



Government
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STANDARD OPERATING PROCEDURE

Vehicle Emissions Testing







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Standard Operating Procedure: Vehicle Emissions Testing

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Foreword

Vanuatu's Vehicle Emissions Standard Operating Procedures (SOPs) represent an important step in strengthening the country's approach to managing air pollution and safeguarding public health. As vehicle numbers continue to grow, it is essential that we take practical and coordinated action to ensure that our transport sector contributes to a cleaner and more sustainable environment.

As a Small Island Developing State, Vanuatu is particularly vulnerable to the impacts of climate change and environmental degradation. While our global emissions remain low, local air pollution from vehicles has direct consequences for the health and wellbeing of our people, as well as for the quality of our environment. These SOPs reflect the Government's commitment to addressing these challenges through realistic, low-cost, and effective measures suited to our national context.

Developed by the Public Works Department (PWD) with technical assistance from the Global Green Growth Institute (GGGI) under the Low Emissions and Climate Resilient Development (LECRD) Phase 2 programme funded by the Governments of New Zealand and Ireland in collaboration with relevant government agencies and stakeholders, these SOPs establish a clear and practical framework for managing vehicle emissions across their lifecycle, from importation through to in-service operation. They outline procedures that are both achievable and enforceable, ensuring that officers are equipped with the tools needed to carry out their roles effectively.

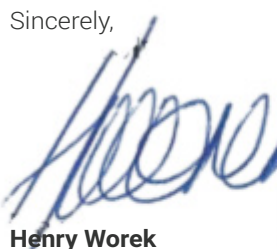
The SOPs focus on three key areas: ensuring minimum emissions standards at the point of import, enabling the identification of high-emitting vehicles through visual inspections, and incorporating basic diagnostic checks for modern vehicles. Together, these measures establish a balanced approach that combines prevention, monitoring, and compliance.

Importantly, these procedures are designed to be implemented in a coordinated manner across agencies, reinforcing consistency and accountability in enforcement. They also lay the groundwork for gradual improvements in vehicle standards and the adoption of cleaner technologies over time.

This initiative demonstrates the Government's commitment to practical and sustainable solutions that protect our people and environment, while remaining mindful of local capacities and resources. I encourage all implementing officers and stakeholders to apply these procedures diligently and work collaboratively to ensure their success.

Through these efforts, we take a meaningful step towards cleaner air, healthier communities, and a more sustainable future for Vanuatu.

Sincerely,


Henry Worek
Director General
Ministry of Infrastructure and Public Utilities



STANDARD OPERATING PROCEDURE

At-Border Emissions Build Compliance Check for Vanuatu

1 Purpose

- 1.1 This Standard Operating Procedure (SOP) defines the national fuel quality assurance regime for petrol and diesel destined for use in internal-combustion engines (excluding specialist applications such as motorsport/racing).
- 1.2 The provisions apply to all new and used motor vehicles destined for service on the roads in Vanuatu and not exempt for a reason provided in these Regulations or the current Import of Motor Vehicle (Control) (Amendment) Bill.

2 Scope

- 2.1 This Regulation applies to all new and used motor vehicles imported into Vanuatu, unless explicitly exempted by the Minister of Transport under the relevant provisions of the Import of Motor Vehicle (Control) (Amendment) Bill.
- 2.2 Exemptions shall include electric vehicles, tractors, motor sport vehicles, and other vehicles explicitly exempted by the Minister of Transport in accordance with the Regulations.

