[Measuring Equipment Control Standard]

[Core]

1 General Provisions

1.1 Purpose

The purpose of this standard is to maintain and control the performance and functions of measuring equipment properly by defining basic requirements for the management of the equipment.

1.2 Scope

1.2.1 This standard applies to the following measuring equipment used by facilities during manufacturing and by service activities (includes parts and devices; the same applies hereinafter).

(1) Measuring equipment used for inspection, measuring or testing.

(2) Measuring equipment, standard devices and reference materials used for inspection and calibration of measuring equipment.

(3) Measuring equipment used for inspection and calibration of production facilities.

1.2.2 Measuring equipment used only for analysis of products with market quality problems are properly maintained and controlled following its respective management systems or procedures as defined in this standard or as directed by sections using those measuring equipment.

1.3 Definitions of Terms

The definitions of terms used in this standard are as follows:

No.	Term	Definition
1	Measuring equipment	A collective term referring to equipment (gauges, meters, standard devices, etc.), testers, analytical equipment, etc., which includes computer related software, standard devices, and reference materials. Hereinafter referred to as “equipment”.
2	Completion inspection equipment	Equipment used for completion inspection of products.
3	Reference material	A material used for inspection of equipment and bears measurements of its own, based on the inspection result of the material.
4	Receiving inspection	A conformity check of ordered specifications with the receiving manufactured or purchased equipment.

No.	Term	Definition
5	Start-up check	A check of appearance and function by the using section of equipment (hereinafter referred to as “using section”) prior to operation.
6	Regular check	Periodic check of appearance and function by the control section of equipment (hereinafter referred to as “equipment control section”).
7	Regular inspection and/or calibration	Periodic check of appearance, function, and accuracy, or overhaul by the equipment control section or equipment manufacturer.
8	Extra inspection	Inspection for function, accuracy and overhaul of equipment performed by an equipment control section or equipment manufacturer despite the specified cycle of regular checks and regular inspection, if the equipment is repaired or modified due to abnormality or resumed after a long period of time.
9	Check and inspection standards	Standards that provide check parameters such as type, item and judgment criteria per equipment.
10	Traceability	Establishment of the chain of comparison to the national standards where the standard devices or measuring equipment are calibrated one after another by standard devices of higher level.
11	Public agency	A governmental agency or its representative that performs inspection, verification, etc. of equipment.
12	Equipment supplier	A party in which inspection and calibration are outsourced or to the manufacturer from which equipment is purchased
13	Standard device	Equipment used as a standard for inspection and calibration.
14	National standards	Standards that are officially endorsed and used in the nation.
15	International standards	Standards that are accepted through international agreements and used internationally.

2 System

2.1 Management System

Management system for control of equipment is outlined in Attachment -1 “Measuring Equipment Management Procedure”

2.2 Role and Responsibilities

2.2.1 Roles and responsibilities of the using section are as follows:

(1) For predetermined (required) measurement items, the using section appropriately uses the equipment and measure.

(2) Responsible person for each equipment is the head of the using section of the equipment.

2.2.2 Roles and responsibilities of the equipment control section are as follows:

(1) The equipment control section is to maintain equipment to prevent interference with the measuring operation of the using section.

(2) Responsible person for each equipment is the head of the section managing the equipment.

2.2.3 Roles and responsibilities of the quality representative in relation to equipment for completion inspection are as follows:

(1) Approve specifications.

(2) Approve annual schedules for check and inspection and verify results.

3 Procedures

3.1 Specification and Orders

3.1.1 When purchasing or manufacturing equipment, approval is to be obtained from the head of the equipment control section after determining the specifications through discussion with the equipment control section, the using section and other related sections.

3.1.2 Regarding the specifications of equipment that are to be purchased or manufactured, the using section ensures compliance by the following requirements:

(1) Accuracy, performance and durability requirements that enable proper inspection, measuring and testing of quality required for a product to be measured by the equipment.

