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 Delivery Vans

Deployment ID

Number of days

% of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Breakdown of Total Vehicles by Deployment for Delivery Vans

Deployment ID

Number of Vehicles Reporting: 94  # of Days Included: 974

Generated: Thu Aug 07, 2014
Daily Average Driving Speed vs. Distance Traveled for Delivery Vans

# of Vehicles Reporting: 94        Generated: Thu Aug 07, 2014        # of Days Included: 974

# of Days

Number of Days

Distance Traveled (miles)

Average Driving Speed (mph)
Daily Average vs. Maximum Driving Speed for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 971
Daily Average Driving Speed Distribution for Delivery Vans

Average Driving Speed (mph)

Frequency

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Daily Mean Road Grade vs. Kinetic Intensity for Delivery Vans

# of Vehicles Reporting: 92  Generated: Thu Aug 07, 2014  # of Days Included: 958
Daily Mean Road Grade vs. Distance Traveled for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Daily Mean Road Grade vs. Average Driving Speed (mph) for Delivery Vans

Mean Road Grade

Average Driving Speed (mph)

Number of Days

# of Vehicles Reporting: 94  Generated: Thu Aug 07, 2014  # of Days Included: 974
Daily Mean Road Grade vs. # of Stops per Mile for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 970
Road Grade and Distance Correlation Examined for Delivery Vans

Average Positive Acceleration (ft/s^2) vs. Average Driving Speed (mph)

Distance
- Maximum
- Minimum

Mean Daily Road Grade

# of Vehicles Reporting: 94
# of Days Included: 974
Generated: Thu Aug 07, 2014
# of Stops per Mile

Average Acceleration (ft/s^2)

Distance and Mile Maximum
Minimum

Average Driving Speed (mph)

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Detailed Average Driving Speed and Distance Correlation Examined for Delivery Vans

# of Stops per Mile

Average Acceleration (ft/s^2)

Distance, Mile

Maximum

Minimum

Average Driving Speed (mph)

# of Vehicles Reporting: 94
 Generated: Thu Aug 07, 2014

# of Days Included: 974
Stops per Mile and Distance Correlation Examined for Delivery Vans

<table>
<thead>
<tr>
<th>Distance</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>4</td>
<td>6</td>
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<tr>
<td>8</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>14</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

Average Driving Speed (mph)

Average Acceleration (ft/s^2)

# of Vehicles Reporting: 94  # of Days Included: 974

Generated: Thu Aug 07, 2014
Daily Stops per Mile vs. Average Driving Speed for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 970
Stops Per Mile by Deployment for Delivery Vans

# of Stops Per Mile by Deployment for Delivery Vans

Deployment ID

# of Stops Per Mile

1 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60

# of Vehicles Reporting: 94  Generated: Thu Aug 07, 2014  # of Days Included: 974
Maximum Driving Speed Distribution for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Daily Kinetic Intensity Distribution for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Daily Distance Traveled by Deployment for Delivery Vans

Deployment ID

Distance Traveled (miles)

# of Vehicles Reporting: 94  # of Days Included: 974

Generated: Thu Aug 07, 2014
Daily Zero Speed Cycle Percentage by Deployment for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Captured Operating Time by Speed Bin (mph) for Delivery Vans

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 Total Captured Data

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Total Mileage Collected by Speed Bin (mph) for Delivery Vans

Driving Speed (mph) | % of Miles Collected
--- | ---
0+ to 5 | 2
5+ to 10 | 4
10+ to 15 | 6
15+ to 20 | 8
20+ to 25 | 10
25+ to 30 | 12
30+ to 35 | 14
35+ to 40 | 16
40+ to 45 | 18
45+ to 50 | 20
50+ to 55 | 22
55+ to 60 | 24
60+ to 65 | 26
65+ to 70 | 28
70+ to 75 | 30
75+ | 32

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Daily Average Acceleration vs. Maximum Acceleration for Delivery Vans

# of Vehicles Reporting: 94  Generated: Thu Aug 07, 2014  # of Days Included: 974
Daily Maximum Acceleration Rate for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Daily Average Deceleration Rate for Delivery Vans

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Daily Average Deceleration vs. Maximum Deceleration for Delivery Vans

Number of Days Included: 974

Number of Vehicles Reporting: 94

Generated: Thu Aug 07, 2014
Daily Maximum Deceleration Rate for Delivery Vans

Maximum Deceleration (ft/s^2)

Frequency

# of Vehicles Reporting: 94  Generated: Thu Aug 07, 2014  # of Days Included: 974
Daily Operating Time vs. Distance Traveled for Delivery Vans

Distance Traveled (miles)

Operating Time (hrs)

# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
Deployment ID
# of Vehicles Reporting: 94
Generated: Thu Aug 07, 2014
# of Days Included: 974
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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