3 Definitions

- 3.1 Certificate of Conformity (CoC): An official document issued by the OEM or authorised country representative dealership/distributor confirming compliance with specified emissions standards.
- 3.2 Certificate of Deregistration (CoD): An official document issued in the source country confirming the deregistration of a vehicle, typically including the date of manufacture or date of first registration.
- 3.3 Certificate of Export (CoE): An official document issued by the source country confirming a vehicle is authorised for export.
- 3.4 Customs or its agents: the Government border inspection authority of Vanuatu, together with any authorised private contractors or appointed inspection agents acting on its behalf, who are responsible for carrying out front-line vehicle import checks, including verification of emissions build compliance in accordance with this SOP.
- 3.5 Euro 4/IV: The minimum acceptable emissions standard for imported vehicles.
- 3.6 Euro 4/IV Near Equivalent Emissions Build: Emissions standards listed in Schedule 2, Part A that are deemed equivalent to Euro 4/IV for the purpose of checking the emission build compliance of vehicles in accordance with this SOP.
- 3.7 HDV (Heavy Duty Vehicle): Vehicles with a GVM greater than 3,500 kg.
- 3.8 LDV (Light Duty Vehicle): Vehicles with a Gross Vehicle Mass (GVM) up to and including 3,500 kg.
- 3.9 More Stringent Emissions Standards: Emissions standards listed in Schedule 2, Part B that are demonstrably more stringent than Euro 4/IV or its near equivalents and are therefore accepted.
- 3.10 OEM: Original Equipment Manufacturer.

- 3.11 Shorthand Emission Standards used in these Regulations (examples) further defined in Schedule 2: Euro 4; Euro IV; China IV; K-Euro 4; K-Euro IV; Japan '05'; JE05; ADR 79/02; ADR 80/02; Tier 2/LEV II; SASO Euro 4/IV; CARB LEV II/III; Euro 5; Euro 6; Euro VI; China 5; China VI; K-Euro 5; K-Euro 6; Tier 3/LEV III; ADR 79/03; ADR 80/03.

4 Procedure for New Vehicles

- 4.1 For each new vehicle, the importer must provide at least one of the following evidences of compliance:
- 4.1.1 A valid Certificate of Conformity (CoC) issued by the OEM or country representative dealership/distributor, confirming that the vehicle has been certified to [emissions build to which vehicle model has been certified to] emissions build standard and complies with the emission build requirements of the Import of Motor Vehicle (Control) (Amendment) Bill current at the date of this CoC. See example letter provided in Schedule 1; or
 - 4.1.2 A clear photo of the entire engine plate, submitted by the importer, which must clearly show the emissions build standard stated on the label. This emissions build must meet the accepted requirement in Schedule 2.
- 4.2 Data verification:
- 4.2.1 Where a cross-check flags an inconsistency, a closer physical examination of the vehicle's compliance credentials will be undertaken by Customs or its agents.
 - 4.2.2 Where a cross-check flags an inconsistency, a closer physical examination of the vehicle's compliance credentials will be undertaken by Customs or its agents.

5 Procedure for Used Vehicles

- 5.1 For each used vehicle, the importer must provide one of the following evidences of compliance
- 5.1.1 Proof of Date of Manufacture (DoM) or Date of First Registration obtained from the Certificate of Deregistration (CoD) or Certificate of Export (CoE). Border officials shall confirm that this date is at or later than the date on which Euro 4/IV (or accepted equivalent) was fully introduced in the domestic market of the vehicle's source country (see Schedule 3). Note: Some vehicles manufactured or registered before this date may still comply. Importers of such vehicles may instead choose to use the engine label method under 5.1.3; or
 - 5.1.2 A valid Certificate of Conformity (CoC) from the OEM or country representative dealership/distributor, confirming that the vehicle meets Euro 4/IV or an accepted equivalent standard (see Schedule 2). See example in Schedule 1; or
 - 5.1.3 A clear photo of the entire engine plate that shows the emissions build. This emissions build must meet the accepted requirement in Schedule 2.

5.2 Data verification:

- 5.2.1 The provided emissions data shall be cross-checked for consistency of data either physically and/or using back-office systems by Customs or its agents against VIN-decoded data and Schedule 2.
- 5.2.2 Where a cross-check flags an inconsistency, a closer physical examination of the vehicle's compliance credentials will be undertaken by Customs or its agents.

6 Compliance Decision

- 6.1 A flowchart of the emissions build compliance check is provided in Schedule 4
- 6.2 If evidence confirms compliance with Euro 4/IV or an accepted equivalent standard, the vehicle may proceed to customs clearance.
- 6.3 If evidence does not confirm compliance, entry as a motor vehicle that can be registered and used on the roads in Vanuatu shall be denied.

