MITSUBISHI HEAVY INDUSTRIES AMERICA INC.

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SL 124
SL 097/25-006
FAA AD 2025-16-09 – Pacific Scientific Company Seat Restraint System Rotary Buckle Assemblies

NOTE

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MU–2

SERVICE LETTER

MITSUBISHI HEAVY INDUSTRIES, LTD.
NAGOYA AEROSPACE SYSTEMS WORKS
10, OYE-CHO, MINATO-KU, NAGOYA, AICHI, JAPAN

JCAB T.C.: No. 124
FAA T.C.: No. 097/25-006

DATE: September 10, 2025

SUBJECT: FAA AD 2025-16-09 – Pacific Scientific Company Seat Restraint System Rotary Buckle Assemblies

MODELS AFFECTED: All MU-2B Airplanes

This Mitsubishi Heavy Industries, Ltd. (MHI) Service Letter is issued to ensure that all MU-2 owners and operators have received Federal Aviation Administration (FAA) Airworthiness Directive (AD), AD 2025-16-09, dated August 12, 2025 and effective September 22, 2025.

FAA AD 2025-16-09 applies to Pacific Scientific Company rotary buckle assemblies, P/N 1111475-01/-03, installed on MU-2B airplanes by FAA Supplemental Type Certificate (STC) SA1751SW. For aircraft with FAA STC SA1751SW installed, please read FAA AD 2025-16-09 for required maintenance actions. If the aircraft does not have STC SA1751SW installed, no action is required.

Parker Meggitt provides additional information at its website:
https://www.meggitt.com/services_and_support/customer_experience/update-on-buckle-assembly-service-bulletins/

For questions and replacement parts, please contact Parker Meggitt Customer Services and Support, Email: TechSupport@meggitt.com.

MHI and MHIA strongly recommend that all MU-2 owners and operators comply with the FAA AD 2025-16-09 immediately to assure the safety benefits of the improved restraint system.

JCAB T.C.: No.124 DATE: September 10, 2025
FAA T.C.: No.097/25-006

If you have any questions related to the FAA STC No. SA1751SW, please contact MHIA at the following contact information:

Mitsubishi Heavy Industries America, Inc.
Aircraft Product Support Division
450 N. Freeport Pkwy, Suite 3400, Coppell, Texas 75019
Email: mu-2support@mhia.com | Website: www.mu-2aircraft.com

[Federal Register, Volume 90 Number 157 (Monday, August 18, 2025)]
[Rules and Regulations]
[Pages 40038-40041]
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]
[FR Doc No: 2025-15688]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-0230; Project Identifier AD-2023-01064-A,Q,T; Amendment 39-23107; AD 2025-16-09]

RIN 2120-AA64

Airworthiness Directives; Various Airplanes

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is adopting a new airworthiness directive (AD) for all airplanes with certain Pacific Scientific Company rotary buckle assemblies (buckles) installed. This AD was prompted by a report of a manufacturing defect in the screws used inside the buckle. This AD requires inspecting the buckle screws, and depending on the results, reidentifying the buckle, replacing the screws and reidentifying the buckle, or replacing the buckle. This AD also allows optionally prohibiting use of the seat until the actions required by this AD are accomplished. This AD also prohibits installing certain buckles on any airplane. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective September 22, 2025.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 22, 2025.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-0230; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Parker Meggitt material identified in this AD, contact Parker Meggitt Services, 1785 Voyager Avenue, Simi Valley, CA 93063; phone: 877-666-0712; email:*TechSuppor@meggitt.com;* website: *Meggitt.com/services_and_support/customer_experience/update-on-buckle-assembly-service-bulletins.*
- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at*regulations.gov* under Docket No. FAA-2024-0230.

FOR FURTHER INFORMATION CONTACT:

David Kim, Aviation Safety Engineer, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712; phone: 562-627-5274; email: *David.Kim@faa.gov*.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all airplanes with a restraint system with a Pacific Scientific Company rotary buckle assembly (buckle) part number (P/N) 1111475 (all dash numbers) or P/N 1111548-01 installed having a date of manufacture (DOM) between January 2012 and September 2012 inclusive, or an unknown DOM. The NPRM was published in the **Federal Register** on February 29, 2024 (89 FR 14783). The NPRM was prompted by a report of a manufacturing defect in the

screws used inside the buckle. In the NPRM, for airplanes with the identified buckle, the FAA proposed to require inspecting the buckle screws, and depending on the results of that screw inspection, replacing the screws and reidentifying the buckle, or replacing the buckle.

