The Fleet DNA Project:

The Fleet DNA Project aims to accelerate the development of advanced vehicle technologies while supporting the strategic deployment of market-ready technologies that reduce costs, fuel consumption, and emissions.

Designed by the U.S. Department of Energy’s National Renewable Energy Laboratory in partnership with Oak Ridge National Laboratory, the data summaries contained within this report are designed to illustrate the broad operation range of many of today’s vehicle vocations and to provide insight into key observable statistical trends.
Within This Report:

Contained within this report are graphical data summaries based on real-world “genetics” of medium- and heavy-duty commercial fleet vehicles operating within a chosen vocation.

These graphical data summaries have been selected to highlight key statistical trends observed in past U.S. DOE fleet studies, and to provide insight into potential areas of interest for the continued development of technology to reduce costs, fuel consumption, and emissions.
Breakdown of Total Operational Days Collected by Deployment for Bucket Trucks

Deployment ID

Number of days

0% 20% 40% 60% 80% 100%

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Breakdown of Total Vehicles by Deployment for Bucket Trucks

Number of Vehicles

Deployment ID

# of Vehicles Reporting: 20  # of Days Included: 283
Generated: Thu Aug 07, 2014

# of Vehicles Reporting: 20  Generated: Thu Aug 07, 2014  # of Days Included: 283
Breakdown of Total Miles Collected by Deployment for Bucket Trucks

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Daily Average Driving Speed vs. Kinetic Intensity for Bucket Trucks

# of Vehicles Reporting: 20  Generated: Thu Aug 07, 2014  # of Days Included: 280
Daily Average vs. Maximum Driving Speed for Bucket Trucks

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 279
Daily Average Driving Speed Distribution for Bucket Trucks

Average Driving Speed (mph)

Frequency

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Daily Mean Road Grade vs. Kinetic Intensity for Bucket Trucks

# of Vehicles Reporting: 20
 Generated: Thu Aug 07, 2014
 # of Days Included: 252
Road Grade and Distance Correlation Examined for Bucket Trucks

Average Driving Speed (mph)

Average Positive Acceleration (ft/s^2)

Distance

Maximum

Minimum

Mean Daily Road Grade

# of Vehicles Reporting: 20

Generated: Thu Aug 07, 2014

# of Days Included: 283
Detailed Average Driving Speed and Distance Correlation Examined for Bucket Trucks

# of Stops per Mile

Average Acceleration (ft/s^2)

Average Driving Speed (mph)

Distance, Mile Maximum

Minimum

# of Vehicles Reporting: 20
# of Days Included: 283
Generated: Thu Aug 07, 2014
Stops per Mile and Distance Correlation Examined for Bucket Trucks

Average Acceleration (ft/s^2)

Distance
Maximum

Minimum

Average Driving Speed (mph)

Stops per Mile

# of Vehicles Reporting: 20
# of Days Included: 283
Generated: Thu Aug 07, 2014
Daily Stops Per Mile Distribution for Bucket Trucks

# of Stops Per Mile

Frequency

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Daily Total Number of Stops vs. Operating Time for Bucket Trucks

# of Vehicles Reporting: 20  Generated: Thu Aug 07, 2014  # of Days Included: 281
Maximum Driving Speed Distribution for Bucket Trucks

# of Vehicles Reporting: 20  # of Days Included: 283
Generated: Thu Aug 07, 2014

NATIONAL RENEWABLE ENERGY LABORATORY
Daily Kinetic Intensity Distribution for Bucket Trucks

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Daily Distance Traveled by Deployment for Bucket Trucks

Distance Traveled (miles)

Deployment ID

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Frequency

Daily Zero Speed Cycle Percentage Distribution for Bucket Trucks

# of Vehicles Reporting: 20  Generated: Thu Aug 07, 2014  # of Days Included: 283
Daily Zero Speed Cycle Percentage by Deployment for Bucket Trucks

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Captured Operating Time by Speed Bin (mph) for Bucket Trucks

<table>
<thead>
<tr>
<th>Speed Bin (mph)</th>
<th>Quantity of Data Captured (hrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0+ to 5</td>
<td>25</td>
</tr>
<tr>
<td>5+ to 10</td>
<td>30</td>
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<tr>
<td>10+ to 15</td>
<td>25</td>
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<tr>
<td>15+ to 20</td>
<td>30</td>
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<tr>
<td>20+ to 25</td>
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<td>35+ to 40</td>
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<td>40+ to 45</td>
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<td>45+ to 50</td>
<td>30</td>
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<td>50+ to 55</td>
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<td>70+ to 75</td>
<td>25</td>
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<td>75+</td>
<td>30</td>
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</tbody>
</table>

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Total Mileage Collected by Speed Bin (mph) for Bucket Trucks

Driving Speed (mph)

- 0+ to 5
- 5+ to 10
- 10+ to 15
- 15+ to 20
- 20+ to 25
- 25+ to 30
- 30+ to 35
- 35+ to 40
- 40+ to 45
- 45+ to 50
- 50+ to 55
- 55+ to 60
- 60+ to 65
- 65+ to 70
- 70+ to 75
- 75+

% of Miles Collected

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Daily Average Acceleration Rate for Bucket Trucks

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283

Average Acceleration (ft/s^2)

Frequency
Daily Maximum Acceleration Rate for Bucket Trucks

Maximum Acceleration (ft/s^2)

Frequency

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Daily Average Deceleration vs. Maximum Deceleration for Bucket Trucks

# of Vehicles Reporting: 20  Generated: Thu Aug 07, 2014  # of Days Included: 283
Daily Maximum Deceleration Rate for Bucket Trucks

# of Vehicles Reporting: 20  Generated: Thu Aug 07, 2014  # of Days Included: 283
Daily Operating Time vs. Distance Traveled for Bucket Trucks

Distance Traveled (miles) vs. Operating Time (hrs)

# of Vehicles Reporting: 20  Generated: Thu Aug 07, 2014  # of Days Included: 283
Daily Operating Time Distribution for Bucket Trucks

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Operating Time by Deployment for Bucket Trucks

# of Vehicles Reporting: 20
Generated: Thu Aug 07, 2014
# of Days Included: 283
Interested in Participating?

The statistical summaries presented in this report were generated with the support of a variety of organizations. It is through the continued support of these partner organizations that Fleet DNA continues to grow.

For more information about the project or to discuss partnership opportunities including contribution of data to the database, please contact:

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