7 Record-Keeping

- 7.1 All import records, including provided CoCs, CoDs, CoEs, engine plate photos, VIN-decoded reports, and back-office findings, shall be securely stored in Customs' compliance database for audit and review.

Schedule 1: Example Certificate of Conformity (CoC) Letter

[OEM Letterhead]

Date: [DD/MM/YYYY]

To Whom It May Concern,

This is to certify that the vehicle identified by VIN [XXXXXXXXXXXXXXXXX] has been certified to [emissions build to which vehicle model has been certified to] emissions build standard and complies with the emission build requirements of the Import of Motor Vehicle (Control) (Amendment) Bill current at the date of this CoC.

Signed,
[Name]
[Position]
[OEM/Dealership Name]

Schedule 2: Emissions Standards Accepted for Compliance

Part A – Minimum & Near-Equivalent Standards (deemed to meet Euro 4/IV):

The following emissions standards are deemed acceptable for compliance purposes on the basis that they are demonstrably near-equivalents to Euro 4/IV.

Jurisdiction	Shorthand	Vehicle Class	Official Reference
European Union / UK	Euro 4 / Euro IV	LDV / HDV	LDV: 98/69/EC (Stage B); HDV: 1999/96/EC; 2005/55/EC; 2005/78/EC
China (PRC)	China IV	LDV / HD engines	GB 18352.3-2005 (LDV); GB 17691-2005 (HD engines)
Korea (ROK)	K-Euro 4 / K-Euro IV	LD diesel / HD diesel	MOE Enforcement Rules / Notices
Korea (ROK)	LEV II / III	LD gasoline	MOE adoption of CARB LEV
Japan	Japan '05' / JE05	LDV / HDV	MLIT Notification No. 1317 (26-09-2003) and subsequent
Australia	ADR 79/02 / ADR 80/02	LDV / HDV	Australian Design Rules 79/02 (LD) and 80/02 (HD)
United States	Tier 2 / LEV II	LDV; HD diesel (2007)	40 CFR §86.1811-04 (LD); §86.004-11 (HD diesel)
Saudi Arabia	Euro 4 / Euro IV	LDV / HDV	SASO/MEWA instruments (Euro 4/IV minimum)
Singapore / New Zealand	Euro-aligned	LDV / HDV	NEA/LTA (SG); NZTA acceptance

Schedule 2: Emissions Standards Accepted for Compliance
Part B — Acceptable Emissions Standards Deemed by Exceeding
Euro 4/IV Stringency

The following emissions standards are deemed acceptable for compliance purposes on the basis that they are demonstrably more stringent than Euro 4/IV or the recognised near-equivalent standards listed in Part A.

Jurisdiction	Shorthand	Vehicle Class	Official Reference
European Union / UK	Euro 5 / Euro 6 / Euro VI	LDV / HDV	LDV: 715/2007/EC; 459/2012; HDV: 595/2009/EC; 582/2011
China (PRC)	China 5 / China 6 / China VI	LDV / HD engines	GB 18352.5-2013 (LDV China 5); GB 18352.6-2016 (LDV China 6); GB 17691-2018 (HD China VI)
Korea (ROK)	K-Euro 5 / K-Euro 6	LD diesel / HD diesel	MOE Notices aligning with Euro 5/6
Japan	Post-2009 LDV / 2009-on HDV	LDV / HDV	MLIT JC08/2010 cycles and post-JE05 updates
Australia	ADR 79/03–79/04 / ADR 80/03	LDV / HDV	Australian Design Rules updating to Euro-5/6 aligned
United States	Tier 3 / LEV III	LDV	40 CFR Part 86 (Tier 3); CARB LEV III Executive Orders
United States	2010-on HD diesel	HDV	40 CFR Part 86 (2010 standards for HD diesel)
GCC	Euro 5 / Euro 6 adoptions	LDV / HDV	Latest SASO/MEWA where applicable

Schedule 3A: Emissions Build Introduction Dates for LDVs and the Corresponding Earliest Date of Manufacture or First Registration Accepted for Emissions Compliance

Explanatory Note: This table provides both the first introduction date of Euro 4 (or SOP accepted near-equivalent) for light-duty vehicles, and the completion date, being when the emissions build requirement was fully applied to all LDV registrations in the source country. For compliance verification under section 5.1.1, the completion date is the controlling reference. Vehicles with a Date of Manufacture or Date of First Registration on or after the completion date are deemed compliant using this method. Where no month is provided on a vehicle's DoM or First Registration, the following year is the earliest acceptable year if introduction completion was part way through a year.