The FAA issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to all airplanes with a restraint system with a Pacific Scientific Company rotary buckle assembly (buckle) P/N 1111475 (all dash numbers) or P/N 1111548-01 installed having a DOM between January 2012 and April 2013 inclusive, or an unknown DOM. The SNPRM was published in the **Federal Register** on February 11, 2025 (90 FR 9293). The SNPRM was prompted by discovery that an additional lot of screws are affected by the unsafe condition. The SNPRM proposed to require the same actions as those proposed in the NPRM, but with a broader applicability and updated service information. As an alternative, the SNPRM also proposed to allow removing the male side from the lap of the restraint system assembly and installing a placard stating that use of the seat is prohibited; use of that crewmember seat or passenger seat would then be prohibited until the proposed actions are accomplished and the male side from the lap of the restraint system assembly is reinstalled.

The FAA is issuing this AD to prevent cracking and missing screw heads when under load. The unsafe condition, if not addressed could result in a failure of the buckle to restrain the occupant.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Boeing and United Airlines who supported the SNPRM without change.

The FAA received additional comments from three commenters, including Delta Air Lines (Delta) and American Airlines (American). The following presents the comments received on the SNPRM and the FAA's response to each comment.

Request To Apply Distinct P/N for Modified Buckles

An individual commenter requested the FAA revise the SNPRM to require identifying the buckle with a distinct P/N and/or more durable label. The commenter stated that the current labeling system wears off over time, potentially increasing the risk of confusion regarding compliance status. Further, the commenter contended that a unique identifier for compliant buckles would prevent unnecessary reinspection and improve long-term regulatory adherence.

The FAA disagrees. As the FAA stated in the SNPRM, the manufacturer introducing a new P/N for newly-manufactured parts is ideal; however, the FAA cannot mandate a company to change a P/N for an article. Applicable part-numbered buckles with an illegible or missing DOM, including those that may have never been marked, are considered as having an unknown DOM for the purposes of this AD and would be required to comply with the AD actions. The DOM marking was added to buckle P/N 1111475 (all dash numbers) starting in September 2012, while buckle P/N 1111548-01 has always been marked with the DOM. Additionally, part marking preservation and reidentification is the responsibility of the operators. No change has been made to this AD as a result of this comment.

Request To Clarify Screw Replacement Requirement

American requested that the FAA clarify whether all four screws must be replaced if at least one of the four screws has a Torx head. American noted that the “Differences Between This SNPRM and the Referenced Material” section of the SNPRM stated that all four screws must be replaced with hex head screws if any number of Torx head screws are found, but that the required actions specify replacement of only Torx head screws. American stated it was not sure if a buckle would have a mix of screws. Delta requested that the FAA revise paragraphs (g)(1)(ii)(B) and (g)(2)(ii)(B) of the proposed AD to require replacing all four screws if at least one of the fours screws is found to have a Torx head. Delta explained that the current language might lead operators to interpret that only Torx head screws found need to be replaced, rather than all four, as stated in the referenced material.

The FAA agrees to clarify the screw replacement requirement in this AD and disagrees with the request to require replacement of all four screws if at least one of the four screws has a Torx head. Although the material referenced in this AD specifies replacing all four screws if at least one screw is a Torx head, this AD only requires the replacement of Torx head screws. Hex head screws are not subject to the unsafe condition and therefore do not need to be replaced for the buckle to be considered airworthy.

No change is necessary to this AD regarding these comments.

Request To Extend Compliance Time

An individual commenter requested that the FAA extend the proposed 12-month compliance time to a compliance time of 18 to 24 months, due to constraints such as parts availability and fleet size. The commenter stated that the FAA's assertion that replacement parts are readily available may not fully account for global supply chain delays.

