td>
<td>-853</td>
<td>-1,364</td>
<td>-271</td>
<td>-451</td>
</tr>
<tr>
<td>% Δ VMT (re No Action)</td>
<td>0%</td>
<td>-0.84 %</td>
<td>-1.35 %</td>
<td>-0.27 %</td>
<td>-0.45 %</td>
</tr>
</tbody>
</table>
## Analysis of Vehicle Idling Hours
(Source: EA Table 14)

<table>
<thead>
<tr>
<th></th>
<th>No Action</th>
<th>Full Compliance</th>
<th>PATT</th>
<th>ATA</th>
<th>FMCSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>For-hire relative %</td>
<td>100 %</td>
<td>100 %</td>
<td>127 %</td>
<td>92 %</td>
<td>109 %</td>
</tr>
<tr>
<td>Private Relative %</td>
<td>100 %</td>
<td>100 %</td>
<td>121 %</td>
<td>94 %</td>
<td>107 %</td>
</tr>
<tr>
<td>For-hire idle hours, MM</td>
<td>1,098</td>
<td>1,098</td>
<td>1,396</td>
<td>1,007</td>
<td>1,195</td>
</tr>
<tr>
<td>Private idle hours, MM</td>
<td>961</td>
<td>961</td>
<td>1,159</td>
<td>900</td>
<td>1,025</td>
</tr>
<tr>
<td>Total idling hours, MM</td>
<td>2,059</td>
<td>2,059</td>
<td>2,556</td>
<td>1,907</td>
<td>2,220</td>
</tr>
</tbody>
</table>
Enforcement of Motor Carrier Safety Regulations
Roadside Enforcement

- Level I – North American standard
- Level II - Walk-around driver/vehicle
- Level III – Driver/credential inspection
- Level IV – Special inspection (usually for a study or special project)
- Level V – Vehicle-only inspection.
- Level VI – Enhanced NAS (radioactive shipments)
Roadside Enforcement (cont.)

- Generally, States adopt the FMCSRs and enforce the requirements during roadside inspections.


- Severe violations of FMCSRs or HMRs result in the driver or vehicle being placed out-of-service.
Compliance Reviews

- Review of a motor carrier’s safety management practices, and records conducted at the place of business.

- Safety ratings are assigned: Satisfactory; Conditional; Unsatisfactory.

- Carriers that are rated “Unsatisfactory” must correct deficiencies within a specified time – or cease operating in interstate commerce.
Summary

- FMCSA’s safety regulations cover motor carriers, drivers, and vehicles.
- States are required to adopt compatible regulations to receive Federal funds to support their motor carrier safety programs.
- All motor carriers operating in the U.S. must comply with the same rules.
- Roadside inspections and compliance reviews are the primary means of enforcement.
For Further Information:

Deborah M. Freund, P.E.
FMCSA – MC-PSV
400 7th Street, SW  Room 8301
Washington, DC 20590
E-mail: deborah.freund@fmcsa.dot.gov