APPROVED
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QUALITY ASSURANCE MANUAL
for suppliers
(SPECIFIC REQUIREMENTS OF "Rudensk" OJSC)

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"RUDENSK"
Open Joint-Stock Company

Foreword:

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1. Purpose and field of application

The present document establishes requirements to suppliers of raw materials, other materials and components (hereinafter referred as "products"), fulfillment of which is mandatory for supplies of products to "Rudensk" OJSC.
Requirements of the document have been worked out on the basis of international standards ISO 9001 and IATF 16949, and they are aimed at achievement of "Rudensk" OJSC goals in improvement of quality of the output products, which maximally satisfy the existing and expected requirements of customers.
Requirements of the present manual must be communicated by suppliers of "Rudensk" OJSC throughout the whole chain of supplies.

2.1. Abbreviations

8D	a standardized approach aimed at early localization and irreversible elimination of product quality problems
APQP	process of perspective quality planning
DFMEA	analysis of types and consequences of potential structural failures
IATF	International Automotive Task Force
FIFO	«first-in first-out» material management method
MSA	Measurement System Analysis
PPAP	Production Part Approval Process
PPM	defects level measurement unit
PFMEA	process failure mode and effects analysis
SPC	statistical process control
АК	automotive components
КД (ED)	engineering documentation
КПП (FPM)	flow process map
ОУК (QCD)	quality control department
ОМТСиВК (MTSD&EC)	material and technical supply and external cooperation department
ПП (CR)	customer's representative
ПУ (MP)	management plan
ПЧР (RPN)	risk priority number
СИ (MM)	measuring means
СК (CM)	control means
СМК (QMS)	quality management system
СХ (SC)	special characteristic
ТД (TD)	technological documentation
ТУ (Specs.)	specifications
ТР ТС (TR CU)	Technical Regulations of Customs Union

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2.2. Terms and definitions

Updated products a finished product that had correctable defects, which was subject to partial or complete disassembly to eliminate identified inconsistencies.

Bulk materials – substances, materials and other products used for production of customer's articles and supplied by mass, volume, length or area.

Supplier – a company (organization) supplying products to a customer.

Customer - "Rudensk" OJSC.

Repair of non-conforming products – elimination of defects in repairable non-conforming products with the use of technological equipment and appliances not indicated in TD for manufacturing.

3. Certification and development of the supplier's quality management system

The supplier's QMS must be certified at least for compliance with the requirements of ISO 9001 (STB ISO 9001) in any certification body that has the accreditation mark of a recognized member of the IAF MLA.

The maximum requirement is that the supplier has a QMS certified for compliance with the requirements of IATF 16949 in any certification body with a valid IATF accreditation.

The organization must notify OJSC Rudensk of the expiration of the QMS certificate no later than three months before the expiration of the certificate, in the event that recertification is not planned by the organization. The new certificate must be sent to JSC "Rudensk".

For each supplier (product manufacturer) not certified according to ISO 9001 (STB ISO 9001), OJSC "Rudensk" plans to conduct annual audits of the 2nd party for compliance with the requirements of ISO 9001 (STB ISO 9001).

The development of the supplier's QMS up to the requirements of the IATF 16949 (STB 16949) standard is carried out within the framework of the Supplier Development Programs of OJSC Rudensk.

4. Context of the company

4.3.2 Specific requirements of customers

The documented information shall demonstrate, in what processes of company's QMS each specific requirement of "Rudensk" OJSC is implemented.

The present requirements shall be taken into consideration in the QMS scope.

4.4.1.2. Product safety

Unless otherwise is provided in the data for elaboration of the mastering request (a ED set), the company shall fulfill the requirements of Technical Regulations of the Customs Union (TR CU 018, TR CU 031). If the customer has not specified product safety characteristics, no additional request of this information to "Rudensk" OJSC is required.

The company shall inform "Rudensk" OJSC of the existing requirements to safety of the supplied products.

The company shall determine the personnel responsible for assurance of product safety ("a person responsible for product safety").

The supplier shall follow the conditions of fulfillment of the requirement in relation to product safety and conduct the traceability procedure in relation to the manufactured lot (at least) for the whole chain of supplies.

5. Leadership

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5.3.1. Roles, responsibility and authorities in the company – addition

Key management executives of the supplier shall appoint a CR by agreeing a nominee with "Rudensk" OJSC. The CR shall ensure accounting and fulfillment of requirements of "Rudensk" OJSC. The required authorities shall be delegated to the CR in the form of an organizational and administrative document.