The FAA disagrees. The FAA determined the proposed 12-month compliance time after factoring the time needed to process the proposed AD before issuance of the final rule, as well as after evaluating the associated safety risks. According to the manufacturer, an ample number of spare parts and screws are in stock and will be available to modify the U.S. fleet within the required compliance time. To the extent spare parts may become unavailable, the FAA cannot base AD actions upon parts availability. While every effort is made to avoid grounding airplanes, the FAA must address the unsafe condition. The FAA did not make any changes to this final rule as a result of this comment.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Parker Meggitt Service Bulletin SB 1111475-25-001-2023 and SB 1111548-25-001-2023, both Revision 002, both dated April 1, 2024. This material specifies procedures for inspecting the buckle for any missing or loose screw heads and, depending on the results, replacing the buckle and sending the removed buckle to Parker Meggitt for repair or replacement. If after that first inspection, all of the screw heads are intact, this material specifies procedures for inspecting the buckle for any Torx head screws (alloy steel) and, depending on the results, allowing the buckle assembly to remain in-service temporarily, replacing any Torx head screws (alloy steel) with new hex head screws (stainless steel), and checking the functionality of the buckle. This material also specifies procedures for removing a buckle from a restraint system, installing a buckle on a restraint system, and returning buckles to Parker Meggitt. If the buckle passes the specified inspections or is modified by replacing Torx head screws (alloy steel) with new hex head screws (stainless steel), this material specifies procedures for reidentifying the back of the buckle. The buckle may be included as a component of a different part-numbered restraint system assembly. This material identifies known affected restraint system assembly P/Ns. These documents are distinct since they apply to different airplane configurations. This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the **ADDRESSES** section.

Costs of Compliance

The FAA estimates that this AD affects 21,313 buckles installed on restraint systems on airplanes worldwide. The FAA has no way of knowing the number of airplanes of U.S. Registry that may have a restraint system with an affected buckle installed. The estimated costs on U.S. operators reflects the maximum possible costs based on affected buckles installed on restraint systems in airplanes worldwide. Labor rates are estimated at $85 per work-hour. Based on these numbers, the FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per buckle	Cost on U.S. operators
Inspecting a buckle	.1 work-hour × $85 per hour = $9	$0	$9	Up to $191,817.

Estimated Costs for Optional Actions

Action	Labor cost	Parts cost	Cost per product
Removing male side of lap belt and placarding seat inoperative	1.5 work-hours × $85 per hour = $128	nominal	$128

The FAA estimates the following costs to do any necessary repairs that would be required based on the results of the inspection. The agency has no way of determining the number of buckles that might need this repair:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per buckle
Replacing a set of screws (four)	.5 work-hour × $85 per hour = $43	nominal	$43.
Replacing a buckle	.5 work-hour × $85 per hour = $43	$740	783.
Reidentifying a buckle	minimal	nominal	nominal.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of

government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

- Air transportation
- Aircraft
- Aviation safety
- Incorporation by reference
- Safety

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39—AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2025-16-09 Various Airplanes: Amendment 39-23107; Docket No. FAA-2024-0230; Project Identifier AD-2023-01064-A,Q,T.

(a) Effective Date

This airworthiness directive (AD) is effective September 22, 2025.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all airplanes, certificated in any category, with a restraint system with a Pacific Scientific Company rotary buckle assembly (buckle) part number (P/N) 1111475 (all dash numbers) or P/N 1111548-01 installed having a date of manufacture (DOM) between January 2012 and April 2013 inclusive, or an unknown DOM. These buckles may be installed on, but not limited to, The Boeing Company model airplanes.

Note 1 to paragraph (c): The buckle may be included as a component of a different part-numbered restraint system assembly.

Note 2 to paragraph (c): These buckles may also be installed on helicopters; however, the FAA determined that a shorter compliance time to accomplish the required actions is required for buckles installed on helicopters. Accordingly, the FAA published a separate AD (AD 2024-20-04, Amendment 39-22863 (89 FR 85040, October 25, 2024)) to address all helicopters with an affected buckle installed.

(d) Subject

Air Transport Association (ATA) of America Code: 25, Equipment/Furnishings, or Joint Aircraft System Component (JASC) Code 2500, Cabin Equipment/Furnishings; and 2510, Flight Compartment Equipment.

(e) Unsafe Condition

This AD was prompted by a report of a manufacturing defect in the screws used inside the buckle. The FAA is issuing this AD to prevent cracking and missing screw heads when under load. The unsafe condition, if not addressed, could result in a failure of the buckle to restrain the occupant.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) For airplanes with buckle P/N 1111475 (all dash numbers), within 12 months after the effective date of this AD, inspect each buckle screw for cracked, loose, and missing screw heads by following the Accomplishment Instructions, paragraphs B.(1) and (2), of Parker Meggitt Service Bulletin SB 1111475-25-001-2023, Revision 002, dated April 1, 2024 (SB 1111475-25-001-2023 Rev 002).

