ECONOMIC COMMISSION FOR EUROPE
INLAND TRANSPORT COMMITTEE
World Forum for Harmonization of Vehicle Regulations (WP.29)
Working Party on Brakes and Running Gear (GRRF)
(Fiftieth session, 10-12 September 2001,
agenda item 1.6. HGV Compatibility)

Transmitted by the Expert from the United Kingdom

Note: The data reproduced below was prepared by the expert from the United Kingdom in order to supply additional information relating to the UK research into HGV Compatibility.

Note: This document is distributed to the Experts on Brakes and Running Gear only.
HGV Compatibility Research Project

Ideal set-up functions

<table>
<thead>
<tr>
<th>Set-up No.</th>
<th>Threshold Pressure Tractor/Trailer</th>
<th>Pressure Difference</th>
<th>Acceptable wear rate</th>
<th>Acceptable work done rate</th>
<th>Efficient brake distribution and good stability</th>
<th>Check braking (reduced wheel lock)</th>
<th>Ideal condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>0.4/1.0</td>
<td>+0.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.4/0.8</td>
<td>+0.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.4/0.6</td>
<td>+0.2</td>
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<td></td>
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</tr>
<tr>
<td>1</td>
<td>0.4/0.4</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.6/0.4</td>
<td>-0.2</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>5</td>
<td>0.8/0.4</td>
<td>-0.4</td>
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</tr>
<tr>
<td>7</td>
<td>1.0/0.4</td>
<td>-0.6</td>
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</tr>
</tbody>
</table>
HGV Compatibility
Stopping Distances Before Road Runs

Coupling Head Pressure = 2

<table>
<thead>
<tr>
<th>Distance (m)</th>
<th>Speed (km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>57</td>
<td>50-10</td>
</tr>
<tr>
<td>55</td>
<td>60-10</td>
</tr>
<tr>
<td>53</td>
<td>65-10</td>
</tr>
<tr>
<td>83</td>
<td>70-10</td>
</tr>
<tr>
<td>105</td>
<td>75-10</td>
</tr>
<tr>
<td>130</td>
<td>80-10</td>
</tr>
</tbody>
</table>

Setup 1
Setup 2
Setup 3
Setup 4
Setup 5
HGV Compatibility
Stopping Distances Before Road Runs

Coupling Head Pressure = 3

Diagram showing the relationship between speed (km/h) and distance (m) with different setups indicated by different colors. The diagram illustrates the stopping distances for various speed ranges and the corresponding percentage changes.

- Setup 1
- Setup 2
- Setup 3
- Setup 4
- Setup 5

Key points:
- 50-10 km/h: Setup 1 shows a distance of 3 meters.
- 30-10 km/h: Setup 2 shows a distance of 15 meters.
- 50-10 km/h: Setup 3 shows a distance of 35 meters.
- 80-50 km/h: Setup 4 shows a distance of 40 meters.
- Setup 5 shows a distance of 46 meters.

Percentage changes are indicated:
- +36% for Setup 2
- +55% for Setup 3
- +57% for Setup 4 and 5
HGV Compatibility

Stopping Distances After Road Runs

Coupling Head Pressure = 4.5

[Graph showing distances vs. speed for Setup 6 and Setup 8]
HGV Compatibility
Stopping Distances After Road Runs

Coupling Head Pressure = 5

Distance (m) vs. Speed (km/h)

- Setup 1
- Setup 2
- Setup 3
- Setup 4
- Setup 5

Distance values and speed increments are indicated on the graph.