The CR shall know specific requirements of "Rudensk" OJSC and requirements of IATF 16949 standard.
The CR shall:

- analyze delivery contracts related to the requirements to QMS, quality assurance and restoration (the CR shall mandatorily participate in coordination of the contract of supply with the aim of acquaintance with relevant demands of the customer);
- participate in determination of goals in the field of quality;
- interact with the customer during performance of audits;
- participate in determination of requirements to the draft APQP;
- control the observance of the periods of the draft APQP and inform the customer, if any problems occur;
- participate in determination and approval of the list of SC products with the customer;
- inform the customer of changes in the product and process;
- participate in fulfillment of the Production Part Approval Process;
- interact with the customer, if any claims occur;
- monitor the manufacturer's information on quality;
- initiate production stoppages for prevention of defective products output;
- agree with the customer permits for deviation of products characteristics;
- provide operative monitoring of information on quality from the customer;
- be the direct head of all 8D projects related to the products supplied to "Rudensk" OJSC;
- control the process of introduction of 8D projects and be aware of periods and status of every 8D phase fulfillment;
- coordinate all controlled supplies by the company related to the products supplied to "Rudensk" OJSC.

5.3.2. Responsibility and authorities for requirements to products and corrective actions

The company shall document the escalation process for resolving problems with products quality. The escalation process shall be determined for type of production and all production shifts.
The company shall determine every following level of informing on the problem, if the problem has not been resolved during the previous stage. Documented information shall be maintained on cases of using the escalation process.

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6. Planning

6.2.2.1. Objectives in the field of quality and planning of their achievement – addition

Objectives in the field of quality of the products intended for "Rudensk" OJSC shall individually be set, and they shall include the target PPM level.

7. Supporting tools

7.1.5.1.1. Analysis of measuring systems

The analysis of measuring systems (MS) is required for confirmation of customer's MS suitability for measurement of products parameters, control of the production process, as well as for determination of characteristics of the process of measurements, which influence MS suitability.
MSA shall be performed in relation to MS used for measurement of special characteristics, as well as for all MS, indicated in the management plan.
Methods and criteria for MS analysis shall correspond to the latest edition of the MSA AIAG guide. The analysis shall be carried out in relation to the MS with quantitative and alternative (ranging) data.
The analysis of measuring process acceptability results for quantitative data means comparison of its convergence and reproducibility of GRR (R&R) (table 1).

Table 1 – Criteria of acceptability

GRR	Solution	Comments
Less than 10%	MS is acceptable	Recommended, especially during sorting out or classification of samples, or when the rigid process control is required
From 10% to 30%	May be acceptable depending on the usage	The decision shall be based, for example, on importance of the results of measurements, expenditures for a measuring appliance, expenditures for alteration or repair. Customer's approval should be obtained.
Over 30%	Considered unacceptable	All efforts should be taken in order to improve the MS.

Another statistical indicator of MS inconsistency is the number of distinguishable categories (ndc). It reflects the number of categories, to which the process of measurements may be divided. Its value shall exceed or be equal to 5.
For alternative data criteria shall correspond to the latest edition of the MSA AIAG guide.
For bulk products the MS may be not applicable depending on the availability of requirements of "Rudensk" OJSC to the given type of the supplier's products.

7.2.2. Competence – training at the working place

The company's personnel shall be taught specific requirements of "Rudensk" OJSC and quality instruments in accordance with the functions performed.

7.2.3. Competence of internal auditors

Internal auditors involved in audit of specific requirements of "Rudensk" OJSC shall be taught to the given specific requirements.

7.4. Exchange of information

The production personnel shall operatively be informed on occurrence of defects in production shops and at the customer's place of work during 3 working days.

8. Operational activity

8.2.1.1. Exchange of information with customer

With the aim of provision of operative informational interaction the Supplier shall ensure possible exchange of data by E-mail.

8.2.3.1. Design and development planning – addition

Design of new articles and development (changes) of production processes shall be carried out on the basis of the APQP guidance (AIAC actual version).
The APQP guidance shall be used:

- during new product design;
- when construction of the supplied product is changed.

Rules of control of APQP-project changes shall be standardized.
Changes of the agreed periods of project implementation, changes of construction and process shall be controlled. "Rudensk" OJSC shall be informed in cases of:

- changing the agreed periods for key stages of the project (for example, product testing, PPAP, beginning of the serial production);
- changing the formerly agreed construction;
- changing the place of production;
- changing the formerly agreed management plan.

Representatives of "Rudensk" OJSC may carry out audits of the course of APQP-project fulfillment, and they inform customer's representatives beforehand. When a request for an audit of the APQP-project is received, the supplier shall provide such opportunity and ensure accompaniment of auditors during the whole checking.

8.3.2.3. Product development with built-in software

The company shall keep the documented information on self-assessment of possible development of software. Self-assessment shall be carried out every year, or when changes are introduced to the process of software development or by demand of "Rudensk" OJSC.