(2) Standards relating to national standards, any legislation regarding measurements, or laws regarding products and regulations.

(3) Safety standards decided by Honda engineering standard (HES) and facilities for machinery equipment, explosion and fire.

3.1.3 For selections of equipment suppliers, refer to paragraph 3.5 “Traceability”.

3.2 Acceptance

3.2.1 The equipment control section performs receiving inspection of equipment for conformity to order specifications and manages records.

3.2.2 If necessary, the using section and related sections witness the receiving inspections or confirms the instruction manual.

3.2.3 The equipment control section may omit the receiving inspection for the following, if a national standard compliance mark or warranty certificate is presented.

(1) Equipment with national standard compliance mark.

(2) Equipment tested and approved by public agency.

(3) Equipment that had receiving inspection in the past and maintained stability up to now.

3.2.4 The equipment control section prepares a measuring equipment management log or a list of accepted equipment.

Equipment control number or some type of identification markings are to be assigned on the equipment.

3.3 Check and Inspection Standards

3.3.1 The equipment control section determines the following items for every equipment, regarding the check and inspection standards.

(1) Types of checks and inspections necessary for the equipment concerned

Start-up check, regular check, regular inspection and/or calibration, etc.

(2) Cycle of checks and inspections

Every shift, every day before operation, weekly, monthly, semiannually, yearly, etc.

(3) Items for check and inspection

Take into account of the extent of assurance for each characteristic and inspection of equipment and then establish its contents of confirmation.

(4) Procedures for check and inspection

Names of measuring equipment used for checks and inspections, methods of testing check items, types of sensory inspection, etc.

(5) Judgment criteria

Establish standards to determine whether or not the results for check items of equipment are acceptable.

If there are to be laws and regulations regarding the equipment, the criteria are to be established within those.

(6) Implementing section of checks and inspections

(7) Section that maintain records.

3.3.2 Check and inspection standards are to be prepared prior to equipment usage and are to be obtained approval from the head of the equipment control section.

For equipment of the same categories, types, etc., the check and inspection standards may be established as a whole and not for each.

3.3.3 For items 1 to 5 of paragraph 3.3.1, accuracy of the equipment, difficulties of maintaining equipment performance, gravity of effect the equipment has on products and regulatory requests, etc., are to be taken into account, referring to specifications and instruction manuals.

Items are to be reviewed as required accordingly to the number of usage years and problem occurrence.

3.3.4 The basic types, cycles, and implementing sections (including outsourcing to equipment manufacturers) of checks and inspections are as follows:

No.	Type	Cycle (Frequency)	Implementing section
1	Start-up check	Before use or at least once a day	Using section
2	Regular check	Within 6 months	Equipment control section
3	Regular inspection and/or calibration	Within 1 year	Equipment control section
4	Extra inspection	On an as-needed basis.	Equipment control section
5	Legal inspection	As specified by obligatory laws and regulations	Equipment control section

3.3.5 Despite the standards stipulated in the preceding paragraph, the cycles of regular inspection and/or calibration may be modified within the range accuracy is guaranteed, based on the approval of the head of the equipment control section.

A change in interval is determined through discussions between the using section and related sections taking into account that frequency of use, durability, etc. of the equipment.

3.3.6 Logs recording regular checks, results of regular inspection and calibrations managed by the using section are to be prepared prior to usage. This is to be based on the items, procedures, judgments criteria, etc. defined in check and inspection standard.

3.4 Scheduling

3.4.1 The equipment control section develops an equipment check and inspection schedule for the following fiscal year based on the check and inspection standards.

3.4.2 The head of the equipment control section approves the following fiscal year's schedule after reviewing results, details, etc. of checks and inspections implemented in the current fiscal year.

3.4.3 The equipment control section complies the due dates and alternatives for regular check, regular inspection and/or calibration following the procedures below:

(1) The due date for measuring equipment and testing devices, such as calipers or dial gauges, that require periodic replacement is calculated from the last periodic replacement date to the end of the cycle as defined in the check and inspection standards.

