

## ***Management documented informations during testing vehicles with upgrades***

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### ***Abstract***

*The paper deals with the importance of management information documented during the planning, organization and implementation of test vehicles with an upgrade. Considered the basic model of the standard ISO 9001: 2015 and the legislation that at the level, scope and content settle for the needs of organizations in the industry. During the test vehicle with the upgrade using the documented information inherent in this process. Laboratory tailored to the needs for providing this type of service must establish an appropriate process to have the appropriate infrastructure and competent staff for testing according to the requirements of the relevant standard.*

**Key Words:** *document, requirements, standards, testing, documented informations.*

### **1. Introduction**

In order to harmonize the legislation of the Republic of Serbia with the regulations of the European Union state has adopted a series of comprehensive system of laws, regulations and technical regulations essential for establishing and improving the system of quality infrastructure. Among the important documents essential for the establishment and improvement of quality infrastructure should be noted: Law on Technical Requirements for Products and Conformity Assessment, Standardization Law, the Law on Metrology, Accreditation Act, the Law on General Product Safety and the Law on Market Surveillance.

The establishment and effective functioning of the quality infrastructure in the field testing of the vehicle with the upgrade has multiple significance and role, as a prerequisite for: [1,2]

- placing on the market (in use) of safe and quality vehicles with an upgrade in order to protect end-users and the environment;
- meet technical regulations in the field of vehicle safety;
- facilitate access to the domestic vehicle manufacturers to upgrade the international market and
- to achieve a greater degree of compliance of vehicles with an upgrade with the relevant standards;

It is desirable that the organization for testing vehicles with an upgrade establishment of the three most applied management system: ISO 9001 (quality management systems), ISO 14001 (system of environmental management) and OHSAS 18001 (occupational health and safety). Apart from these there are other sets of standards are also important for this type of organization. This group includes standard, ISO / TS 16949 (quality management system in the auto industry), ISO 5001 (management system in energy) and ISO 27001 (information security system).

Implemented quality infrastructure in organizations of this type should provide improving the quality of life of end users of vehicles with an upgrade and environmental security.

Meet the requirements of the new standard ISO 9001: 2015, based on risks and PDCA (Plan-Do-Check-Act) cycle is a prerequisite for ensuring the quality of the vehicle testing process with the upgrade. The new standard means that the process of testing the vehicle with an upgrade establishment by model PDCA cycle of continuous improvement of the mechanisms of this process.[3]

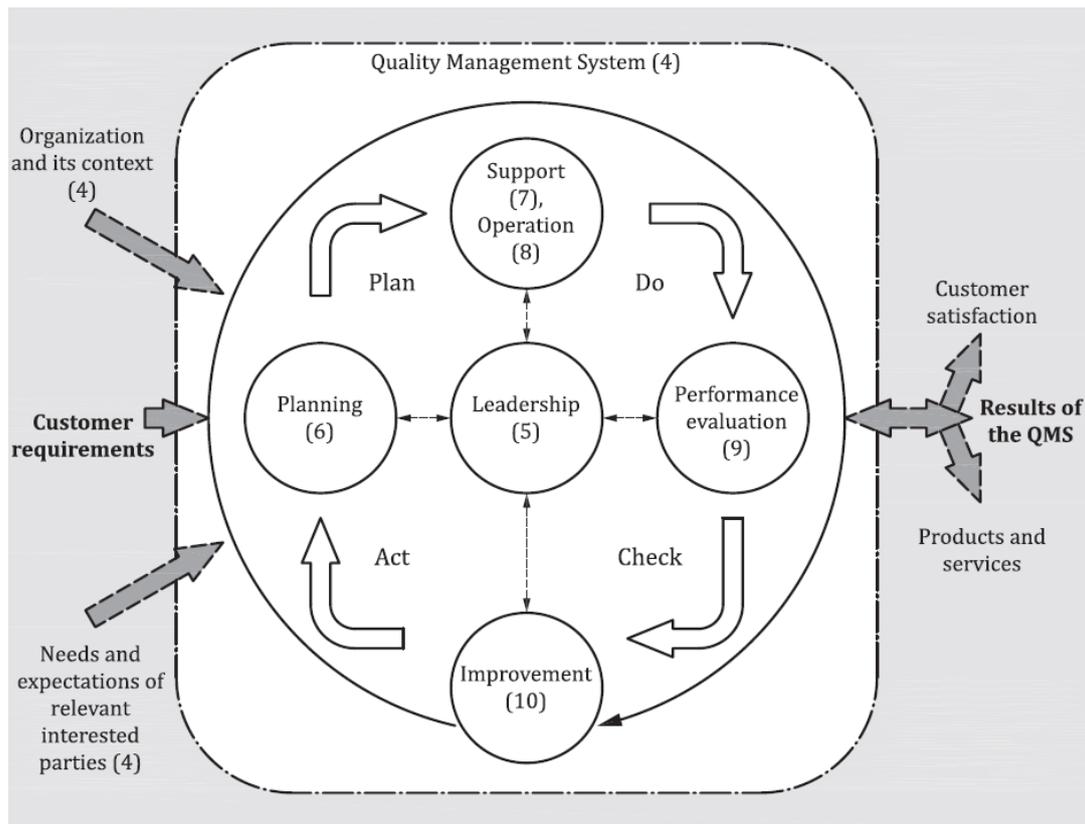


Figure 1. Original show the structure of ISO 9001:2015

## 2. Management documented information

Testing vehicles with an upgrade are carried out by the content of tests according to applicable standards and testing methodology. The tests are conducted in order to assess whether the asset meets the requirements, compliance with technical requirements and regulations, quality of execution functions, security handling and exploitation, the degree of completion of the development and the quality of the technical documentation.