8.3.3.3. Special characteristics

Regardless of the responsibility for product designing the company shall determine, denote in the design documentation and coordinate special characteristics or the necessity of their setting with "Rudensk" OJSC.
Special characteristics shall be coordinated before the PPAP.
The company shall use the following rules of special characteristics designation (Table 2):

Table 2 – Designations of special characteristics

Types of characteristics, designation	Classification
Critical C	Characteristics of the finished product requiring the application of special measures of production variability control for minimization of the risk of occurrence of defects, which violate safety of vehicle operation and/or normative legal requirements. Importance range ≥9.
Substantial S	Characteristics of the finished product requiring the application of special measures of production variability control for minimization of the risk of failures occurrence, which affect working efficiency, consumer properties or technological effectiveness of processes of "Rudensk" OJSC. Importance range ≥7.

The company may also use other designations of special characteristics, provided that the comparative table of symbols of special characteristics adopted in the company and in "Rudensk" OJSC has been agreed with "Rudensk" OJSC.
Measures of special characteristic control include, but not limited to:

- application of Poka-Yoke devices with the function of blocking or warning;
- automated control of the process of the SC process;
- 100% control;
- application of statistical control methods.

8.3.4.4. Product approval process

Cases of PPAP initiating

The production approval procedure is used in the cases shown in table 3.

Table 3 – Application of the approval procedure

Basis for performance of the component production approval procedure	**Procedure initiator**
1. New products (i.e. specific component, which was not formerly supplied to "Rudensk" OJSC)	"Rudensk" OJSC
2. Elimination of discrepancies for the formerly provided component	"Rudensk" OJSC
3. Technical amendment in designed data, specifications or materials instead for component production	"Rudensk" OJSC Supplier*
Basis for performance of the component production approval procedure	**Procedure initiator**
4. The use of another construction or material instead of formerly used ones in the approved component	Supplier*
5. Production with the use of a new or modified rigging (excluding the rapidly wearing rigging), dies, moulds, etc, including auxiliary or duplicating rigging	Supplier*
6. Production with the use of the existing rigging or equipment after their modification or reinstallation	Supplier*
7. Production with the use of the rigging and equipment transferred to another production site or production at an additional production site	Supplier*
8. Change of the supplier of component parts, materials or services (for example, thermal treatment, coating)	Supplier*
9. Production renewed after standstill of means of production for twelve months and more	Supplier*
10. Changes in test/check methods – new methods (without influencing the acceptance criteria)	Supplier*
In addition to bulk products: 11. New raw material source from new or existing suppliers 12. Changes of component appearance 13. New technological process, which was not formerly used for production of the given component	Supplier*

* if these situations occur, the supplier shall send a PSW-application and a set of documents in the volume of the level preliminarily agreed with specialists of "Rudensk" OJSC.

Levels of presentation

Five levels of presentation of documents and samples are stipulated, which characterize the production (Table 4):

Table 4 – Levels of presentation of documents and samples, which characterize the production

Level No.	**PPAP set composition**
Level 1	Application only. For products determining the appearance, in addition a report on appearance approval
Level 2	Application with samples of the product and the limited set of confirming data
Level 3	Application with samples of the product and the full set of confirming data
Level 4	Application and other certificates determined by the customer
Level No.	**PPAP set composition**
Level 5	Application with samples of the product and the full set of confirming data, verified in the company at the production place

The company shall send a set of documents and samples in accordance with the assigned level of presentation to "Rudensk" OJSC (Table 5):

Table 5 – Levels of presentation of PPAP certificates

PPAP certificates	**Levels of presentation**				
	1	2	3	4	5
1. Application for production approval	S	S	S	S	R
2. Design data. Outlines drawings with SC designation agreed with the customer	R	S	S	*	R
3. Documentation for technical amendments, if any	R	S	S	*	R
4. FMEA-constructions, list of SC agreed with the customer	R	R	S	*	R
5. FPM	R	R	S	*	R
6. FMEA-process	R	R	S	*	R
7. MP	R	R	S	*	R
8. MSA	R	R	S	*	R
9. Results of measurements	R	R	S	*	R
10. Results of tests of materials, specifications	R	R	S	*	R
11. Initial research of processes	R	R	S	*	R
12. Documentation of the specialized laboratory	R	R	S	*	R
13. Statement on agreement of appearance (AAR), if necessary	R	R	S	*	R
14. Sample of products	R	R	S	*	R
15. Control sample	R	R	R	*	R
16. Control means	R	R	R	*	R
17. Data on compliance with special requirements of the customer: - certificates of approval of suppliers' productions	R	R	S	*	R

Legends:
R – The company shall retain documentation at respective production sites and make it available by demand of "Rudensk" OJSC;

S – The company shall provide to "Rudensk" OJSC and retain a copy of data and documents on respective production sites.
* - The company shall retain documents at respective production sites and make it available by demand of the customer.
Unless otherwise is agreed, the company shall send a set of certificates by the 3rd level of presentation for approval by "Rudensk" OJSC.
For passing the PPAP process the company shall send a letter to MTSD&EC of "Rudensk" OJSC about its intention to pass the procedure of production approval.
In accordance with the assigned level of PPAP presentation the company shall send an electronic archive with copies of documents (file names shall correspond to their belonging) in accordance with the assigned level of PPAP presentation in Russian, by E-mail (a notification on reading) to MTSD&EC.