(2) The due date for equipment not requiring periodic replacement:

(a) Calculated from the date of the last inspection or calibration for the period defined by the check and inspection standards.

(b) If a regular check or regular inspection or calibration is performed within one month before the original due date, the due date for the next regular check or regular inspection and/or calibration may be calculated starting from the original due date.

(c) If due dates for checks and inspections are defined by law and regulations or by specifications, etc., the due date must not be later than the date required by law.

(3) If a due date for regular check or regular inspection and/or calibration of equipment is a non-operating day, the due may be extended before restarting the use of the equipment.

In this case, the next due date may be calculated from the date of the postponed regular check or regular inspection and/or calibration.

(4) If regular check and regular inspection and/or calibration of equipment are implemented in the same fiscal month, the regular check may be omitted if the regular inspection and/or calibration meet the requirements of the regular check.

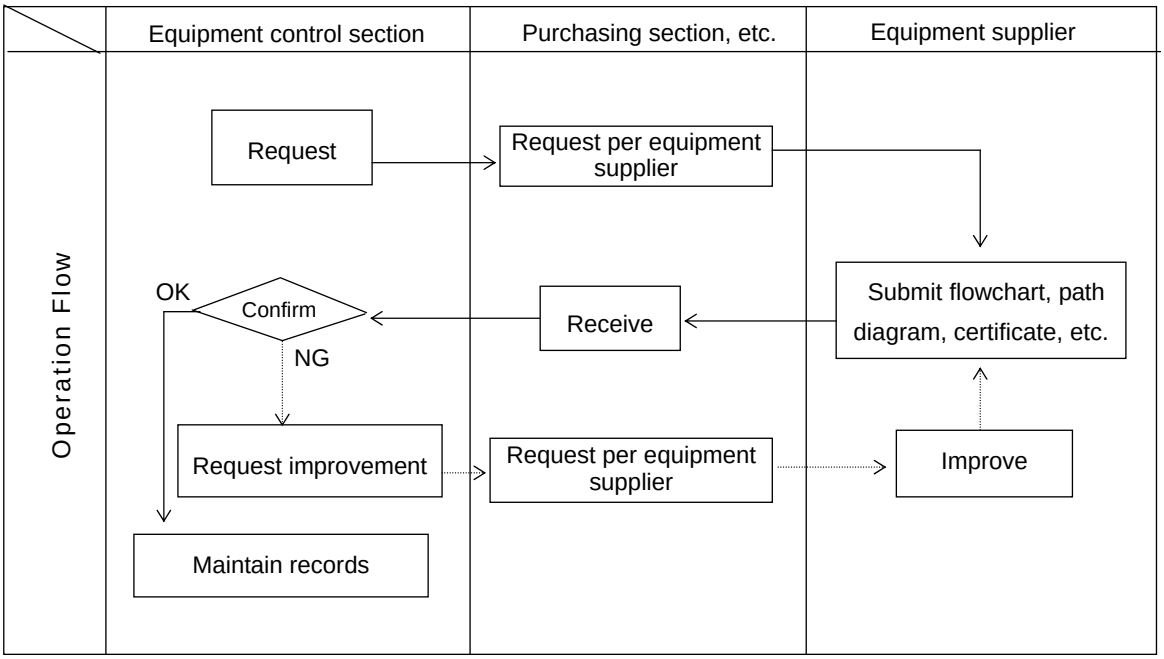
(5) If extra inspection details are equivalent to those of regular inspection and/or calibration or regular check, the extra inspection may be replaced by the regular inspection and/or calibration or regular check.

In this case, the date of the next regular check or regular inspection and/or calibration is calculated from the date of replacement.

3.5 Traceability

3.5.1 When equipment inspections, calibrations, manufacturing of equipment are outsourced, or when purchasing equipment the equipment control section confirms traceability as follows:

(1) Flowchart for confirming traceability is as follows:



(2) Verify and record results of a certificate prepared and issued by an equipment supplier in accordance with national standards or flowcharts and path diagrams identifying traceability of inspection or calibration to the corresponding standard device used by the equipment supplier for inspection or calibration purposes (hereinafter referred to as “certificate”).

