The Ultimate Guide to MDSAP

The Medical Device Single Audit Program

Rimsys®

Contents

What is MDSAP?

The Medical Device Single Audit Program (MDSAP) was designed and developed to allow a single audit of a medical device manufacturer to be applied to all country markets whose regulatory authorities are members of the program. The MDSAP provides efficient and thorough coverage of the standard requirements for medical device manufacturer quality management systems, and requirements for regulatory purposes (ISO 13485:2016). In addition, there are specific requirements of each medical device regulatory authority participating in the MDSAP that must be met:

- Conformity Assessment Procedures of the Australian Therapeutic Goods (Medical Devices) Regulations (TG(MD)R Sch3)
- Brazilian Good Manufacturing Practices (RDC ANVISA 16)
- Medical Device Regulations of Health Canada (ISO 13485:2003)
- Japan Ordinance on Standards for Manufacturing Control and Quality Control of Medical Devices and In Vitro Diagnostic Reagents (MHLW Ministerial Ordinance No 169)
- Quality System Regulation (21 CFR Part 820), and specific requirements of medical device regulatory authorities participating in the MDSAP program.

This means that a report from a single MDSAP audit of a medical device manufacturer would be accepted as a substitute for routine inspections by all the member Regulatory Authorities (RAs) across the world. There are currently five participating Regulatory Authorities (RA) representing the following countries: Australia, Brazil, Canada, Japan and the USA.

In April, 2021, the RAs released an "Audit Approach" document (MDSAP AU P0002.007) that combines the formerly separate MDSAP Audit Model and Process Companion documents into a single guidance document. It includes guidance for assessing the conformity of each process and includes an audit sequence, instructions for auditing each specific process, and identifies links that highlight the interactions between the processes.

History of MDSAP

In March 2012 the US FDA announced that they had approved a final pilot guidance document "Guidance for Industry, Third Parties and Food and Drug Administration Staff: Medical Device ISO 13485:2003 Voluntary Audit Report Submission Pilot Program." This allowed the owner or operator of a medical device manufacturing facility to be removed from FDA's routine inspection work plan for 1 year upon completing a ISO 13485:2003 audit. This guidance document went into effect in June 2012, and was intended as an interim measure while a single audit program was being developed.

This pilot program was not very successful and few companies signed up because they did not see any advantage in participating. The manufacturer had to pay for a third party to inspect their facilities, generate a report, and share the inspection results back to the FDA. Many companies were reluctant to contract "someone else" to perform their inspection when they could easily wait for the FDA to conduct an inspection for free.

During its inaugural meeting in Singapore in 2012, the International Medical Device Regulators Forum (IMDRF) appointed a working group to develop a set of documents for a harmonized third-party auditor system. Hence, the "Medical Device Single Audit Program" (MDSAP) was formed. The concept was similar to the FDA's original idea of creating a third-party auditor to help reduce their workload of performing regulatory audits of medical device manufacturers' quality management systems. This new approach would consist of a single audit that would review regulatory QMS compliance, conducted by a third-party, who would later be called an Auditing Organization (AO).

From January 2014 to December 2016, five countries participated in a Medical Device Single Audit Program Pilot. In June 2017, a report was generated summarizing the outcomes of prospective "proof-of-concept" criteria established to confirm the success of the program. The outcomes are documented in the final MDSAP Pilot Report and recommended that the program become fully active and open to any manufacturer who requested this type of audit.

2012	**Jan:** Initiation of the pre-pilot project
2014	**Jan:** Announcement of the MDSAP Pilot project **Aug:** Mid-Pilot Report
2015	**Nov:** 1st GMP Certificate delivered by ANVISA, using MDSAP audit report **Dec:** Health Canada publish transition plan to replace CMDCAS by MDSAP
2016	**Jan:** 1st Canadian device license supported by an MDSAP certificate **Dec:** Review of MDSAP Pilot project
2017	**Jan:** Auditing Organizations other than CMDCAS registrars can apply **July:** Final Pilot Report concludes that the plan objectives met performance targets
2019	**Jan:** MDSAP replaces CMDCAS
2020	Implementation

Who is responsible for the MDSAP?

The governing body of the MDSAP is the Regulatory Authority Council (RAC), which is composed of two senior managers (and a few other staff members) from each participating RA. They are responsible for executive planning, strategic priorities, setting policy, and making decisions on behalf of the MDSAP International Consortium. The RAC also reviews and approves documents, procedures, work instructions, and more. The mission of the MDSAP International Consortium is to jointly leverage regulatory resources to manage an efficient, effective, and sustainable single audit program focused on the oversight of medical device manufacturers on a global scale.

Other international partners that are involved in the MDSAP include:

MDSAP Observers:

- European Union (EU)
- United Kingdom's Medicines and Healthcare products Regulatory Agency (MHRA)
- The World Health Organization (WHO) Prequalification of In Vitro Diagnostics (IVDs) Program

MDSAP Affiliate Members:

- Argentina's National Administration of Drugs, Foods and Medical Devices (ANMAT)
- Republic of Korea's Ministry of Food and Drug Safety
- Singapore's Health Sciences Authority (HSA)

The observers and affiliate members are not the same as the participating member RA's. The observers simply observe and/or contribute to RAC activities. Affiliate members, on the other hand, are interested in engaging in the MDSAP program and are subject to certain rules. They are only given access to a certain level of information about the manufacturers, audit dates, and information in audit reports. They are also invited to attend sessions that are open to members, observers, and affiliates only.

