This form needs to be completed by the client and supplied to Element before the delivery of the Vehicle

**This section to be completed by Element Test Engineer only (prior to commencing testing)**

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| --- | --- | --- | --- |
| **DATE:** |  | **SIGNED:** |  |
|  | |  | |
| **Standard(s) tested to:** | |  | |

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| --- | --- |
| **Basic Tests** | **Applicable Tests**  **(✓)** |
| Broadband Radiated Emissions |  |
| Narrowband Radiated Emissions |  |
| Radiated Immunity |  |
| Electrostatic Discharge |  |

***Remainder of form to be completed by the client***

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| **VEHICLE UNDER TEST:** | | |
| Vehicle Name: |  | |
| Description of Vehicle: |  | |
| Model: |  | |
| Build Level: |  | |
| Serial No: |  | |
| Software Revision: |  | |
| Engine Type: |  | |
| Vehicle Battery Voltage: |  | |
| Vehicle Weight: |  | |
| Frequencies generated or used in the EUT: | |  |
| EUT physical dimensions (H x W x D) metres: | |  |

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| **Vehicle Set-up Preparation:** | | | |
| Identify Jacking Points: | | |  |
| Axel Stand Requirements: | | |  |
| Exhaust Extraction Coupling: | | |  |
| **SUPPORT EQUIPMENT: (Where applicable)** | | | |
| 1 | Model: |  | |
| Type: |  | |
| Serial Number: |  | |
|  |  |  | |
| 2 | Model: |  | |
| Type: |  | |
| Serial Number: |  | |
|  |  |  | |
| 3 | Model: |  | |
| Type: |  | |
| Serial Number: |  | |
|  |  |  | |
| **MODE OF OPERATION**: **- Broadband Emissions** | | | |
| *Basic Mode: (minimum requirements)*  *The engine shall be operational at a speed of 1500 revs/min.*  *All equipment capable of generating broadband emissions which can be switched on permanently by the driver or passenger should be in operation in maximum load, e.g. wiper motors or fans. The horn and electric window motors, etc., are excluded because they are not used continuously*  *The actual operating state of the vehicle and its systems shall be detailed below:* | | | |
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| **MODE OF OPERATION**: **- Narrow Emissions** |
| *Basic Mode: (minimum requirements)*  *The ignition switch shall be switched on. The engine shall not be operating. The vehicle's electronic systems shall all be in normal operating mode with the vehicle stationary. All equipment which can be switched on permanently by the driver or passenger with internal oscillators > 9 kHz or repetitive signals should be in normal operation.*  *The actual operating state of the vehicle and its systems shall be detailed below:* |
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| **MODE OF OPERATION & FAILURE CRITERIA**: **- Immunity** |  |
| *Basic Mode: (minimum requirements)*  *The vehicle shall be in an un-laden condition except for necessary test equipment. The engine shall turn the driving wheels at a steady speed of 50 km/h if there is no technical reason due to the vehicle to define a different condition. The vehicle shall be supported on insulated axle stands with minimum ground clearance. Where appropriate, transmission shafts may be disconnected (e.g. trucks).* | |
| *Basic vehicle conditions*  *The table below defines minimum test conditions and failures criteria for vehicle immunity tests. Other vehicle systems, which can affect immunity-related functions, must be tested in a way to be agreed between manufacturer and Element.* | |

| **50 km/h Vehicle Test Conditions** | **Failure Criteria** | **Monitoring Method** |
| --- | --- | --- |
| Vehicle speed 50 km/h ± 20% (vehicle driving the rollers). If the vehicle is equipped with a cruise control system, it shall be operational | Speed variation greater than ± 10 % of the nominal speed In case of automatic gearbox: change-of-gear ratio inducing a speed variation greater than ± 10 % of the nominal speed | Camera monitoring dash/speedo and if available CAN bus data. |
| Dipped beams ON (manual mode) | Lighting OFF | Camera (mounted externally to the vehicle) monitoring headlights. Possibly same camera as for wipers |
| Front wiper ON (manual mode) maximum speed | Complete stop of front wiper | Camera (mounted externally to the vehicle) monitoring wiper. Possibly same camera as for headlights |
| Direction indicator on driver’s side ON | Frequency change (lower than 0,75 Hz or greater than 2,25 Hz). Duty cycle change (lower than 25 % or greater than 75 %) | Optical interface required |
| Adjustable suspension in normal position | Unexpected significant variation | Camera (mounted externally to the vehicle) monitoring suspension. Measured and verify the distance from wheel arch to tyre on screen in control room. Possibly same camera as for headlights |
| Driver’s seat and steering wheel in medium position | Unexpected variation greater than 10 % of total range | Camera (mounted internally or externally to the vehicle) monitoring seat/backrest position. Mark display screen and monitor for seat for movement relative to it original position on Possibly same camera as for speedo if seat is in line of vision. |
| Alarm unset | Unexpected activation of alarm | Camera with microphone used for monitoring audio alarms and camera for visual alarm i.e. hazard lights. |
| Horn OFF | Unexpected activation of horn | Camera with microphone used for monitoring audio. |
| Airbag and safety restraint systems operational with inhibited passenger airbag if this function exists | Unexpected activation | Camera (mounted internally to the vehicle) monitoring drive / passenger area for airbag activation. If function exists the passenger airbag should be inhibited. |
| Automatic doors closed | Unexpected opening | Camera (mounted externally to the vehicle) monitoring wiper. Possibly same camera as for headlights |
| Adjustable endurance brake lever in normal position | Unexpected activation | ????? |

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| **50 km/h Vehicle Test Conditions** | **Failure Criteria** | **Monitoring Method** |
| Other |  |  |
| Other |  |  |
| Other |  |  |
| Other |  |  |