For equipment that national standards do not exist, verify records documenting accuracy requirements set out in a standard used for the inspection or calibration performed by the equipment supplier or records documenting standards used for calibration, and maintain records.

(3) The flowcharts and path diagrams are prepared by equipment suppliers including the following:

(a) Name and capability of the standard device used for inspection and/or calibration of the equipment and paths relating the standard device to the public agency.

(b) Indicate inspection frequency or verification to be delegated to public agencies and the name of the public agency.

(c) Equipment supplier's name, date prepared, name of the person who prepared, company seal or signature of the representative.

(4) Verify that the certificate bears the seal required by the national standards.

(5) Request equipment supplier for improvement if it is found as a result of verification of the certificates, etc. that the traceability is not established for equipment relating to international standards or national standards.

(6) The cycle to verify certificates, etc. is generally the same as that for the regular inspection and/or calibration.

If the regular inspection and/or calibration cycle is less than a year, the check will be performed once a year. When a standard device not contained in the flowchart, path diagram, certificate, etc. has become necessary or when initiating a new transaction, certificate verifications are required for equipment suppliers and existing equipment suppliers every time.

3.5.2 When delegating the equipment inspection and/or calibration directly to public agencies, or purchasing products verified by a public agency or approved by national standards, confirmation and verification processes outlined in the preceding paragraph may be omitted.

3.6 Implementation of Checks and Inspections

3.6.1 The using section and the equipment control section perform and record the checks and inspections based on its standards and schedules.

3.6.2 The equipment control section may outsource regular inspections and/or calibration processes to equipment suppliers. The acceptance judgment will be made after reviewing the inspection results of the equipment supplier.

3.6.3 The head of the equipment control section confirms the results of the checks and inspections performed by the equipment control section.

3.6.4 The head of the using section confirms the results of start-up checks and checks and inspections performed by the equipment control section.

Confirmation of start-up check results may be delegated to the person appointed by the head of the using section.

3.6.5 For measuring equipment and testing devices requiring periodic replacement, the equipment

control section regular check or regular inspection and/or calibration as stated below:

(1) Perform regular checks and regular inspections/calibrations after equipment has been collected.

(2) Properly maintain the equipment to prevent deterioration in accuracy, function, etc. until the next regular replacement day.

(3) Even for unused measuring equipment that has been check or inspected, if it passes the planned expiration date, check and inspections are to be implemented before usage.

3.7 Indication of Valid Period

3.7.1 For equipment that passed the regular check and calibrations, the equipment control section manages the equipment by indicating its the valid period or by color identification:
If it is difficult to display the valid period or identifications directly onto the equipment, display it on the container of the equipment or on the control sheet.

3.7.2 If an color identification is used, the equipment control section notifies appropriate colors usage of the current month by posting on the bulletin board.

3.7.3 For equipment that did not pass the inspection and/or calibration, the equipment control section appropriate identifies those and stores them in a designated area.

3.8 Problem Solving Procedure

3.8.1 If a problem is found in equipment in use or during check and/or inspection, the using section and/or the equipment control section stop use of the equipment and report to the head of the using section.

3.8.2 The head of the using section confirms the details of the problem, determines the possible effects on safety and pollution prevention aspects of the product, and provides the related sections with instructions on corrective action.

3.8.3 The equipment control section repairs or modifies the equipment with the problem, performs extra inspections required for the repair or modification, and report to the head of the using section after confirming that the equipment has no problem.

3.8.4 The equipment control section records the details of the problem, causes, corrective actions taken against the problem, etc. on a specified form.

3.8.5 The using section records the potential effects of the problem on manufactured products with the corrective actions on a specified format.