Audits can also be conducted by MDSAP participating RAs at any time and for various reasons including:

- "For Cause" due to information obtained by the regulatory authority
- as a follow up to findings from a previous audit
- to confirm the effective implementation of the MDSAP requirements

The purpose of audits conducted by the RAs is to ensure appropriate oversight of the AOs MDSAP auditing activities. The AOs are appointed by the RAs and a list of the currently approved AO's is published on the FDA website. Most AOs offer a broad range of management system certification services, beyond just medical devices. Manufacturers should verify that prospective AOs are clearly trained and perform MDSAP audits of medical devices.

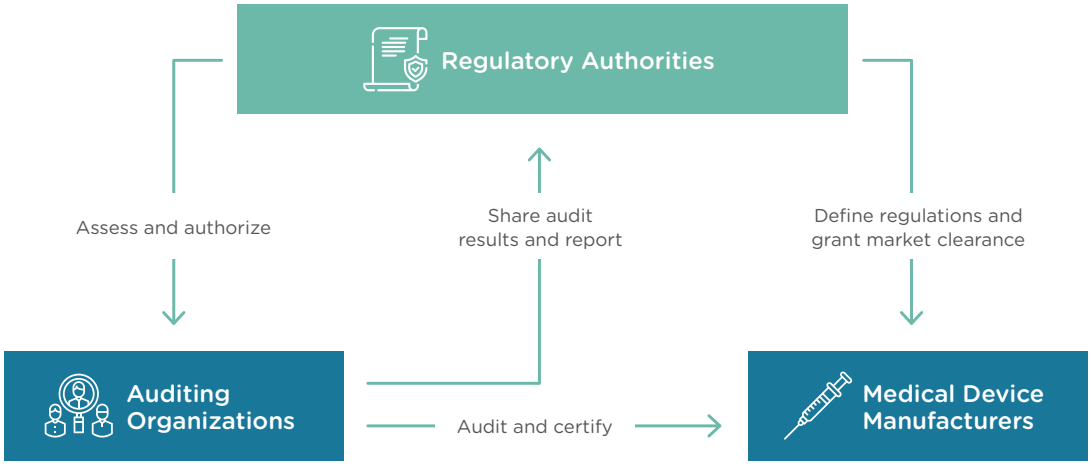
AOs have the final word as to whether a manufacturer has met the requirements for the MDSAP during the execution of the audit and generation of the associated reports summarizing the results. MSDAP RAC participating RAs have the final decision regarding all development, implementation, maintenance, and expansion activities associated with the program.

Although an unannounced visit by an AO is rare, it can happen in circumstances where high-grade nonconformities have been detected.

How does an MDSAP audit work?

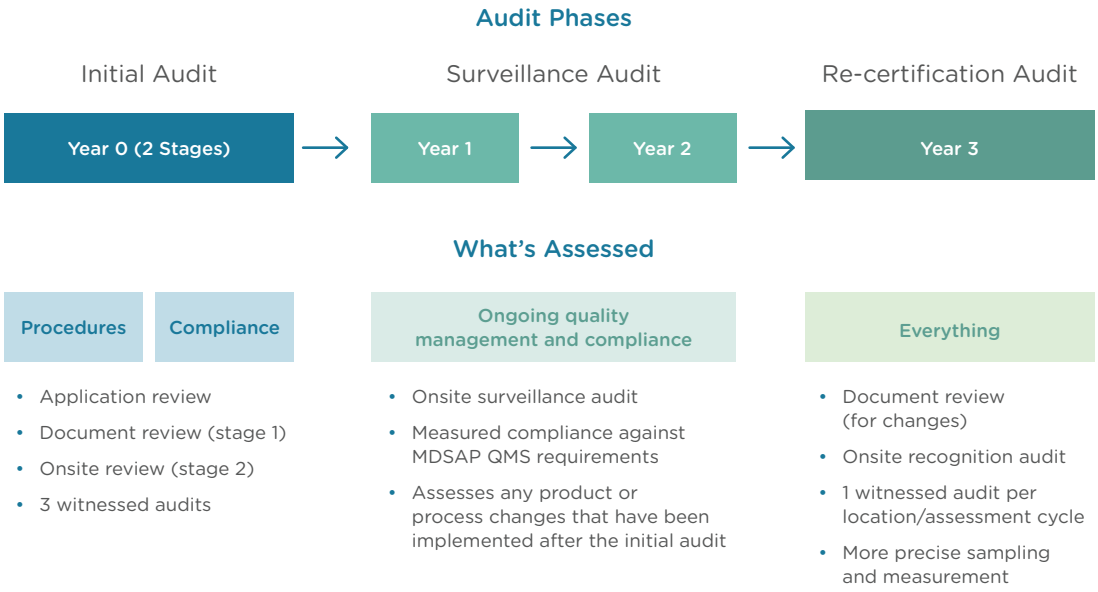
An MDSAP audit module is similar to the design structure of an ISO 13485 audit. However, instead of the RAs performing the audits, they approve AOs to perform the audit process. For an AO to get MDSAP audit approval, they must submit a lengthy and detailed application matrix form for review to the RAC. Once the application is received, it is then reviewed by the RAC secretariat, the Lead Project Manager, and the Assessment Program Manager. The entire process of becoming a recognized Authorized Organization can take a few months from submission to approval or denial.

