

# NCT Vehicle Inspection Report - Explanatory Notes

All tests are carried out in accordance with the EU Directive 96/96 EC

Where test equipment is used, all readings are automatically transferred to a central database where they are compared to the pass/fail limits set.

Calibration of the test equipment is independently performed by the equipment manufacturers. It is carried out at defined intervals as set by the Department of Transport.

The AA supervises consistency checks on a quarterly basis i.e. the results from a vehicle tested on each lane are compared to the results of that same vehicle tested on a benchmark lane.

Also calibration and maintenance routines are carried out daily.

Explanation
<p><b>The Side Slip Test:</b> This test simulates driving on a straight, flat road without touching the steering wheel. This measurement indicates how many metres a vehicle would deviate to the left (-) or to the right (+) hand side over a distance of 1km.</p>
<p><b>The Suspension Test:</b> The Suspension Test Plates measure the movement of the suspension on each wheel and compares the readings for both wheels on a single axle (i.e. imbalance). The Suspension Test Plates also record the weight at each wheel and sums all four measurements to give total vehicle weight.</p>
<p><b>The Brake Test:</b> This test measures the brake brake force on each axle separately, by applying the brake and measuring the increased torque required by the rollers in the brake tester to maintain a constant RPM.</p> <p><b>Service Brake Performance</b> is the total Brake Effort expressed as a proportion of the vehicle weight.</p> <p><b>Parking Brake Performance</b> is the total Brake Effort from the Hand Brake expressed as a proportion of the vehicle weight.</p> <p><b>Ovality</b> is the proportion of the minimum and maximum brake force on one full wheel rotation at a brake force of 25%</p> <p><b>Imbalance</b> is the ratio between the left and right brake force of the same axle.</p>
<p><b>Exhaust Emissions Test:</b> This test measures the levels of certain gases (petrol) and particulates (diesel) which are emitted from the exhaust pipe under defined conditions. Vehicles may be tested at low and high RPM depending on the year of manufacture and manufacturers specifications. The results are then compared to the limits set in the relevant EU Directives.</p> <p>The Exhaust Emissions Test checks for the following: CO (Carbon Monoxide)      NDIR      NonDispersive InfraRed CO2 (Carbon Dioxide)      NDIR      NonDispersive InfraRed HC (Hydrocarbons) (n Hexane)      NDIR      NonDispersive InfraRed</p> <p><b>Lambda</b> is a calculation based on the proportion of the above gases in the emissions. All diesel and petrol fuel emission tests are performed to the manufacturer's specifications.</p>
<p><b>Light Test:</b> The light test measures the alignment of the light beams for pitch and direction. This test is computer-controlled.</p>
<p><b>Visual Test:</b> All vehicles are tested for defects as outlined in the National Car Test (NCT) Manual, published by the Government Supplies Agency and which is available from the Government Publication Sales Office on (01) 6476000. Examples of visual tests are brake components, steering linkage, tyres, suspension, safety belts, registration plates etc.</p>

Test Readings	Limits	Results																												
<p><b>Side - Slip (Alignment Test)</b> Front Axle: -6m/km Rear Axle: 0m/km</p>	<p>+ values are to the offside and - are to the nearside Outside -14 to +14m/km fail Outside -18 to +18m/km fail</p>	<p>PASS PASS</p>																												
<p><b>Suspension Test</b></p> <table border="1"> <thead> <tr> <th></th> <th>Left</th> <th>Right</th> <th>Imbalance</th> </tr> </thead> <tbody> <tr> <td>Front Axle:</td> <td>34Mm</td> <td>32Mm</td> <td>6%</td> </tr> <tr> <td>Rear Axle:</td> <td>31Mm</td> <td>31Mm</td> <td>0%</td> </tr> </tbody> </table>		Left	Right	Imbalance	Front Axle:	34Mm	32Mm	6%	Rear Axle:	31Mm	31Mm	0%	<p>imbalance above 30% fail imbalance above 30% fail</p>	<p>PASS PASS</p>																
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