

## **Appendix 4: New Gasoline Vehicle random inspection and In-Service Vehicle Recall and Correction Testing Provisions**

1. The purpose of the random inspection of the new certified vehicle is to ensure the conformity of production which shall be performed by the central competent authority to check its compliance with the applicable emissions standards and other relevant regulations.
2. The new gasoline vehicle random inspection related matters such as: vehicles selection schedule, selective testing types shall be described in details by the central competent authority when giving the test notice. The applicant who has obtained the vehicle's Certificate of Conformity shall respond immediately to cooperate with the central competent authority for the related testing activities. After receiving the notice, if the applicant does not respond within 5 days, the central competent authority may suspend the certificate registration process of that random inspection required engine family or vehicle model.
3. Vehicle Selection:
  - 3.1 The Engine families and vehicle models for the random inspection shall be designated by the central competent authority. The test vehicles being selected randomly and representative to the in market and in-service vehicles.
  - 3.2 The applicant shall provide designated numbers of mass production vehicles for the central competent authority to select.
  - 3.3 Locations for sample test vehicles' selection:
    - 3.3.1 Storage area for the vehicles that have completed the conformity of production test.
    - 3.3.2 Applicant's designated domestic agent, distributor or dealer's vehicle storage locations.
    - 3.3.3 Storage Warehouse of Republic of China Customs.
  - 3.4 Sampling ratio and testing types:
    - 3.4.1 For the vehicle driving cycle test, idle test and crankcase emission test, if the sales of the same engine family exceed 5,000 units, three vehicles shall be tested. If the sales are between 3,000 and 4,999 units, two vehicles shall be tested. For vehicle sales below 3,000 units, one vehicle shall be tested. In the meantime, the central competent authority may designate the number of vehicles that will be used to conduct the random inspection for the specific engine family according to actual need.
    - 3.4.2 As to the gas tank and carburetor HC leakage evaporative emissions test, one vehicle for each engine family shall be selected to conduct the test.
    - 3.4.3 As to the OBD test, one vehicle for each engine family shall be selected to conduct the test.

### **4. Test schedule and location:**

After the selection of test vehicles, the applicant shall prepare the test vehicles within four weeks. The applicant may request for extra days for the OBD test if deemed necessary, send the vehicles to the test laboratory designated by the central competent authority according to the designated schedule. Testing shall be conducted in accordance with the "Gasoline Vehicle Exhaust Emissions Testing Methods and Procedures", test and transportation fees shall be paid

by the applicant. If approved by the central competent authority, testing may be designated and conducted by the applicant self-established test laboratory.

## 5. Vehicle Preparation

- 5.1 If necessary, the applicant may run-in the test vehicles to the required minimum mileage, to ensure stable emission test results for the test.
- 5.2 The unleaded gasoline test fuel designated by the central competent or purchased from domestic gas stations shall be used for the mileage accumulation.
- 5.3 Being approved in advance and monitored by the central competent authority, the applicant may use instruments, equipment, or tools with the same functionalities as the service stations that owned by dealers to perform the following maintenance, inspection or adjustments:
  - 5.3.1 Spark plug replacement.
  - 5.3.2 Battery replacement or recharge.
  - 5.3.3 Wiring Harness safety check.
  - 5.3.4 Oil or Filter change.
  - 5.3.5 EVAP Canister (carbon canister) replacement.
  - 5.3.6 Preparation procedures prior to the vehicle delivery must be consistent with those specified in the related documents.
  - 5.3.7 If the selected test vehicle is already being sold, the maintenance items listed in the owner's manual may be performed.
  - 5.3.8 Re-set the adjustable parameters that already been within the tolerance range that stated in the certificate or owner's manual is prohibited.
- 5.4 The applicant shall not perform adjustments, maintenance or test the selected test vehicles without been approved by the central competent authority.
- 5.5 Special instruments or equipment required for testing shall be prepared by the applicant. Unable to provide such instruments or equipment shall not be an excuse to claim invalidation of the test results.
- 5.6 Any objections or unable to perform the test due to a vehicle accident, the applicant should provide the central competent authority with an explanation prior to the test. The central competent authority may authorize to conduct adjustments or repairs to restore the vehicle back to the normal operation condition and suitable for the test. The central competent authority may disqualify that vehicle if being deemed no longer representative for the test, and select other vehicles as a replacement. The number of the replacement vehicle is determined by the central competent authority according to the test sampling ratio.

## 6. Determination and handling of test results

- 6.1 If the test results of the entire selective test types comply with the related emissions standards, the test shall be deemed pass.
- 6.2 If any of the selected vehicles fail the random inspection, then the applicant may ask for conducting the retest for once or may also ask the central competent authority to conclude that such vehicle has failed the initial test. The applicant shall complete the test within the

timeline instructed by the central competent authority. If failing to complete the test within such timeline, then the original test result shall be regarded as the finalized result.

6.2.1 Vehicle repeat test must be requested prior to its removal from the test laboratory.

6.2.2 Any repairs, adjustments to the vehicle are prohibited for the repeat test.

6.2.3 The repeat test results shall be treated as the final result, if comply with the related emissions standards, the test shall be deemed pass.

6.3 When the preliminary test is determined as non-compliance, within 15 days from the day of receipt notice from the central competent authority, the applicant may submit a written request for repeat testing, or accept the non-compliance determination and in accordance with the provisions to propose a Recall and Correction plan to the central competent authority.