Once approved, the AOs are now responsible to thoroughly audit and certify (if the audit passes) the manufacturer, and to also provide a final report back to the RA. No certificate will be issued to any manufacturer without a clean pass of an audit. Manufacturers are permitted to select their own AO and will be notified of the details of the audit prior to the agreed upon date. The RA is responsible for the assessment and recognition of AOs as well as making regulatory decisions for medical device manufacturers.



A medical device manufacturer who participates in the MDSAP will be audited annually, as part of a three-year certification cycle. The "Initial Certification Audit" is a complete audit of the manufacturer's quality management system (QMS). The initial Audit is followed by partial Surveillance Audits conducted once per year, for two consecutive years. The cycle re-commences with a complete Re-audit, also referred to as a Recertification Audit in the third (3rd) year.

1. Initial Audit
   - Stage 1 – A focus on your QMS procedures and readiness for Stage 2
   - Stage 2 – A focus on your records of compliance with ISO 13485:2016
2. Surveillance Audit
   - This is conducted over a two-year period and concentrates on your QMS process in detail. If there are any changes to your products or processes after the initial certification, the auditor may feel the need to repeat activities from the Initial Audit.
3. Re-certification Audit
   - This is a comprehensive review of your entire QMS that has been audited in the previous two phases. The purpose is to make certain that your QMS continues to meet the MDSAP requirements. This re-certification audit requires more sampling, and can take up to a year to complete.



Audit sequence

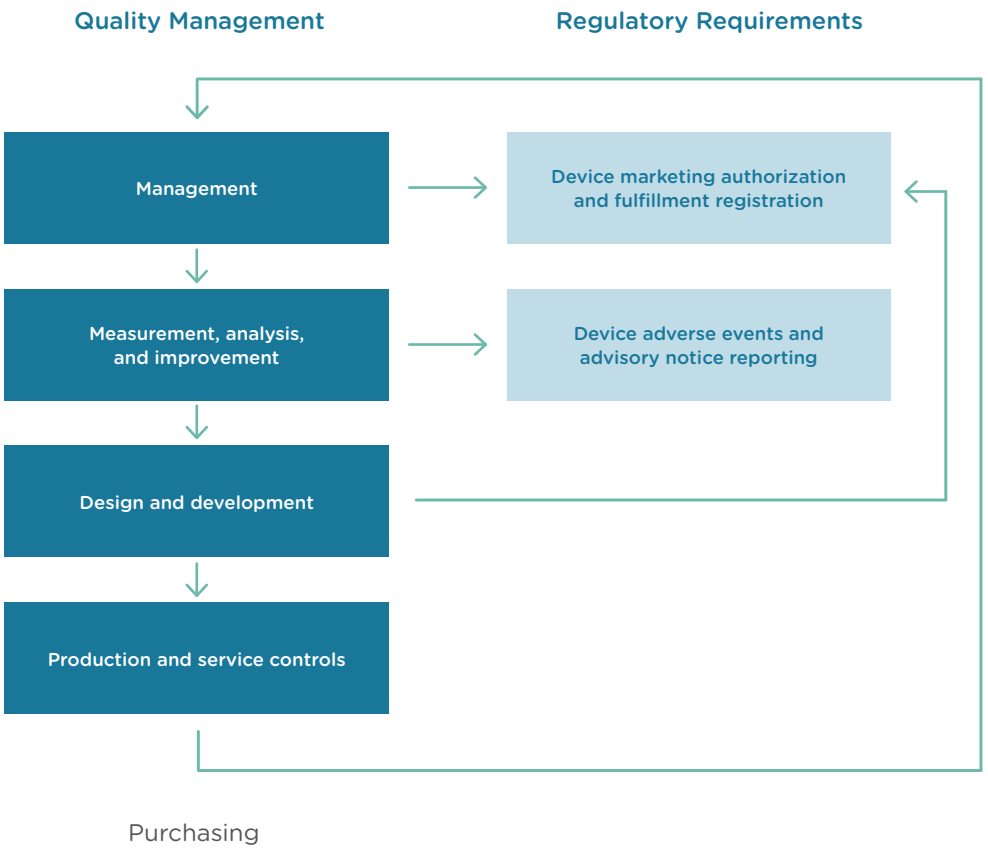
There are four primary processes and one supporting process that are audited:

1. Management
2. Measurement, Analysis, and Improvement
3. Design and Development
4. Production and Service Controls
5. (Supporting Process) Purchasing

These five processes combined are designed around a risk management foundation that includes a good QMS and the regulatory requirements of the five participating RAs. In addition, the audit has two supporting processes designed to meet specific regulatory requirements of each of the participating RAs:

6. Device Marketing Authorization and Facility Registration
7. Medical Device Adverse Events and Advisory Notices Reporting

This chart illustrates the relationship between these processes:



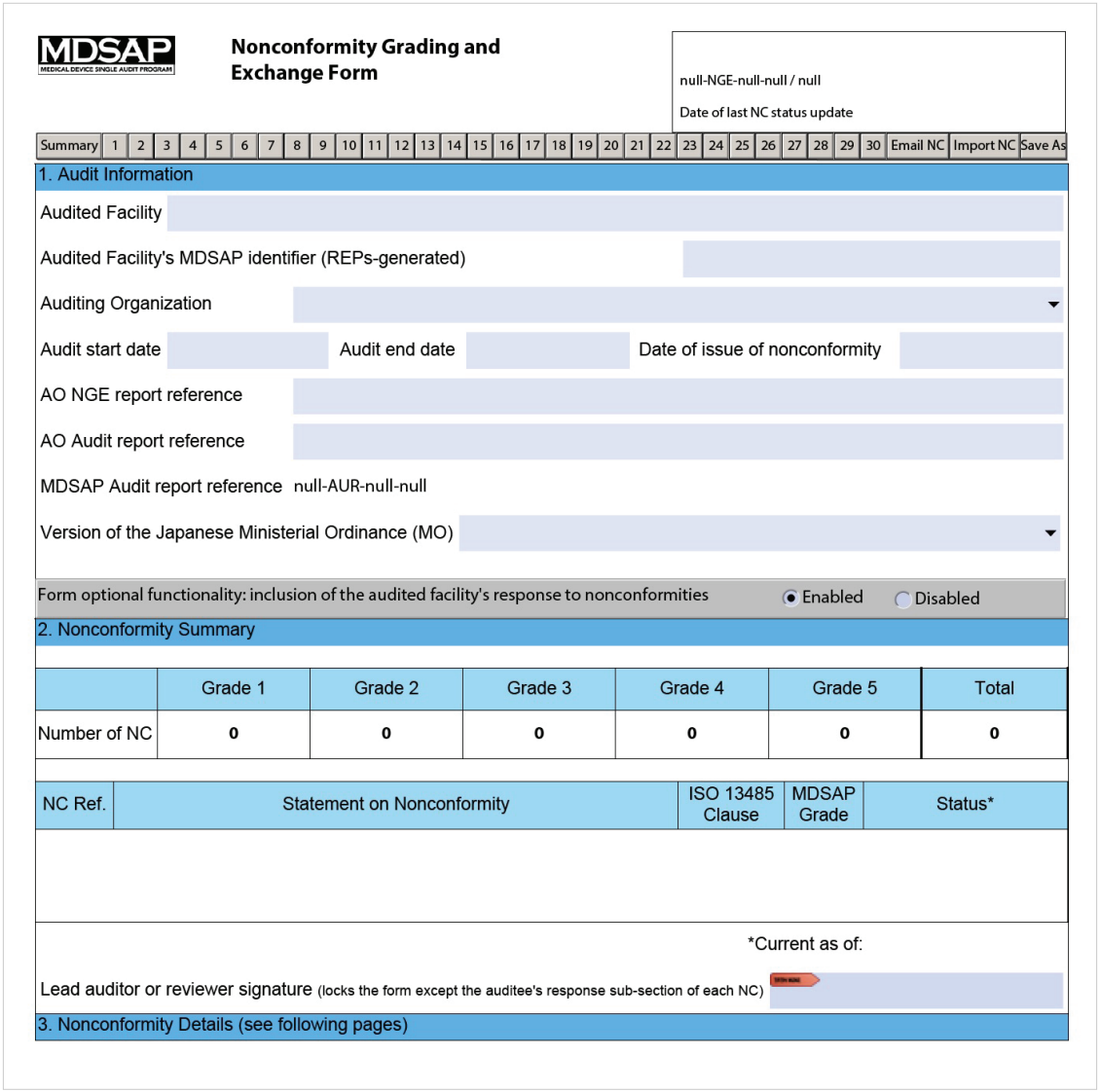
If you pass the audit, then you will move on to certification. The AO will complete a Regulatory Audit Information Exchange Form which is used to exchange information between MDSAP regulators. The guidance document "Medical Device Regulatory Audit Report Form Guidance" (MDSAP AU G0019.3) provides clarification on the information that needs to be recorded in the form.

You got a nonconformity – now what?

MDSAP Grading:

The MSDAP has five levels of non-conformities ranging from Grade 1 to Grade 5 based on the product impact, and whether the issue is systemic in nature. Non-conformities are documented in what is called the "Nonconformity Grading and Exchange (NGE)" form. The form is organized into three sections:

1. **Audit Information:** general identification information on the audited facility, auditing date(s), the AO, etc.
2. **Nonconformity Summary:** a high-level view of the nonconformity information.
3. **Nonconformity Details:** includes a subsection for each nonconformity explaining the nature of the nonconformity, unmet requirements, grading, and status.



MDSAP
MEDICAL DEVICE SINGLE AUDIT PROGRAM

Nonconformity Grading and Exchange Form

null-NGE-null-null / null

Date of last NC status update

Summary | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | Email NC | Import NC | Save As

1. Audit Information

Audited Facility

Audited Facility's MDSAP identifier (REPs-generated)

Auditing Organization

Audit start date | Audit end date | Date of issue of nonconformity

AO NGE report reference

AO Audit report reference

MDSAP Audit report reference null-AUR-null-null

Version of the Japanese Ministerial Ordinance (MO)

Form optional functionality: inclusion of the audited facility's response to nonconformities ◉ Enabled ○ Disabled