If the block of documents is not accepted (composition of document does not conform to the level of presentation, the application is executed with errors), MTSD&EC shall send a relevant message to the company. During 5 working days the company shall eliminate remarks, otherwise the whole block of documents shall be returned to the company. By results of assessment of PPAP certificates MTSD&EC shall inform the company of the obtained approval status.

Approval status

By results of the analysis of PPAP certificates the following decisions shall be taken: approval or rejection.

Full approval

Full approval means that products, as well as all provided data and documents comply with all requirements of "Rudensk" OJSC. In case of the full approval supply of products shall be permitted.

Temporary approval:

Temporary approval means that not all provided reports and data comply with all requirements of "Rudensk" OJSC and/or products have non-critical deviations from requirements of the agreed specification. When the temporary approval is obtained, limited supply by volume and time is allowed.
Temporary approval may be provided, if the company:

- determined the main reason of non-compliances, which interfered with approval;
- prepared a plan of corrections agreed with "Rudensk" OJSC;
- applied a plan of restrictive actions for the period of introduction of amendments agreed with "Rudensk" OJSC (if necessary);
- agreed the date of repeated provision of the PPAP certificate with "Rudensk" OJSC, which shall occur before the end of the period of temporary approval (there shall be a time reserve for repeated passage of PPAP).

Deviation:

Deviation means that the production lot, which was the basis of the presentation, and the accompanying set of PPAP documents do not comply with the customer's requirements.
When "deviation" takes place, supply of the products is not allowed till the moment of "temporary" or "full" approval. If the company receives deviation, it shall coordinate the plan of corrective actions with "Rudensk" OJSC. After introduction of these actions the approval procedure may be resumed. In case of the repeated "deviation" "Rudensk" OJSC shall be entitled to take a decision on cessation of works on PPAP consideration.

Data storage

After approval by "Rudensk" OJSC the set of documents and control samples shall be stored in the company till the moment of receiving a written instruction of "Rudensk" OJSC on the end of the approval time and till the end of temporary approval plus one calendar year.

8.3.6.1. Design and development change – addition

The PPAP procedure shall be fulfilled for approval of changes in the product construction.
Manufacturing of a trial lot is required along with execution of the documented information confirming the results of verification/validation for verification/validation of changes.
The supplier shall provide all Technical Regulations to "Rudensk" OJSC for the products referred to in the contract.

8.4.2.2. Legislative and normative legal requirements

Unless otherwise is stated by the Customer in the contract or other documents, for determining the normative and legal requirements to safety of the Customer's products the Republic of Belarus and the Russian Federation are the countries of destination.

8.4.2.3. Development of suppliers' QMS

The supplier must require its suppliers (subcontractors) to have at least a QMS for compliance with the requirements of ISO 9001 (STB ISO 9001) in a certification body that has the accreditation mark of a recognized member of the IAF MLA.
For each supplier (subcontractor) not certified according to ISO 9001 (STB ISO 9001), the supplier must conduct annual audits by the second party for compliance with the requirements of ISO 9001 (STB ISO 9001).
The supplier bears full responsibility for the quality of the goods supplied to the address of OJSC "Rudensk" from its suppliers (subcontractors).

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8.4.2.3.1. Software for products of the automobile industry or products of the automobile industry with the built-in software

The company shall demand from the software supplier the retention of the documented information on the self-assessment of opportunities for software development. Self-assessment shall be performed every year or when changes are introduced to the process of software development.

8.4.3.1. Information for external providers – addition

The supplier shall transfer to his suppliers all applicable legislative and normative requirements, legal requirements and special characteristics of products and processes and demand cascading by the suppliers of all applicable requirements down to the chain of supplies to the place of manufacturing.

8.5.1.1. Management plan

The form of the management plan shall not contradict to the APQP (AIAG) management.
The company shall work out and use the management plan for the following APQP:

- prototype or trial sample;
- setting series – the first industrial lot;
- serial production

The management plan shall describe the full complex of management measures (quality assurance) related to all operations of the production process, including manufacturing (assembly), control, shifting, storage, as well as modification/repair and reserved management measures.

8.5.2.1. Identification and traceability – addition

The company shall control the traceability system for assurance of possible:

- determination of the doubtful products volume for organization of urgent and retaining measures within the frameworks of 8D and controllable overhauls on the territory of "Rudensk" OJSC;
- determination of the doubtful products volume, to which the retaining procedure shall be used on the territory of the company;
- determination of the reasons of products defects occurrence.