(i) If any screw has a cracked, loose, or missing screw head, before further flight, replace the buckle with an airworthy buckle.

(ii) If none of the four screw heads are cracked, loose, or missing, before further flight, inspect each screw to determine if any screw has a Torx head by using one of the following methods in the Accomplishment Instructions of SB 1111475-25-001-2023 Rev 002: paragraph B.(4)(a) (Magnet Test); paragraph B.(4)(b) (Inspection); or paragraphs C.(2) through (4) (removing the buckle from the restraint system) and paragraphs D.(1)(a) through (d) (disassembling the buckle).

(A) If none of the four screws have a Torx head, before further flight, reassemble the buckle (if necessary) by following the Accomplishment Instructions, paragraphs D.(1)(f) through (l), of SB 1111475-25-001-2023 Rev 002, and reidentify the buckle with “INS. A” by following the Accomplishment Instructions, paragraph B.(6), of SB 1111475-25-001-2023 Rev 002.

(B) If at least one of the four screws has a Torx head, before further flight, with the buckle removed, replace each Torx head screw with a hex head screw, reassemble the buckle, and reidentify the buckle with “MOD. A” by following the Accomplishment Instructions, paragraphs D.(1)(e) through (m), of SB 1111475-25-001-2023 Rev 002, except you are not required to return any parts to Parker Meggitt. If a screw head breaks off during disassembly, before further flight, replace the buckle with an airworthy buckle.

Note 3 to paragraph (g)(1): SB 1111475-25-001-2023 Rev 002 refers to a magnifying glass as an “eye loupe.”

(2) For airplanes with buckle P/N 1111548-01, within 12 months after the effective date of this AD, inspect each buckle screw for cracked, loose, and missing screw heads by following the Accomplishment Instructions, paragraph B.(1), of Parker Meggitt SB 1111548-25-001-2023, Revision 002, dated April 1, 2024 (SB 1111548-25-001-2023 Rev 002).

(i) If any screw has a cracked, loose, or missing screw head, before further flight, replace the buckle with an airworthy buckle.

(ii) If none of the four screw heads are cracked, loose, or missing, before further flight, inspect each screw to determine which screws have a Torx head by using one of the following methods in the Accomplishment Instructions of SB 1111548-25-001-2023 Rev 002: paragraph B.(3)(a) (Inspection); or paragraph C. (removing the buckle from the restraint system) and paragraphs D.(1)(a) through (c) (disassembling the buckle).

(A) If none of the four screws have a Torx head, before further flight, reassemble the buckle (if necessary) by following the Accomplishment Instructions, paragraphs D.(1)(e) through (l), of SB 1111548-25-001-2023 Rev 002, and reidentify the buckle with “INS. A” by following the Accomplishment Instructions, paragraph B.(5), of SB 1111548-25-001-2023 Rev 002.

(B) If at least one of the four screws has a Torx head, before further flight, with the buckle removed, replace each Torx head screw with a hex head screw, reassemble the buckle, and reidentify the buckle with “MOD. A” by following the Accomplishment Instructions, paragraphs D.(1)(d) through (m), of SB 1111548-25-001-2023 Rev 002, except you are not required to return any parts to Parker Meggitt. If a screw head breaks off during disassembly, before further flight, replace the buckle with an airworthy buckle.

Note 4 to paragraph (g)(2): SB 1111548-25-001-2023 Rev 002 refers to a magnifying glass as an “eye loupe.”

(3) For a crewmember seat or passenger seat with a restraint system with a buckle identified in paragraph (c) of this AD installed, as an option for the actions required by paragraph (g)(1) or (2) of this AD, as applicable, within 12 months after the effective date of this AD:

(i) Remove the male side from the lap of the restraint system assembly.

(ii) Fabricate a placard using at least 1/8 inch letters with the words “USE OF THIS SEAT IS PROHIBITED” on it and install the placard on the seat within the crewmember or passenger's clear view. The seat is then inoperative until the actions required by paragraph (g)(1) or (2) of this AD, as applicable, are accomplished and the male side from the lap of the restraint system assembly is reinstalled.