2. Nonconformity Summary

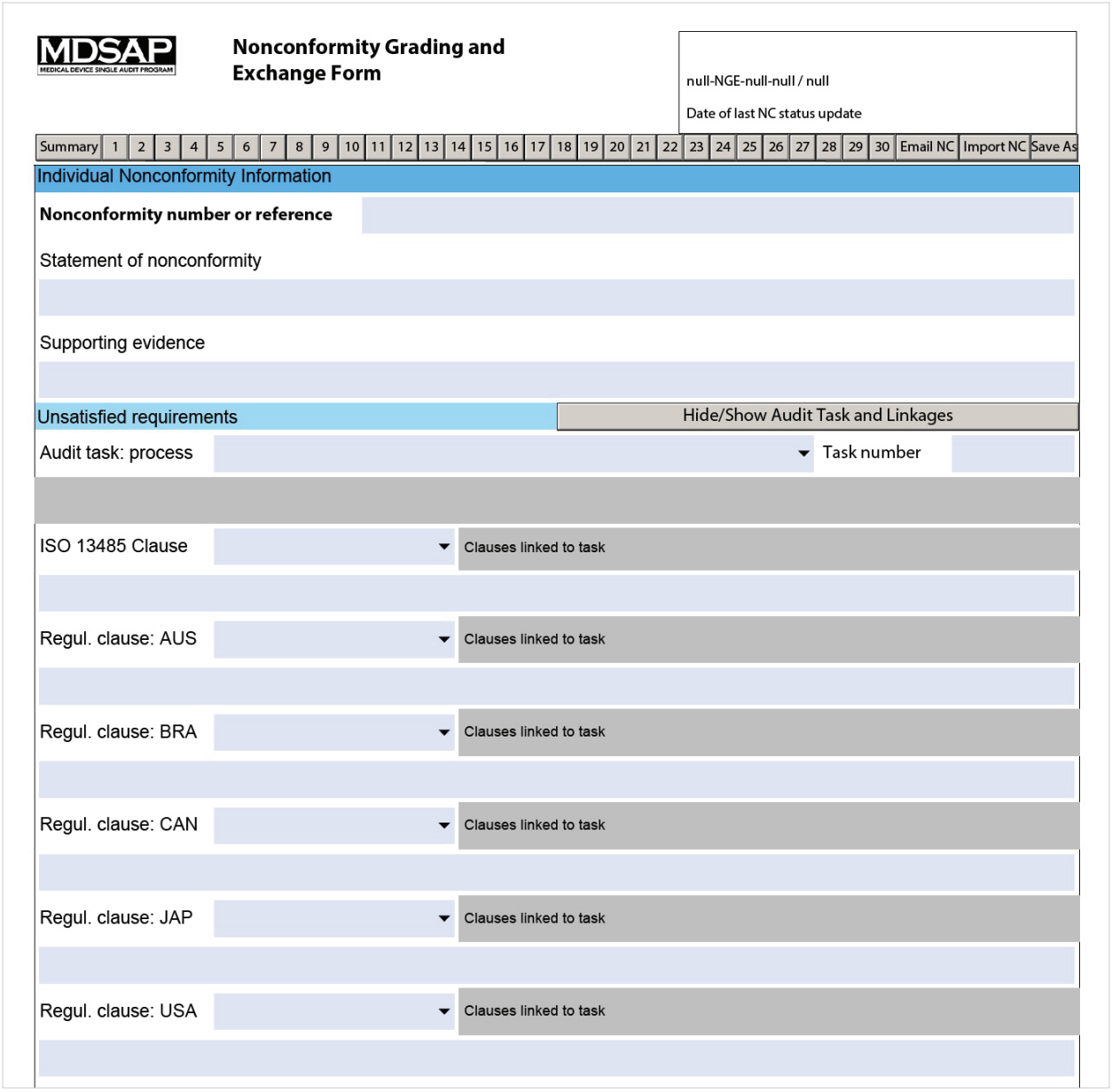
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Total
Number of NC	0	0	0	0	0	0

NC Ref.	Statement on Nonconformity	ISO 13485 Clause	MDSAP Grade	Status*

*Current as of:

Lead auditor or reviewer signature (locks the form except the auditee's response sub-section of each NC)