Source Country	Shorthand	First Introduction (MM/YYYY)	Completion (MM/YYYY) and Earliest Accepted DoM/1st Reg	Earliest Acceptable Year (if no month provided by DoM/Reg)
European Union / UK	Euro 4	01/2005	10/2006	2007
China (PRC)	China IV (LDV)	01/2010	12/2011	2012
Japan	Japan '05'	10/2005	10/2005	2006
Korea (ROK) – Diesel LD	K-Euro 4	01/2006	01/2006 for passenger cars	MLIT JC08/2010 cycles and post-JE05 updates
12/2007 for other models	2007 for passenger cars	LDV / HDV	LDV / HDV	Australian Design Rules updating to Euro-5/6 aligned
2008 for other models	Tier 3 / LEV III	LDV	LDV	40 CFR Part 86 (Tier 3); CARB LEV III Executive Orders

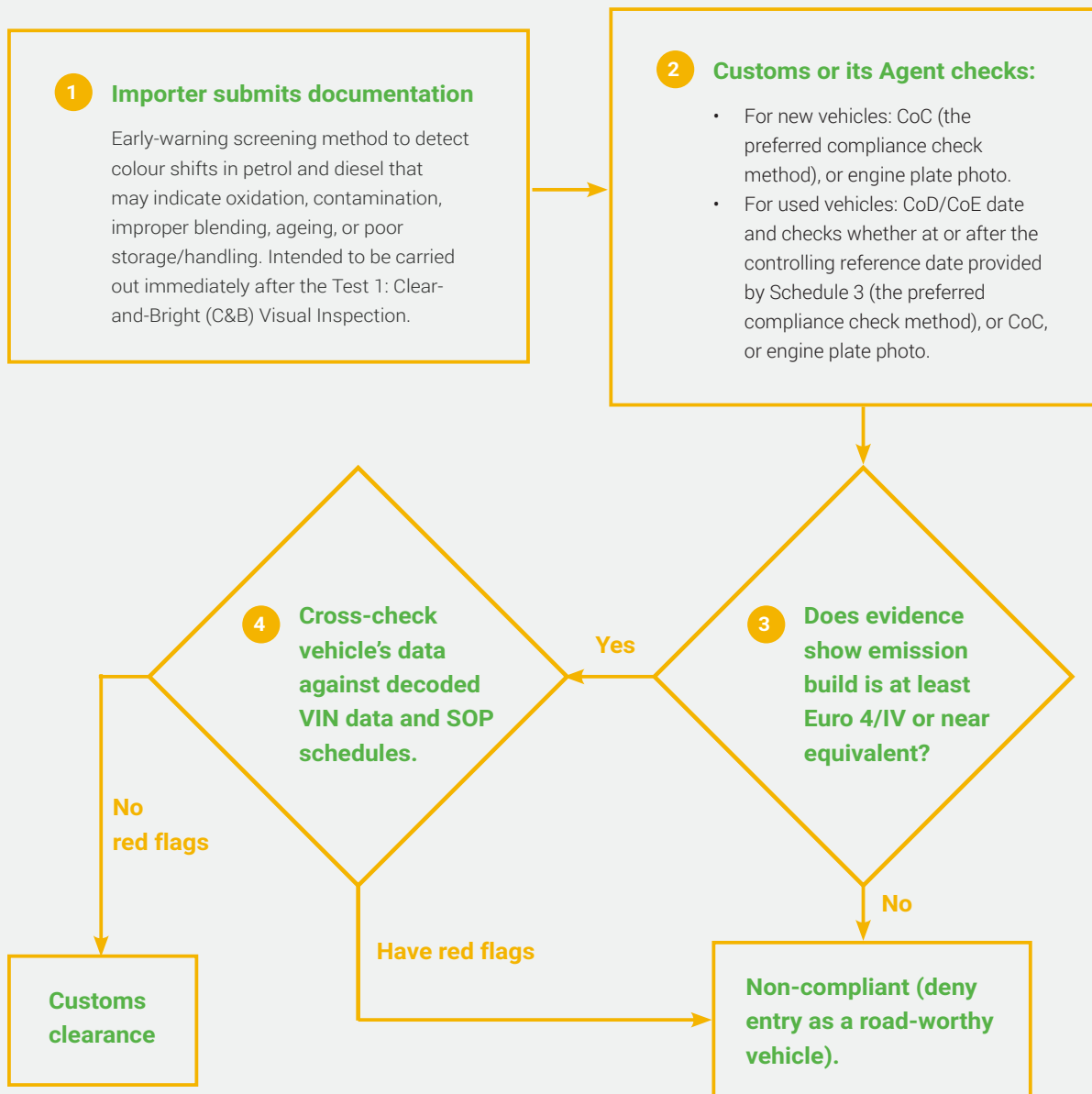
Schedule 3B: Emissions Build Introduction Dates for HDVs and the Corresponding Earliest Date of Manufacture or First Registration Accepted for Emissions Compliance

