[Organization logo]

[Organization name]

Commented [16A1]: All fields in this document marked by square brackets [ ] must be filled in.

PROCEDURE FOR CONTROL OF GAUGES

Code:	
Version:	
Created by:	
Approved by:	
Date of version:	
Signature:	

Commented [16A2]: The document coding system should be in line with the organization's existing system for document coding; in case such a system is not in place, this line may be deleted.

Distribution list

Commented [16A3]: This is only necessary if document is in paper form; otherwise, this table should be deleted.

Copy No.	Distributed to	Date	Signature	Returned	
				Date	Signature

Change history

Date	Version	Created by	Description of change
	0.1	16949Academy	Basic document outline

Table of contents

Commented [16A4]: Update this Table of contents once you're written the whole document.

1. Purpose, scope and users

The purpose of this procedure is to define the methods used to control gauges used as measurement systems, operators and measurement equipment identified in the control plan, by assessing the variation from established measurements.

Users of this document are members of [maintenance department] in [organization name].

Commented [16A5]: Write here the name of appropriate department.

2. Reference documents

- IATF 16949:2016, clause: 7.1.5.1.1

3. Measurement System Analysis Process

3.1. Initiate process

[Job title] will schedule MSA studies for each piece of measurement equipment identified in the [illegible]

Commented [16A6]: Replace according your organization – can be for example Project Manager, Engineering manager, Quality Manager.

The planning is scheduled in the Measurement Systems Analysis Plan by [job title] which is updated after each change.

[illegible]

- One year has passed since the last study
- [illegible]
- [illegible]

Commented [16A7]: Adapt to your organization practice, such rules are for orientation but are common for many automotive companies.

[Job title] prioritizes the scheduling based on the criticality of the product characteristic or process parameter which is measured by the gauge.

Commented [16A8]: Adapt to your organization, typically is Quality Engineer.

3.2. Perform study

According to the method (numeric/attributive), 2 or 3 operators will be selected by [job title]. The [illegible]

Commented [16A9]: Typically, this is Quality Engineer, but you need to adapt to your organization.

A number of parts will be randomly consecutively sampled from current production by [job title].

Commented [16A10]: Typically, this is Quality Engineer, but you need to adapt to your organization.

[illegible]

[Job title] will supervise process and record just in time measurement result in Measurement Systems Analysis Form.

Commented [16A11]: Typically, this is Quality Engineer, but you need to adapt to your organization.

3.3. Asses gauge measurement capability

The Measurement System Analysis Form will automatically compute the variation of measurement system. Acceptance of the system is through acceptance of the following rules:

- Numeric study:
  - R&R variation < 10%: system is accepted
  - R&R variation between 10% and less than 30%: system can be accepted based on project financial consideration
  - R&R variation greater than 30%: system cannot be accepted in this state, improvement is needed
- Attribute study:
  - All operations for all checked parts provide same result

If the system is not accepted, [job title] schedules an analysis of the system and, if necessary, initiates corrective action in order to improve the measurement system. If applicable, alternate control is used and a request for deviation is sent to customer for approval.

Commented [16A12]: Replace with your responsible; typically is Quality Manager.

3.4. Control error-proofing operation with Red Rabbit

[Job title] plans, documents and implements a process for checking the operation of error-proofing devices and defines activities according to each device.

Commented [16A13]: Adapt to your organization, in general is maintenance leader.

Commented [16A14]: Example: 1. Define Red Rabbits (nonconforming parts) according failure mode to be automatically detected.

Checks are performed by an operator as part of 1st maintenance level, or by maintenance department employees as part of 2nd maintenance level.

Commented [16A15]: If your organization has implemented TPM or similar, in general 1st level is maintenance performed by operator, 2nd level is performed by technician.

Results of checks are documented in Red Rabbit lists. The process of recording is followed-up by [job title].

Commented [16A16]: Adapt to your organization, in general, this is the maintenance leader or Quality Engineer.

4. Managing records kept on the basis of this document

Record name	Code	Storage			Responsibility
		Retention time	Location	Protection	
Measurement System Analysis Plan		End of Life + 15 years	[office]	Locked room	[job title]
Measurement System Analysis Form		End of Life + 15 years for end of life	[office]	Locked room	[job title]
Red Rabbits List		End of Life + 15 years for end of life	[office]	Locked room	[job title]

Commented [16A17]: Define here document code (form code) according your organization practice.

Commented [16A18]: Adapt to your organization practice, rules.
Check carefully your customer requirements if exists.

Commented [16A19]: Adapt to your organization practice, rules.
Check carefully your customer requirements if exists.

Commented [16A20]: Adapt to your organization practice, rules.
Check carefully your customer requirements if exists.

5. Appendices

- Appendix 1 – Measurement System Analysis Plan
- Appendix 2 – Measurement System Analysis Form
- Appendix 3 – Red Rabbits List