3. Nonconformity Details (see following pages)


MDSAP
MEDICAL DEVICE SINGLE AUDIT PROGRAM
Nonconformity Grading and Exchange Form
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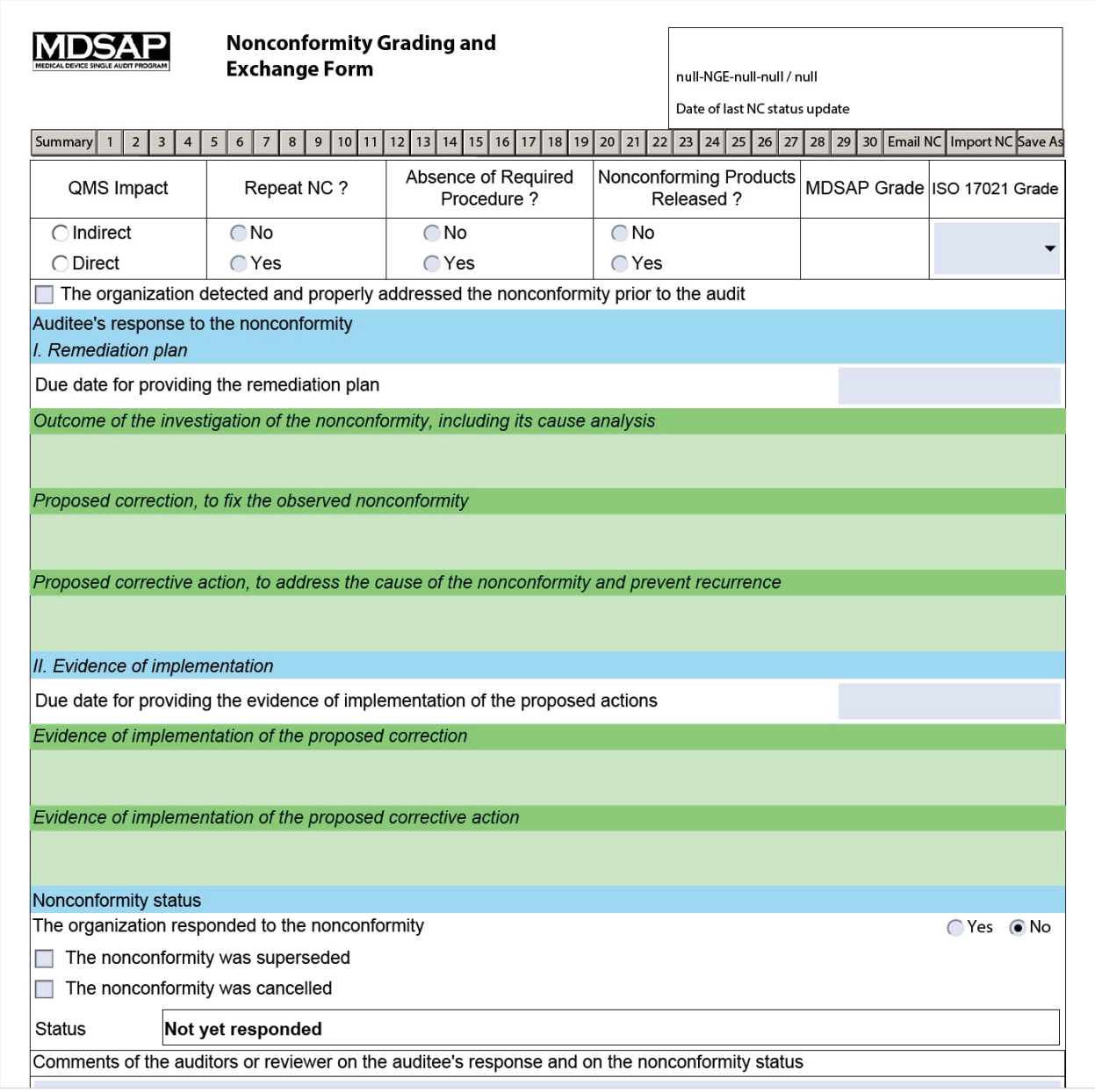
Date of last NC status update
Summary 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 Email NC Import NC Save As
Individual Nonconformity Information
Nonconformity number or reference
Statement of nonconformity
Supporting evidence
Unsatisfied requirements
Hide/Show Audit Task and Linkages
Audit task: process
Task number
ISO 13485 Clause
Clauses linked to task
Regul. clause: AUS
Clauses linked to task
Regul. clause: BRA
Clauses linked to task
Regul. clause: CAN
Clauses linked to task
Regul. clause: JAP
Clauses linked to task
Regul. clause: USA
Clauses linked to task



Nonconformity Grading and Exchange Form

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Date of last NC status update

Summary | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | Email NC | Import NC | Save As

QMS Impact	Repeat NC ?	Absence of Required Procedure ?	Nonconforming Products Released ?	MDSAP Grade	ISO 17021 Grade
○ Indirect ○ Direct	○ No ○ Yes	○ No ○ Yes	○ No ○ Yes		

☐ The organization detected and properly addressed the nonconformity prior to the audit

Auditee's response to the nonconformity

I. Remediation plan

Due date for providing the remediation plan

Outcome of the investigation of the nonconformity, including its cause analysis

Proposed correction, to fix the observed nonconformity

Proposed corrective action, to address the cause of the nonconformity and prevent recurrence

II. Evidence of implementation

Due date for providing the evidence of implementation of the proposed actions

Evidence of implementation of the proposed correction

Evidence of implementation of the proposed corrective action

Nonconformity status

The organization responded to the nonconformity ○ Yes ◉ No

☐ The nonconformity was superseded

☐ The nonconformity was cancelled

Status **Not yet responded**

Comments of the auditors or reviewer on the auditee's response and on the nonconformity status

The Nonconformity Grading Matrix is used as the first step to assign a "grade" to a nonconformity in a medical device manufacturer's QMS, based on whether there is a direct or indirect impact to the product. Grading is a 2-step process that leads the auditor to a final calculation for each nonconformity.

Step 1 – A nonconformity is assigned points using the requirements of ISO 13485:2016. It's determined based upon whether there is a direct or indirect impact on device safety and performance, and the frequency of that impact. The sub-clauses of ISO 13485:2016 for Indirect (4.1 to 6.3) and Direct (6.4 to 8.5) should be reviewed for any points that are given during the audit process.

- A "first occurrence" is a nonconformity in a particular sub-clause of ISO 13485:2016 that wasn't present in the previous two audits where that sub-clause was addressed.
- A "repeat occurrence" indicates that it was present within the last two audits where the sub-clause was addressed.

The MSDAP has five levels of non-conformities ranging from Grade 1 to Grade 5 based on the product impact, and whether the issue is systemic in nature. Non-conformities are documented in what is called the "Nonconformity Grading and Exchange (NGE)" form. The form is organized into three sections:

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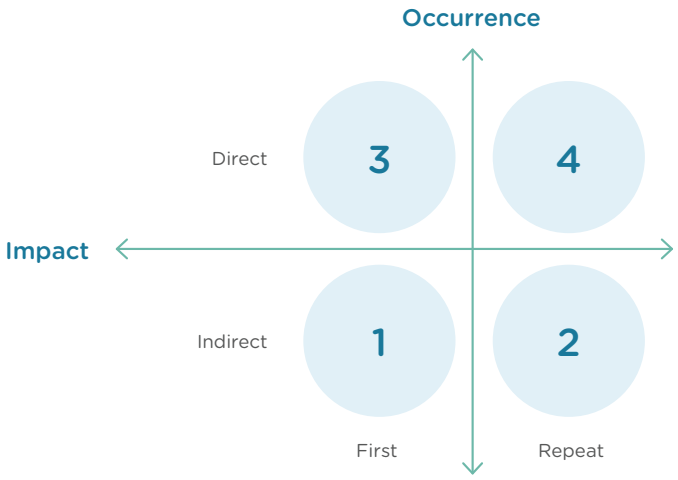
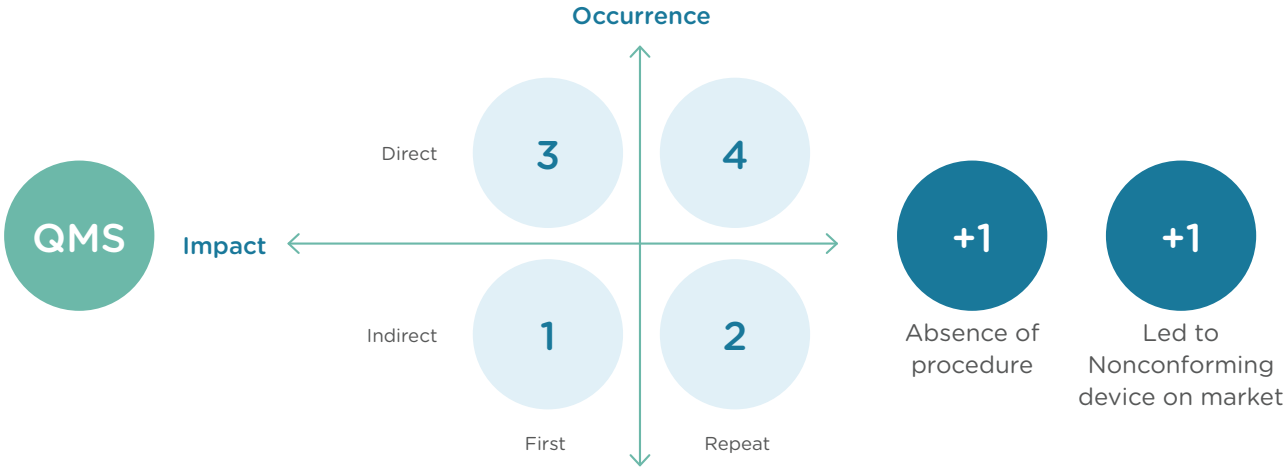


Step 2 – In this step, additional points can be added when there is an issue with the occurrence of one of the escalation rules. The two rules that can add points to your grade in Step 1 are:

- Rule 1 - The absence of a documented process or procedure that impacts effective implementation
- Rule 2 - A released medical device that is outside of QMS conformity



The final grade is a combination of the points and will be between 1 and 6, where any grade above a 4 requires immediate attention. Grade 6, is generally recorded as a Grade 5, since the differentiation between the two scores does not require any additional activity by the manufacturer.

1. If a manufacturer receives three or more 4's or one or more 5's then the AO must alert the RA's within five days.
2. The manufacturer will need to provide a remediation plan for each nonconformity reported within 15 days from the time the AO reported it.
3. The remediation plan must include:
    - outcomes of the investigation related to each nonconformity and their cause(s)
    - a correction plan to address each nonconformity
    - a corrective plan to prevent each nonconformity from happening again.
4. Evidence of the successful implementation plan must be provided to the AO within 30 days of the audit end date.

Manufacturers are permitted to challenge any nonconformities reported in an audit by an AO as long as they follow the proper procedure. The manufacturer needs to prove that a recorded nonconformance is invalid. Grades that are assigned to nonconformities won't necessarily get changed as a result of corrective actions though, but they can be amended based on evidence to show that they weren't valid in the first place.

What does an MDSAP audit cost?

There are a number of variables that impact the cost of an audit, so it's difficult to provide a generic estimate. Orielstat notes that costs can vary depending upon the scope, number of facilities, and time put into the audit itself by the AO. The AOs must follow the"Audit Time Determination" (MDSAP AU P0008.007) procedure when calculating audit time.

Why choose the MDSAP Certification Process?

- The MDSAP process allows medical device manufacturers to go through a single audit process that will satisfy the requirements for all participating Regulatory Authorities (currently five). If the audit is performed by an MDSAP recognized Audit Organization, it will be accepted in each of the markets of the participating Regulatory Authorities.
- The single audit approach reduces the need for duplicate QMS audits and helps medical device manufacturers better manage resources. It provides simplified access to participating markets around the world and it harmonizes the manufacturer's strategy to demonstrate regulatory compliance between the participating RA's.
- Planned audits are less stressful than unannounced audits. The manufacturer can choose who will audit their facility as long as they choose from the authorized Auditing Organization list. There are also benefits for each of the RA participants too, beyond just creating a unified, standard auditing process. Auditing is expensive and time-consuming for RAs.
- The MDSAP encourages manufacturers to leverage third-party authorized Auditing Organizations, rather than relying on RA auditors to certify compliance.