3.9 Handling and Storage of Equipment

3.9.1 The using section and the equipment control section take appropriate control measures such as displaying warning signs and protection to prevent equipment from damage and deterioration,

and erroneous operation, affecting accuracy.

3.9.2 The using section provides necessary protection and stores the equipment after cleaning and confirming there is no damage, etc. to the equipment after use.

3.10 Management of Unused Equipment and Replacement Parts

3.10.1 If an equipment is to be left unused for a long period of time, the equipment control section stores the equipment with appropriate identification to prevent deterioration in accuracy and functions

3.10.2 When equipment that has been kept unused for a long period of time is to be used again, the equipment control section performs an extra inspection, confirming that there is no problem with the equipment, and reports to the head of the using section.

3.10.3 If equipment is not used for a long period, or is scrapped, sold, transferred, loaned, etc. the equipment control section obtains confirmation from the head of the equipment control section and records information on the equipment management log.

3.10.4 The equipment control section procures replacement parts, oil, grease etc. as necessary based on check and/or inspection schedule, equipment specifications, repair history, etc.

Store replacement parts, oil, grease, etc. in a manner that prevents deterioration in accuracy and functions and manage expiration dates where it is necessary.

4 Supplementary Provision

4.1 Application

Matters relating to establishment, revision and implementation of this standard are outlined in G-HQS [Quality Management Standards Control Standard].

[Headquarters Function]

1. General Provisions

1.1 Purpose

The purpose of this standard is to maintain the accuracy of emission laboratories in facilities within a certain range by identifying and reducing differences among emissions laboratories by defining a basic framework for cross checking to be performed for the laboratories.

1.2 Scope

This standard applies to cross checking of facility's emission laboratories with a laboratory.

1.3 Definitions of Terms

Definitions of terms used in this standard are as follows:

No.	Term	Definition
1	Cross-checking	A measurement comparison of emissions obtained in emission laboratories.

2. System

2.1 Roles and Responsibilities

Roles and responsibilities for cross checking are as follows:

(1) The head of a section which owns the master laboratory is responsible for managing cross-checking.

(2) The certification and regulation compliance section identifies and understands the differences between emissions laboratories.

(3) The certification and regulation compliance section provides improvement instructions to the head of the facility that own emissions laboratory.

3. Procedures

3.1 Laboratory Selection Subject to Cross-Checking

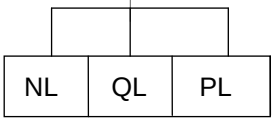
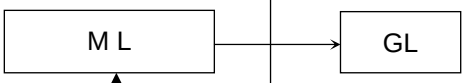
After consultation with the facility, the certification and regulation compliance section determines which laboratory is subject to cross-checking after consultation with the facility.

3.2 Implementation of Cross-Checking

The certification and regulation compliance section prepares procedures, guidelines, etc. for cross-checking and implements it.