The content of the test vehicle with the upgrade realize the determination of the status of technical documentation, preliminary inspection and measurement, laboratory testing, test exploitation and polygon tests and final inspection and measurement. Documented information as set requirements must be complete, technically correct and compliant with applicable regulations and standards. Documented information in the form of structural documentation must be complete, accurate and precise in relation to the constructional technology solution cars with an upgrade.

The process of testing the vehicle with the upgrade involves the use of specific standardized methodology that includes the documentary information relating to: [2,3]

- object, or a description of the test method;
- measuring sizes (parameters) and their method of measurement (including the required instrument accuracy);
- description of the laboratory infrastructure (including special installations specific to certain types of vehicles with an upgrade), or method of installation of measuring instruments;
- conditions of testing, ie, conditions required to perform tests and measurements;
- procedure for conducting measurements and data collection and
- measurement results (including criteria for their evaluation).

The stages of this process should be agreed with the methodology of the test vehicle with the upgrade, which is defined based on the requirement of the relevant standards and regulations in this field.

Documented information includes a graphical representation in a flowchart of activities, document flow and competence of personnel involved in the process of testing the vehicle with the upgrade. In order to ensure an appropriate level of quality during the test vehicle with the upgrade required documentation and other aspects in the testing process. The scope and structure of the documented information varies from organization to organizations of depending on their scope of accreditation and organizational positions in larger more complex organization to which it belongs.

The new ISO 9001: 2015 is not strictly defined by the organization documented procedures already given her more freedom in choosing their documented information which proves that manages the processes and results. For organizations, the decision about which procedures to document, provided that they can prove to manage their processes and their results. Number of documents depends on risk. In accordance with Annex E the term "documented procedure" and "records" has been replaced by the term "documentary information".

Standard ISO 9001: 2015 modified the specific terminology in relation to the ISO 9001: 2008. While the ISO 9001: 2008 used specific terminology, such as "document", "documented procedure", "quality manual" or "quality plan" ISO 9001: 2015 defines the requirements to "maintain documented information." Also, while the ISO 9001: 2008 used the term "record" to indicate the document to provide evidence of conformity to requirements, it is now expressed as a request to "keep record of information". [3]

Management information documented during the test vehicle with the upgrade involves the complete fulfillment of requirement 7.5 of ISO 9001: 2015, which relates to the creation, updating and management of documentary information.

All document management system quality organization that performs testing vehicles with an upgrade are classified into three levels:

- level "A", this level belongs to a quality manual and handbooks on quality,
- level "B", belong to this level procedure (method of performing activity) and instructions (how the activity is performed),
- level "C", this level belong to the operating instructions (specified activities), instructions and registers.

In order to assist in identifying the documented information we denote their corresponding marks the level of documents, the holder of issue and the serial number in the registry.

Documented information must be concise, clear, precise and colorful style that these are understandable and applicable without additional explanations for users who have not participated in its elaboration. Also documented information should be consistent with other documents of quality management systems and other relevant documents.

Documented information is stored in appropriate files or registers relating to the testing process during whose unfolding is formed. Protection of documented information from damage or degradation of the loss is provided in accordance with the applicable internal standards organization for testing vehicles with an upgrade.

Recording of documents is done according to their similarity and purpose in order to achieve traceability of documents.

During the tests are created and documented information regarding the control of the testing process in order to ensure confidence in the quality of tests carried out or confirming that the activities carried out tests on the way to meet the requirements specified in the documented information that defines the process of testing. Creating and formation of the documented information is carried out in all phases of the test vehicle with an upgrade, in order to ensure confidence in the results of this type of test.

The results are displayed in the form of documented information defined internal standards in form and content. The analysis of the obtained results it is concluded fulfillment of requirements in the form of "evaluation" as key information documented at the end of the process of testing the vehicle with an upgrade.

### 3. Conclusion

The set of all documented information in the process of testing the vehicle with the upgrade provides a full implementation of the process approach and the assumption of a continuous improvement process and the type of services.

The process of creating, updating and managing information documented during the test vehicle with the upgrade involves the complete fulfillment of the requirements of paragraph 7.5 of ISO 9001: 2015.

Documented information management is the primary task of the organization which examines and evaluates the quality of the vehicle with an upgrade, in order to ensure confidence in test results.

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