Potential disadvantages of the MDSAP

- MDSAP compliance is tightly associated with certain standards. As a result, any updates or changes to standards can cause challenges for manufacturers who are in the midst of a multi-year audit process. For example, the withdrawal of ISO 13485:2003 on March 1, 2019, caused havoc for medical device manufacturers. To maintain MDSAP certification, they had to modify their QMS to comply with the requirements of the revised ISO 13485:2016 standard. Further complicating this is the fact that participating regulatory authorities may have different timetables for transitioning their regulations to the latest ISO 13485:2016 revision.
- There are specific costs associated with the MDSAP. Retaining a third-party AO to conduct audits can be very expensive depending on the scope of the audit, especially compared to audits performed directly by RAs. While the MDSAP covers compliance for 5 major markets, there are over 113 global regulatory regimes covering medical technology (devices, in vitro diagnostics, and software). Manufacturers will still have to support additional compliance processes depending on the number of markets they operate in.
- Some markets, however, do not provide a choice. Canada, for example, has officially transitioned away from the CMDCAS (Canadian Medical Devices Conformity Assessment System) to the MDSAP. This has made it mandatory for medical device manufacturers to be MDSAP certified if they want to go to market in Canada. This could create a burden for some manufacturers who only wish to distribute into Canada and not any of the other four MDSAP markets. Refer to Canada's FAQ for more information.

Ready to participate? – Here's how to get started

Here are some specific steps to help you get started with an MDSAP audit:

1. Contact one of the approved Auditing Organizations. The FDA's list of approved AO's is a good reference to find potential auditors.
2. Complete a questionnaire to see if you qualify, then see what steps you need to take to schedule your audit.
3. Ask for a quote, and comparison shop as each AOs pricing can vary significantly.
4. Complete the required forms for the AO.
5. Present any current products, registrations, licenses you have for each market.
6. Explain the types of products your company manufactures.
7. Schedule your audit with the AO.

Completing a successful MDSAP audit

The best way to pass your MDSAP audit is to create and maintain an effective Quality Management System (QMS). Having an effective and properly resourced QMS will ensure that the activities required for manufacturing safe and effective medical devices are correctly documented, current, and easy to present to any auditor.

While MDSAP compliance is mainly process-based, there are ways that technology can improve your audit results as well. Many times nonconformities can be driven by siloed systems, or manual communication steps that don't get fully completed. One example is how do you ensure that products are only being sold and marketed in markets where regulatory clearance has been obtained? This seems like a simple question, but for manufacturers with a large portfolio of products distributed across multiple markets, it can be quite difficult.

Regulatory registrations and certifications are either managed manually or within a Regulatory Information Management (RIM) system. Go-to-market activities are typically managed within an ERP or CRM system. Adopting a RIM platform, and integrating it with these resource planning and sales systems can allow manufacturers to automatically control selling status directly based on regulatory clearance—completely eliminating a potential nonconformity.

Integrations between eQMS and RIM systems can also be tremendously helpful. Rather than manually passing safety and performance information between departments, manufacturers can ensure that the most up-to-date quality information and relevant records are included in and associated with regulatory submissions. This not only strengthens compliance, but it can speed up and streamline submission review, allowing products to get to market more quickly.

Glossary

Assessor: An employee of a Regulatory Authority with the demonstrated personal attributes and competence to assess an Auditing Organization.

Audit: A systematic, independent, and documented process for obtaining records, statements of fact or other relevant information and assessing them objectively to determine the extent to which specified requirements are fulfilled.

Auditing Organization (AO): An organization that audits a medical device manufacturer for conformity with quality management system requirements and other medical device regulatory requirements. Auditing Organizations (AO) may be an independent organization or a Regulatory Authority which performs regulatory audits.

Lead Assessor: The individual responsible for leading the assessment team. The Lead Assessor manages an assessment team, prepares the assessment plan, conducts any assessment related meetings, and submits the formal assessment report.

MDSAP: Medical Device Single Audit Program

MDSAP International Consortium: responsible to jointly leverage regulatory resources (including third party and Regulatory Authority inspectorates) to manage an efficient, effective, and sustainable single audit program focused on the oversight of medical device manufacturers allowing for greater coverage in auditing manufacturers around the globe.

MDSAP Observer: A member of the World Health Organization (WHO) or a nonparticipating regulatory authority who observes and/or contributes to RAC activities.

MDSAP Affiliate Member: A non-participating MDSAP Observer or non-participating MDSAP RAC regulatory authority that wants to engage in MDSAP, demonstrates understanding of MDSAP and utilize MDSAP audit reports and/or MDSAP certificates for evaluating a medical device manufacturer's quality management system.

Medical Device Single Audit Program Regulatory Authority Council (RAC): The RAC consists of representatives from all participating regulatory authorities (Australia, Brazil, Canada, Japan, United States) and provides direction, oversight, and resources to support the MDSAP development, implementation, maintenance, and expansion.

Regulatory Authority (RA): A government body or other entity that exercises a legal right to control the use or sale of medical devices within its jurisdiction, and that may take enforcement action to ensure that medical products marketed within its jurisdiction comply with legal requirements. Currently, Australia, Brazil, Canada, Japan and the USA.

About Rimsys

Rimsys is bringing regulatory order to the MedTech industry. The Rimsys Regulatory Information Management (RIM) platform digitizes and automates regulatory activities, freeing teams from inefficient administrative work, and helping them confidently establish and secure global regulatory compliance. Unlike complex spreadsheets or expensive consultants, Rimsys centralizes all regulatory information, automates submission processes, and monitors relevant expirations, standards, and global regulations. Overburdened regulatory affairs teams struggle to keep pace with the increasingly complex global landscape. Rimsys streamlines all regulatory activities in an integrated platform, helping MedTech companies get to market more quickly and reduce risk of non-compliance, product recalls, and unexpected expirations.

For more information about Rimsys or to get a free demo of our platform, please visit rimsys.io.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