Explanatory Note: This table provides both the first introduction date of Euro IV (or accepted near-equivalent) for heavy-duty vehicles, and the completion date, being when the requirement was fully applied to all HDV registrations in the source country. The completion date controls eligibility under section 5.1.1. As for LDVs, if no month is provided for a vehicle's DoM or first registration, then the earliest year acceptable falls on the following year if the completion of the introduction of the emissions standards occurred part way through a year.

Source Country	Shorthand	First Introduction (MM/YYYY)	Completion (MM/YYYY) and Earliest Accepted DoM/1st Reg	Earliest Acceptable Year (if no month)
European Union / UK	Euro IV	10/2006	10/2006	2007
China (PRC)	China IV (HD)	01/2011	12/2011	2012
Japan	JE05	10/2005	10/2005	2006
Korea (ROK) – Diesel HD	K-Euro IV	01/2006	01/2008	2008
United States	HD Diesel 2007	01/2007	01/2007	2007

Schedule 4: Compliance Check Flowchart

The following flowchart illustrates the emissions build compliance check process for both new and used vehicles:



STANDARD OPERATING PROCEDURE

Engine/Emissions Malfunction Indicator Lamp Check

1 Purpose

To provide a simple, reliable, low-technology procedure for verifying that a vehicle's on-board diagnostics (OBD) malfunction indicator lamp (MIL)—often labelled “Check Engine” or “Service Engine Soon”—is functioning correctly and not illuminated during normal engine operation, indicating no emissions-relevant malfunction is being reported.

2 Scope

This SOP applies at the first in-country inspection and at all subsequent periodic inspections, and may be used at the border for entry certification. It covers spark-ignition and compression-ignition vehicles equipped with an OBD/MIL. It does not apply to electric vehicles. For vehicles not fitted with OBD/MIL (legacy or exempt types), mark “Not Applicable”.

3 Definitions (concise)

- 3.1 OBD: On-board diagnostics that monitor emissions-relevant systems.
- 3.2 MIL: Malfunction Indicator Lamp: Dashboard lamp commanded ON by OBD when an emissions-relevant fault is detected; illuminates briefly at key-on for a bulb check and must be OFF in normal operation.
- 3.3 Steady MIL: Emissions fault present -> Fail.
- 3.4 Flashing MIL: Severe misfire or similar risk of catalyst damage -> Immediate Fail.
- 3.5 Equivalent emissions warnings: Text or symbol messages such as “Emission Workshop,” “DPF/AdBlue/SCR fault,” etc., are treated as MIL.

4 Responsibilities

Inspectors conduct the check and record the result; supervisors review fails and potential tampering cases.

5 Equipment and Materials

- 5.1 None required.

6 Safety and Preparation

- 6.1 Park on level ground; select P/Neutral; apply parking brake.
- 6.2 Ensure adequate ventilation if indoors.
- 6.3 Confirm battery voltage is sufficient to avoid spurious warnings.