Requirements to the obligatory use of the unique identification of products providing traceability shall be determined by "Rudensk" OJSC. The company shall use the unique identification of each product having unsatisfactory history of supplies quality.

8.6.2. Full size control and functional tests

Periodical tests of products and size control for compliance with all requirements of the agreed drawing shall be carried out at least once per 12 months, unless otherwise has been set up in Specifications or other documents agreed with the customer.

8.6.5. Compliance with legislative and normative legal requirements

The supplier shall follow the enabling of conditions on compliance of the supplied products with the existing applicable requirements, as well as in case of determination by the Customer of special measures for control of certain products.

8.7.1.1. Authorization for deviation by the customer

The company shall control the processes fulfilled with deviations from the requirements of the management plan (by-pass processes).
The following control measures shall be stipulated for each by-pass process:

- PFMEA shall be fulfilled, and product verification measures shall be determined/reviewed;
- operating instructions shall be worked out, which contain requirements to the subsequent verification of products and equivalent to the risks revealed during PFMEA performance;
- if applicable, the by-pass process results shall be verified by means of 100% retaining control;
- personnel shall be trained.

If the company indicated possible by-pass processes and their risks (PFMEA) during PPAP coordination, no additional production approval is required with the use of these agreed by-pass processes. In all the rest cases the documented permit of the customer shall be received.
Supply of the products with deviations, as well as the products made with the use of components and materials deviated from the requirements shall not be allowed without agreement with the deviation consumer.
In case of revealing con-conforming components during the input control "Rudensk" OJSC may (if this is foreseen in the contract):

- accept only a part of the lot on the basis of the further selective control and allow the repeated provision of a part of the lot, where non-conforming products were revealed;
- allow the repeated provision of the lot (a part of the lot) only according to the characteristic, due to which the lot was rejected;
- refuse from rejection by the supplier and the repeated provision of the lot, if the rejection process carries little credibility.

If the supplier does not fulfill the contractual terms by the level of non-conformities, and if the customer needs components and has no other sources of receipt, as well as credibility to the supplier T1-T3, the level of credibility to the supplier and assessment criteria are shown in table 6, the customer may organize acceptance of components at the supplier's place by the authorized representative of the quality service of the company, if this requirement is stipulated in the delivery contract.

Table 6 – The level of credibility to the supplier and criteria of assessment

Level of credibility to the supplier	**Criteria of assessment**
T1	Required continuous control of components before delivery to the customer
Level of credibility to the supplier	**Criteria of assessment**
T2	No reliable information on capabilities of the supplier to ensure the required quality, or information on the low quality of supplies, negative other customer reviews
T3	Unavailability of the certificate for the quality management system, the own experience of ordering from the given supplier, procedures of statistical management of technological processes, but with the account of indirect positive information from other customers or societies of customers
T4	Availability of the certificate for the quality management system according to STB ISO 9001; a long period of supplies of components of satisfactory quality, positive assessment of the quality management system by the customer, introduction of statistical management of technological processes at individual production stages
T5	Availability of the certificate for the quality management system according to STB ISO 9001; application of statistical management of technological processes by the supplier, positive experience of the own orders by the given supplier
T6	Possession by the supplier of the certificate for the quality management system according to STB ISO 9001; ppm indicator at the stage of supply is equal to zero, long term supplies of high quality components
T7	Possession by the supplier of the certificate for the quality management system according to STB ISO 9001; ppm indicator at the stage of supply is equal to zero, during operation of supplier's components in production not exceeding 50 ppm, unchallenged reputation of the supplier, long period of supply of components without claims

8.7.1.4. Control of corrected products

No agreement is required with "Rudensk" OJSC, if corrective operations are indicated in the management plan, PFMEA has been carried out for them, and these documents have been approved within the frameworks of PPAP.

8.7.1.5. Control of repaired products

No agreement is required with "Rudensk" OJSC, if repairing operations are indicated in the management plan, PFMEA has been carried out for them, and these documents have been approved within the frameworks of PPAP.