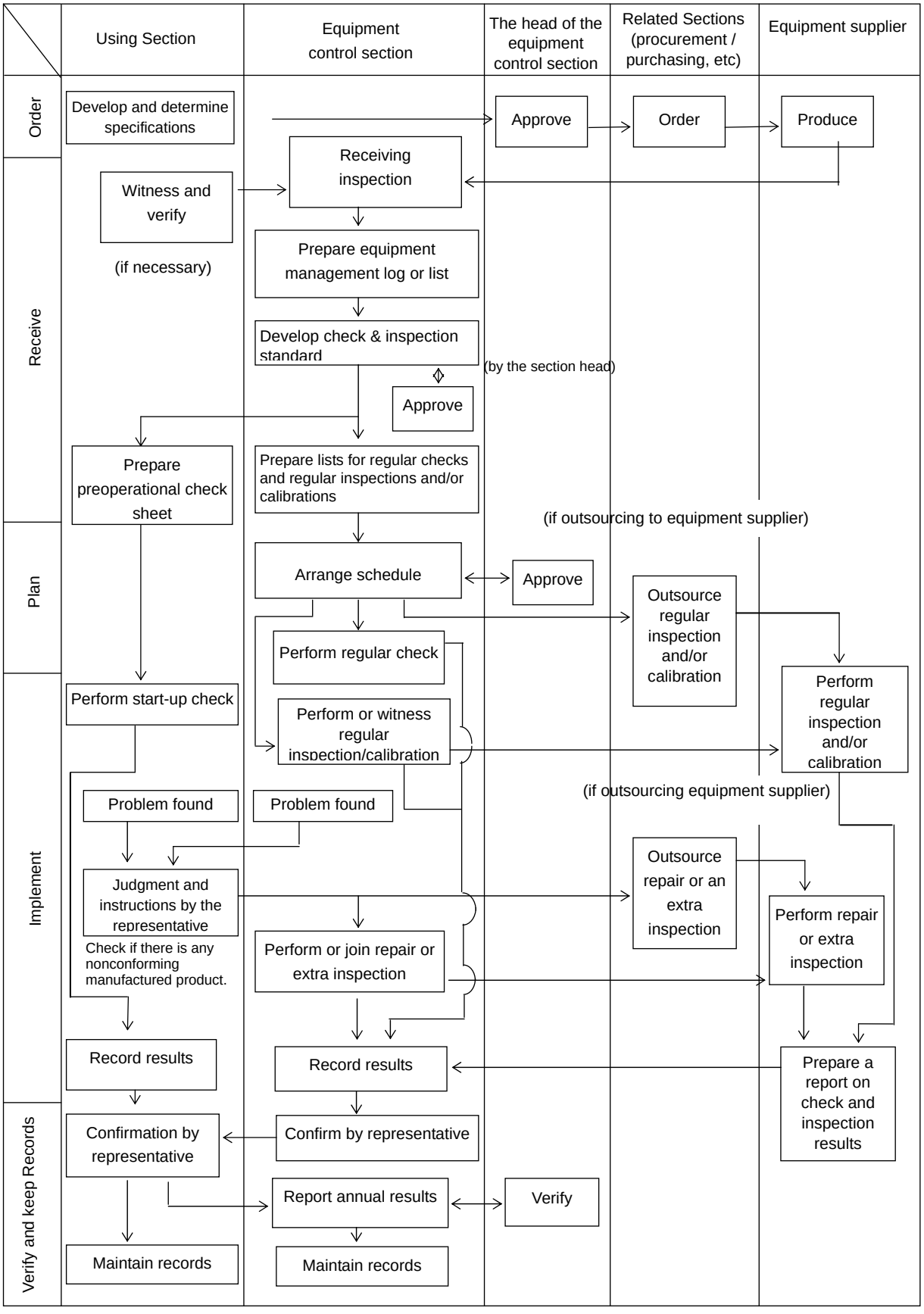
3.3 Basic System

The basic system for cross checking of emissions laboratories is as follows:

<table>
<tr><td></td><td>Facility</td><td>Honda Motor Co., Ltd.</td><td>Public agency
Third party agency</td></tr>
<tr><td>Master Laboratory</td><td rowspan="2"> 
</td><td rowspan="2"> 
</td><td rowspan="2"></td></tr>
<tr><td>Laboratory subject to cross-checking</td></tr>
<tr><td>Legend</td><td>NL: Laboratory for certification testing.
QL: Laboratory for quality control
PL: Laboratory for completion inspection</td><td>ML: Master laboratory
(Honda Motor Co., Ltd.)</td><td>GL: government laboratory</td></tr>
</table>

Measuring Equipment Management Procedure

Attachment -1 (related to section 2.2)



Establishment and Revision

Date of Establishment, Revision or Enactment (MM/DD/YYYY)			Description (MM/DD/YYYY)	Approved by:
0	Estab. Enact.	05/06/2010 06/01/2010	First issue. This document becomes effective as of 06/01/2010.	T.Sonoda (Signed on original)
1	Estab. Enact.	12/26/2011 01/01/2012	Revised to correct wording.	T. Sonoda (Signed on original)