7 Procedure (step-by-step)

- 7.1 Key-On Bulb Check
 - 7.1.1 Turn ignition ON without starting (or follow manufacturer's keyless procedure).
 - 7.1.2 Confirm the MIL illuminates with the other warning lamps for the bulb-check period (typically 2–5 seconds).
 - 7.1.3 Fail if the MIL does not illuminate at bulb check (inoperative/tampered), unless verified by official documentation that the model has no MIL.
- 7.2 Engine Start—Normal Operation Check
 - 7.2.1 Start the engine; allow ~15–30 seconds at idle.
 - 7.2.2 Confirm the MIL extinguishes and remains OFF during normal idle.
 - 7.2.3 Fail if the MIL remains ON (steady) or flashes at any point after start.
 - 7.2.4 Treat any equivalent emissions warning (e.g., "Emission Control Fault," DPF/SCR/AdBlue fault lamp) as a Fail.

8 Pass/Fail Criteria

- 8.1 Pass: MIL illuminates at bulb check and is OFF during normal operation; no equivalent emissions warnings displayed.
- 8.2 Fail: MIL does not illuminate at bulb check; or MIL steady/flashing after start; or equivalent emissions warning active.
- 8.3 Not Applicable: Vehicle legitimately not equipped with MIL/OBD (record reason and proceed with visible-smoke SOP).

9 Actions on Failure

- 9.1 Border/first in-country inspection: Vehicle must be repaired (fault rectified) and re-presented; apply local rules for conditional release if any.
- 9.2 Periodic inspection: Issue defect notice with re-inspection timeframe; the vehicle remains non-compliant until passed.

10 Records & Evidence

- 10.1 Record result on the inspection form.
- 10.2 Where practical, photograph the cluster showing: (i) key-on state with MIL ON (bulb check), and (ii) engine running with MIL OFF.
- 10.3 Note any suspected tampering (inoperative lamp, covered symbol, missing OBD connector).

11 Tampering/Red-Flag Indicators (trigger closer examination)

- 11.1 MIL never illuminates at bulb check while other lamps do.
- 11.2 MIL symbol obscured/covered, or cluster warning re-mapped.
- 11.3 OBD connector missing/damaged (if vehicle should have one).
- 11.4 Repeated prior MIL failures without documented repair.

12 Time Standard

The MIL check shall be performable in ≤ 2 minutes per vehicle under routine conditions.

13 Inspector's Quick Checklist (optional)

- 13.1 Vehicle safe/secure; ignition ON -> MIL ON (bulb check)
- 13.2 Start engine; idle 15–30 s -> MIL OFF
- 13.3 No flashing MIL; no equivalent emissions warnings
- 13.4 Photos captured if concerned with false passes (bulb check & engine running) to be discussed with stakeholders
- 13.5 Result recorded; actions applied (Pass/Fail/NA)

STANDARD OPERATING PROCEDURE

Visible Tailpipe Emissions (Smoke) Check

1 Purpose

Provide a simple, low-cost procedure to identify vehicles emitting clearly visible exhaust smoke, so that gross emitters are repaired or removed from service until compliant.

2 Scope

Applies to all motorised road vehicles with internal-combustion engines at first in-country inspection, periodic inspections, and roadside enforcement. Excludes pure electric vehicles. For hybrids, the check applies when the engine is running.

3 Definitions

- 3.1 Visible smoke: Clearly visible blue, black, or persistent white emissions from the exhaust outlet, observed against a neutral background in daylight (or adequate artificial light).
- 3.2 Continuous: Uninterrupted visible smoke for the specified duration (seconds).
- 3.3 Normal operating temperature: Engine warmed so coolant/oil temperatures are in typical operating range (initial condensation has ceased).

4 Responsibilities

- 4.1 Inspectors/enforcement officers conduct checks and record outcomes; supervisors review disputes and borderline cases.

5 Equipment and Materials

- 5.1 Stopwatch or timer (phone acceptable).
- 5.2 Clipboard/inspection app; optional camera/video for evidence (especially roadside).
- 5.3 High-visibility PPE for roadside operations.