9. Assessment of functioning

9.1.1.1. Monitoring and measurement of manufacturing processes

The company shall use SPC methods in accordance with the latest edition of the SPC AIAG guidance.
The following values of reproducibility indexes (C_p, C_{pk}) or applicability indexes (P_p, P_{pk}) are used for assessment of reproducibility/applicability (Table 7):

Table 7- Values of reproducibility indexes (C_p, C_{pk}), applicability indexes (P_p, P_{pk})

Range of index values	Process assessment
C_p, C_{pk}(P_p, P_{pk})<1.33	The process is unacceptable. Contact "Rudensk" OJSC for consideration of the results of researches
1.33≤ C_p, C_{pk}(P_p, P_{pk}) ≤1.67	The current state of the process is acceptable, but some modification may be required. Contact "Rudensk" OJSC for consideration of the results of researches. If improvement cannot be achieved before the beginning of the production process, amendments in the management plan may be required
C_p, C_{pk}(P_p, P_{pk}) >1.67	This process fully complies with the requirements of "Rudensk" OJSC. After approval start production and follow the management plan

10. Improvement

10.2.3. Problems solution

When information is received on deviations from the established requirements to the supplied products, which were revealed at the input control in the process of production (including customers of "Rudensk" OJSC) or during the warranty period, during 5 working days since the moment of receiving a notification on non-conformity or from the moment of execution of examination reports, the company shall operatively fulfill measures in production in accordance with 8D format (the form in Appendix B).
The 8D report consists of the following stages:

- formation of a team;
- detailed description of the defect;
- urgent actions;

- determination of reasons;
- development of actions;
- introduction of actions;
- amendment of documentation and distribution of actions;
- acknowledgment of results.

As the 8D report was filled in at different stages of the process of problems solution, it must be sent to "Rudensk" OJSC within the periods and with the content, as shown in table 8.

Table 8 - Periods and content of the 8D report

Report version	**Period of report sending since the moment of claim/inquiry receiving from "Rudensk" OJSC**	**Filled in sections of the report**
I	no later than within 24 hours	from D1 to D3
II	no later than 5 working days	from D4 to D5
II	no later than 10 working days	from D6 to D8

"Controlled overhauls" process

Controlled overhaul is the requirement of "Rudensk" OJSC to the company for introduction of an extra process of overhauling/improvement of non-conforming products according to the established characteristics.

The company shall perform overhauling works on the territory of "Rudensk" OJSC by the own means or, if necessary, attract a third company.

In case of refusal of the company from the controlled overhauling "Rudensk" OJSC shall be entitled to:

- lay a claim to reimburse expenses for "production downtime" in "Rudensk" OJSC;
- use services of third companies or "Rudensk" OJSC for "controlled overhaul" with reimbursement of expenses at the expense of reduction of the accounts payable amount by "Rudensk" OJSC to the company.

The controlled overhaul includes:

- qualified overhaul/improvement of non-conforming products;
- operative overhaul/improvement of non-conforming products revealed at all stagesof the service life of products;
- retaining measures performed by the personnel of the company from the own funds;
- 100% output control/improvement of products of the controlled overhaul.

The mode of controlled supplies shall be initiated in the following cases:

- when "Rudensk" OJSC reveals non-conforming products in the lots having the position – deficit (threat of production stoppage due to lack of products, the required quality), the decision on organization of the extra 100% control or improvement of products shall be taken by "Rudensk" OJSC;

- when the company reveals deviations influencing the formation of defects in lots sent to "Rudensk" OJSC, the decision on organization of the extra 100% control or improvement of products shall be taken by "Rudensk" OJSC.

Responsibility of the company:

- to send a response during two hours to the address of "Rudensk" OJSC by E-mail;
- to take a decision concerning the blocked lot and to send a notice to the address of "Rudensk" OJSC within 24 hours;
- to provide measuring means and materials for overhaul, if necessary.

"Controlled supplies" process

When non-conforming products are revealed, which have deviations in quality at the input control in the production process (including also the customers of "Rudensk" OJSC) and in operation, "Rudensk" OJSC is entitled to take a decision on organization of 100% control of the indicated characteristics and to notify the company (the customers of "Rudensk" OJSC) by 2 days before the beginning of control.

If the company refuses from the application of the mode of controlled supply, "Rudensk" OJSC is entitled to:

- reimburse the expenses for implementation of the controlled supply at the expense of reduction of the accounts payable of "Rudensk" OJSC to the company;
- suspend the further purchase of the products from the company and initiate the search of new suppliers for the whole nomenclature of products supplied by the company.

By the demand of "Rudensk" OJSC in relation to the company the controlled supply presupposes introduction of an additional process of products control as per established characteristics with simultaneous implementation of the process of elimination of the problem primal cause. The additional control is organized in excess of the normal control formerly foreseen by the technology.

The controlled supply includes:

- retaining measures by the company's personnel from the own funds;
- 100% output control of products;
- the process of problem elimination with the products quality.

The mode of controlled supply shall be initiated by 2 days before the beginning of retaining.