6.3.1 The applicant may determine the sample numbers for the repeat test; however, the number must greater than twice the number of non-compliance vehicles of the preliminary test.

6.3.2 The selection, preparation, and test method are the same as the preliminary test.

6.3.3 Before removing the vehicle failing the retest, the applicant may ask for conducting the retest for once. The applicant shall complete the test within the timeline instructed by the central competent authority. If failing to complete the test within such timeline, then the original test result shall be regarded as the finalized result. The result of the retest shall be regarded as the finalized result. In the meantime, the applicant shall not attempt to make any repairs, adjustment or testing during the entire test process.

6.3.4 The test value obtained from the vehicles failing the initial test and all the vehicles used in the random inspection during the retest. The arithmetic mean should be retrieved from all of the aforesaid values for using as the test result. Conformity shall be rendered if the arithmetic mean of the respective air pollutant shown in the test result is lower than the emission standard, or the non-conformity shall be rendered. If the aforesaid test belongs to the On-board Diagnosis System (OBD) Test, then the summation of the vehicles failing the initial test and that failing the random inspection during the retest shall be divided by the summation of the vehicles failing the initial test and all of the vehicles used in the random inspection during the retest. Conformity will be rendered if the resulting value is less than 0.4 and the summation of the vehicles failing the initial test and that failing the random inspection during the retest is less than 4. Provided below is the judgment equation:

Determination	Criterion
Formula 1	$(N_{fn} + N_{sn}) / (N_{fn} + N_s) < 0.4$
Formula 2	$(N_{fn} + N_{sn}) < 4$
Notes	1. $N_{fn}$ : number of vehicles failed the preliminary test 2. $N_{sn}$ : number of vehicles failed the repeat test 3. $N_s$ : number of vehicles taking the repeat test

6.3.5 Although the engine family vehicle model is determined as in compliance, but for vehicles that failed the preliminary or repeat test, the applicant still need to provide the failure cause explanations, remedy measures, and after improvement every vehicle is

in compliance with the emission standards to the central competent authority for future examination.

- 6.4 For the engine family vehicle which failed the new vehicle selective testing and its Certificate of Conformity is revoked by the central competent authority, within 30 days upon receiving the notification, the applicant shall submit a recall and correction plan for the unsold and sold engine family vehicles, being reviewed and approved by the central competent authority. The applicant shall complete the implementation of the recall and correction plan within 90 days upon receiving the approval letter. If unable to complete the recall and correction plan by the deadline, within 30 days of receiving the approval letter, the applicant shall submit a specific improvement plan to apply for an extension to the central competent authority. Basis of actual conditions, the central competent authority may approve the extended deadline, and the maximum extension may not exceed one year. The central competent authority may immediately terminate the extension of deadline if the improvement plan implementation is being investigated and confirmed not in accordance with the approved plan.
- 6.5 The contents of the Recall and Correction plan include:
- 6.5.1 Engineering cause analysis for each vehicle that non-compliance with the applicable emissions standards.
  - 6.5.2 An influence assessment for the cause of non-compliance.
  - 6.5.3 The make, engine family, vehicle model, vehicle model year, and the number of affected vehicles to be recalled and corrected, and other relevant information.
  - 6.5.4 The projected ratio between the implemented recall vehicle numbers to the sales of the vehicle.
  - 6.5.5 Remedial measures to be implemented on a recalled motor vehicle, such as component replacement, repair, inspection, calibration, adjustment and other necessary changes in technical information summaries that are sufficient to ensure in compliance with the applicable Standards after implementation of the remedial measures.
  - 6.5.6 The acquiring method for the list of names and addresses of the recalled vehicle owners.
  - 6.5.7 For recalled vehicles, without the consent of the central competent authority , the vehicle manufacturer or importer shall not confine the owner by any maintenance, operation guideline or using conditions; such as prohibit motor vehicle owners using non OEM components or being serviced by non-authorized workshops.
  - 6.5.8 The implementation process for the recall shall include notifying the owner and provide the designated start and finish dates, location, and duration of the repairs.
  - 6.5.9 The proof of technical capability and facilities for the organization and technicians that responsible for the implementation of the recall and correction plan.
  - 6.5.10 Send notices to the recall vehicle owners.
  - 6.5.11 Provide replacement components appropriate supply system during recall and correction period.
  - 6.5.12 The necessary guidance for the technicians that involved in the recall and repair plan.

- 6.5.13 If the implementation of the recall and correction plan would affect the vehicle's fuel consumption, noise, or other performance functionalities, the manufacturer should provide appropriate explanations.
- 6.5.14 The applicant may provide other technical data and test reports to proof the effectiveness of the recall and correction plan to the competent authority for evaluation.
- 6.6 The central competent authority shall perform verification tests for each remedy measure of the recall and correction plan implemented by the applicant.
- 6.7 Within 15 days upon complete the implementation of the recall and correction plan, the applicant shall submit a recall and correction implementation report to the central competent authority for review.
- 6.8 When the central competent authority notifies the applicant of the cancellation or revocation of the Certificate of Conformity, the Ministry of Transportation and Communications should also be notified simultaneously.
- 6.9 For those unsold vehicles with revoked Certificate of Conformity, once the applicant has completed the implementation of the recall and correction plan, being reviewed and approved by the central competent authority, the applicant may re-apply for the Certificate of Conformity of the engine family in accordance with these provisions.