6 Safety & Test Conditions

- 6.1 Stationary checks on level ground; transmission in P/Neutral; parking brake applied; wheels chocked if necessary.
- 6.2 Ensure normal operating temperature before assessing; perform a brief pre-run if needed.
- 6.3 Avoid confounders: rain blowing into the tailpipe, dust clouds not from the exhaust, and cold-start condensation (wait until vapour dissipates).

7 Procedure

- 7.1 Vehicle Preparation (all stationary checks)
 - 7.1.1 Warm engine to normal operating temperature.
 - 7.1.2 Ask driver to ensure accessories are off; confirm transmission in P/Neutral and parking brake applied.
 - 7.1.3 Inspector positions ~1–3 m behind and slightly offset ($\approx 45^\circ$) to the tailpipe with a clear view.
- 7.2 Idle Smoke Check (inspection bay)
 - 7.2.1 With engine idling at normal temperature, observe the tailpipe for 5 continuous seconds.
 - 7.2.2 Fail if clearly visible smoke persists continuously for ≥ 5 s.
 - 7.2.3 Pass if no clearly visible smoke is observed, or only transient puffs (< 5 s) occur (excluding cold-start vapour).
- 7.3 Free/Rapid-Acceleration ("Snap") Check (stationary)
 - 7.3.1 From idle, instruct driver to rapidly accelerate the engine to about 2,500 rpm or half of maximum engine speed (whichever is lower), hold briefly (~ 2 – 3 s), then release to idle. (For motorcycles, apply a brief snap to roughly half of redline in neutral.)
 - 7.3.2 Observe the exhaust during the snap and return-to-idle for a defined window of up to 5 seconds.
 - 7.3.3 Fail if clearly visible smoke persists continuously for ≥ 5 s during/after the snap.
 - 7.3.4 Pass if no clearly visible smoke is seen, or only a momentary puff (< 5 s).
- 7.4 On-Road Continuous-Smoke Rule (roadside)
 - 7.3.1 From a safe vantage, observe vehicles in normal traffic.
 - 7.3.2 Fail if a vehicle emits continuous visible smoke for ≥ 10 seconds while being driven.
 - 7.3.3 Record time, location, direction of travel, registration, and (where possible) capture video/photo evidence showing continuous smoke and elapsed time.
 - 7.3.4 Issue a defect/notice directing repair and re-inspection within the prescribed timeframe.



8 Pass/Fail Criteria (summary)

- 8.1 Idle check: Fail if continuous visible smoke ≥ 5 s.
- 8.2 Snap check: Fail if continuous visible smoke ≥ 5 s during/after snap.
- 8.3 On-road rule: Fail if continuous visible smoke ≥ 10 s in traffic.
- 8.4 Pass if none of the above fail conditions occurs.

9 Exceptions and Clarifications

- 9.1 Condensation vapour (thin white vapour that dissipates quickly) at initial warm-up is not smoke; repeat observation once vapour ceases.
- 9.2 Dust or road spray not originating from the exhaust is not smoke.
- 9.3 If a vehicle documents a transient after-treatment event (e.g., diesel DPF regeneration),

10 Actions on Failure

- 10.1 Entry/first in-country inspection: Vehicle must be repaired and re-presented before approval.
- 10.2 Periodic inspection or roadside: Issue defect/fix notice with compliance deadline; vehicle remains non-compliant until passed. Consider conditional operation limits if permitted by law.

11 Records & Evidence

- 11.1 Record vehicle ID, date/time, location, test type(s), durations observed, and result.
- 11.2 Capture photos/video where feasible (mandatory for roadside findings where practicable).

12 Time Standard

- 12.1 Stationary checks (idle + snap): typically ≤ 3 minutes per vehicle. Roadside observation: opportunistic; evidence capture should not compromise safety.

13 **Inspector's quick checklist (optional):**

- 13.1 Engine at normal temperature; safe setup
- 13.2 Idle 5 s: any continuous visible smoke? -> Fail if ≥ 5 s
- 13.3 Snap 5 s: any continuous visible smoke? -> Fail if ≥ 5 s
- 13.4 Roadside 10 s (if applicable): continuous visible smoke? -> Fail if ≥ 10 s
- 13.5 Evidence recorded (notes/photos/video); result issued