Responsibility of the company:

- to send a confirmation of the controlled supply mode introduction to "Rudensk" OJSC (the form in Appendix B);
- in case of disagreement with the requirement of the controlled supply mode introduction to contact "Rudensk" OJSC and to provide objective evidences of the lack of data for the controlled supply mode introduction;

- to carry out preparatory works for the beginning of the mode of controlled supplies (introduction/review of retaining measures, verification of reserves);
- to agree the method of identification of the articles having passed the control in the mode of controlled supplies with "Rudensk" OJSC;
- to collect and analyze data on defective products in the zone of action of retaining measures of the company (control of products by the company's personnel);
- to develop and introduce actions in accordance with the 8D format;
- to send 8D reports to "Rudensk" OJSC;
- to send a report on actions performed as per 8D with the agreed periodicity to "Rudensk" OJSC;
- to execute results of products control every day and provide them to "Rudensk" OJSC;
- to fulfill the established criteria for withdrawal of the mode of controlled supplies;
- to distribute the approved corrective actions to all similar production processes (if applicable).

Criteria of withdrawal from the controlled supplies:

- control data show "0" defects by the results of sequential acceptance of 5 manufactured lots of products in succession;
- measures were introduced in the process for protection from errors in relation to the indicated defects;
- the plan of corrections has been received and approved by "Rudensk" OJSC;
- 8D effectiveness has been confirmed with the data on control and agreed with "Rudensk" OJSC.

The list of documents for withdrawal from the mode of controlled supplies to be sent to "Rudensk" OJSC:

- an inquiry letter for withdrawal on the company's form;
- renewed records of FMEA, FPM, MP, RI;
- evidences of the activity for prevention of errors, including introduction, confirmation and periodical verification;
- a report for the introduced corrective actions;
- data on control;
- records on personnel training for the introduced amendments;
- evidences of performance of audits at respective levels confirming the effectiveness of corrective actions;
- statistical data for assessment of reproducibility of characteristics, if applicable;
- the statement for analysis of measuring and controlling processes.

10.2.5. Guarantee management system

The company shall provide the quality guarantee for the products. The warranty operation period is shown in ED, Specifications or contracts for products supply.

Solution of the problem with quality during the warranty period according to clause 10.2.3 of the present manual.

11. Normative references

STB 16949-2018	Requirements to the quality management system of the companies, which manufacture products of automotive agricultural machine engineering, other industries for construction of land-based mobile vehicles and respective serviceable parts
IATF 16949:2016	Fundamental requirements to the quality management system for products of the automotive industry and the companies, which manufacture respective serviceable parts
ISO 9001:2015	Quality management systems
TR CU 018/2011	Technical Regulations of the Customs Union on safety of wheeled vehicles
TR CU 031/2012	Technical Regulations of the Customs Union on safety of agricultural and forestry tractors and trailers to them
Reference guidance	Failure mode and effects analysis (FMEA), AIAG and VDA edition, 2019 (FMEA Handbook)
Reference guidance	Statistical process control (SPC), 2nd edition. N. Novgorod: "Prioritet" LLC SMC, 2007
Reference guidance	Production Part Approval Process (PPAP), 4th edition. N. Novgorod: "Prioritet" LLC SMC, 2009
Reference guidance	Measuring systems analysis (MSA), 4th edition. N. Novgorod: "Prioritet" LLC SMC, 2010
Reference guidance	Process of perspective quality planning (APQP), 2nd edition. N. Novgorod: "Prioritet" LLC SMC, 2010

12. Dispatch

The control copy of this document is located in QCD.
The working copy is placed at the Web-site of "Rudensk" OJSC http://www.rudensk.com

13. Appendixs

Appendix A. Form of 8D report
Appendix B. Form of confirmation of the mode of controlled supplies

Appendix A
Form of 8D report

8D No.		**REPORT FOR PROBLEM SOLUTION – 8D**			
		E-mail for sending the report			
Supplier's name and code		Detail name		Date of 8D beginning	
Customer Basis (incoming document, date)		Drawing No. Primary description of problem (claim No.)		No. of lot /consignment note	

D1	**Team formation**	Name, surname	Duty	Tel/fax	E-mail
Head of 8D group			Customer's representative		

D2	**Detailed defect description**		
Defect repeatability	□ case 1 □ case 2 □ more than 2 cases	Act(s) of defect study No.	
Actual parameter size of rejected articles / materials		As per STD (ED, TY, GOST)	
TY, GOST No / date		Drawing No (notice/date)	
Defect photo / sample	□ yes □ no	Quantity of rejected articles /from the lot volume	
Place of defects discovery (input control, conveyer operation			
Terms of storage / installation / operation may be violated by the customer (indicate specific requirement of TY, GOST, etc. and description of violation		TY RB 05882559.009-95	

Reasons of defect missing to the customer	**Yes**	**No**	**Indicate the instrument used for control and main reasons of defect missing to the customer**
Are any control (detection) methods used for this defect?	□	□	
Is the used method for detection of the defective production identical with the method used by the customer?	□	□	
Is the respective control correct (technology, instrument, competence, volume, sampling, etc.)?	□	□	
Can this defect emerge after control fulfillment?	□	□	
Is the control method (technology, MM, sampling volume, periodicity, allowance conditions, etc.) suitable for guaranteed detection of all defective articles?	□	□	

D3	URGENT ACTIONS Indicate the actions , which will ensure 100% protection of the customer from supply of non-conforming products before the acknowledment of effectivenes of corrective actions (D6)	Period D1-D3 < 24 h

Reasons of defect missing to the customer		**Checked, pcs.**	**Rejected, pcs.**	**Retaining actions (additional 100% control)** See Appendix No. 2	
□	Products in customer's storehouses			Control method (including instruments) defects withholding (photo)	
□	Products en route to the customer			Date of introduction (document) of additional 100% control	
□	Products in consignated (leased) storehouses			Date of the beginning of supplies of lots (No.) having passed control	
□	Products in supplier's storehouses			Marking method for the products having passed control	
□	Products in sub-supplier's storehouses			Retaining may be cancelled after getting the positiveconclusion about effectiveness of actions (D6)	

Head of 8D group Customer's representative

_____ _____ _____

Duty Signature Name, surname

Appendix A contd.

D4	DETERMINATION OF REASONS	For determining the key reasons of the defect state the mechanism of its occurrence and apply the methods: (why? Cause-and-effect diagram, ARIZ, defect provocation, SPC, FTA. "failure tree" (see the check list)			
Last record PFMEA (for introduction of 8D) No./version		Is the revealed defect identical with the potential failure?	□ yes □ no		
importance emergence discovery RPN RPN max					
Mechanism of defect origin		Fundamental cause of defect origin			

D5	DEVELOPMENT OF ACTIONS	D6	INTRODUCTION OF ACTIONS	For each reason, first of all, possible technical solution of problems must be considered!		
Reason (D5)	Actions (D5)	Period (plan) (D5)	Approximate Sum (thousand rubles)	Executor (D5)	Date of introduction / supporting document (D6)	

Method of assessment of actions effectiveness (D5)	Date of assessment (plan) (D5)	Person responsible for checking (D5)	Date of assessment (actual) (D6)	Conclusion on effectiveness (D6)
Date of retaining cancellation				

Head of 8D group Customer's representative

_____

Duty Signature Name, surname

The 2nd report (D4-D5) is to be sent to OAKiR DMiP3 "KAMAZ" OJSC no later than during 5 days since the moment of receiving the reclamation kamaleev@kamaz.org

D7	AMENDMENT OF DOCUMENTATION AND SPREADING OF ACTIONS						
To amend	**Doc. No.**	**Executor**	**Date**	**To amend**	**Doc. No.**	**Executor**	**Date**
□ DFMEA				□ Working instruction of controller /adjuster / operator, etc.			
□ PFMEA							
□ Management plan				□ Check list for internal audit			
□ Process flow chart				□Measuring means			
□ Technological process				□ Quality control station			
To be extended to the process / product				Head of the project		Plan of actions No.	
Description		Drawing No (Specs, TP, etc.)					

D8	ACKNOWLEDGMENT OF RESULTS		
Renewed PFMEA record (after introduction of 8D) No. /version		Potential failure	
importance emergence discovery RPN 0 RPN max 100			

Team participants	Stages	Team participants	Stages	Team participants	Stages

Head of 8D group Customer's representative

_____

Duty Signature Name, surname

Appendix B

Form of confirmation of the mode of controlled supplies

CONFIRMATION OF INTRODUCTION OF MODE OF CONTROLLED SUPPLIES

To whom: _____
From whom: _____
Name of the organization

We confirm the receipt of your notification dated _____, according to which the mode of controlled supplies is introduced on our production site.
□ We fully understand the requirements for implementation of retaining measures.
□ We do not fully understand the requirements for implementation of retaining measures. Please, contact:

_____
(name and surname of the contact person)

_____
(contact telephone)

Find below the description of identification methods, which mean conformity of the supplied lots to the requirements of _____
_____
The retaining measures will be introduced on the production site(s): _____
_____

The employee responsible for introduction of the retaining measures:

_____
(name and surname of the contact person)

_____
(contact telephone)

_____ _____
(signature of the employee responsible for introduction of retaining measures) (Date)

Approval record sheet

Worked out by: I.V. Ageichik

Ref. No.	Duty	Name, surname	Signature	Date
1	Deputy Director for quality – representative of management	N.A. Ivantsova		21.12.19
2	Chief of department – customer's representative	Zh. Y. Mikhailova		24.12.19

Sheet of familiarization

Duty	Name, surname	Signature	Date

SHEET OF AMENDMENTS REGISTRATION

Amendment	Numbers of sheets (pages)				Total sheets (pages) in the document	Document No.	Signature	Date
	Amended	Substituted	New	Cancelled				
1	–	3,5-7,14	–	–	28	112-56-2021		29.12.2021