(h) Parts Installation Prohibition

As of the effective date of this AD, do not install a buckle identified in paragraph (c) of this AD on any airplane unless the buckle is marked with “MOD. A” or “INS. A.”

(i) Credit for Previous Actions

You may take credit for actions required by paragraph (g)(1) or (2) of this AD, as applicable, if the corresponding actions were performed before the effective date of this AD using Parker Meggitt SB 1111475-25-001-2023, Revision 001, dated December 1, 2023, or Parker Meggitt SB 1111548-25-001-2023, Revision 001, dated December 1, 2023, as applicable, and provided torque of 15 to 25 in-lbs. (1.69 to 2.82 N-m) was applied on the four hex head screws (P/N 0901101-149) during any repair of the buckle.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, West Certification Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the West Certification Branch, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: *AMOC@faa.gov*.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(k) Additional Information

For more information about this AD, contact David Kim, Aviation Safety Engineer, FAA, 3960 Paramount Boulevard, Lakewood, CA 90712; phone: 562-627-5274; email: *David.Kim@faa.gov*.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the material listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this material as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Parker Meggitt Service Bulletin SB 1111475-25-001-2023, Revision 002, dated April 1, 2024.

(ii) Parker Meggitt Service Bulletin SB 1111548-25-001-2023, Revision 002, dated April 1, 2024.

(3) For Parker Meggitt material identified in this AD, contact Parker Meggitt Services, 1785 Voyager Avenue, Simi Valley, CA 93063; phone: 877-666-0712; email: *TechSupport@meggitt.com;* website: *meggitt.com/services_and_support/customer_experience/update-on-buckle-assembly-service-bulletins*.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th Street, Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit *www.archives.gov/federal-register/cfr/ibr-locations* or email *fr.inspection@nara.gov*.

Issued on August 12, 2025.

Steven W. Thompson,

Acting Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2025-15688 Filed 8-15-25; 8:45 am]

BILLING CODE 4910-13-P

This document is subject to the Export Controls and Restrictions listed on the first page.

SERVICE BULLETIN

FROM : PARKER MEGGITT TECHNICAL PUBLICATIONS

TO : HOLDERS OF SB 1111475-25-001-2023 FOR THE RESTRAINT SYSTEM ROTARY BUCKLE WITH PNR 1111475 SERIES

TRANSMITTAL SHEET

REVISION 002
dated Apr 01/24

The Table that follows gives a list of the primary changes in this manual :

Page No.	Description of Change	Effectivity
1, 2, and 15	Revised ‘September 2012’ to ‘April 2013’.	—
2	Updated paragraph 1.B.(3).	—
8	Added paragraph 1.E.(2)(c). Updated paragraph 1.E.(3)(b).	—
9	Added paragraph 1.E.(3)(h).	—
10	Updated Figure 2.	—
11	Updated paragraph 2.B.(1).	—
13	Updated the website address. Added Additional Materials.	—
14	Updated Special Tooling – Price and Availability. Added Table 2 Special Tools or Equipment.	—
15	Updated paragraph 4.A.(1). Updated note.	—
17	Added magnet test for rotary buckle with Velcro.	—
18	Added Figure 6 and direction of magnet slip in Figure 7.	—
21	Updated Figure 10 with new graphics.	—
22	Revised paragraph 4.C.(3).	—
25	Updated paragraph 4.D.(1)(g).	—
26	Added step (5). Updated steps (3) to (6). Added paragraph 4.D.(1)(n).	—
27	Updated Figure 15 with new graphics.	—

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Enabling Engineering
Breakthroughs that Lead
to a Better Tomorrow

CAGE Code: 45402

SERVICE BULLETIN

CHAPTER 25 - EQUIPMENT/FURNISHINGS

Information Regarding Screw Inspection for the

Restraint Systems

with PNR 1111475 Series Rotary Buckles

Trade Compliance Regulations :
The information contained in this Service Bulletin may be subject to Trade Compliance Regulations of the European Union, USA or other countries. Each recipient of this Service Bulletin is responsible to ensure that the transfer or use of any information contained in this document complies with all relevant Trade Compliance Regulations.

Export Control Standards :			
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Checked by : Name / Date	N/A	Checked by : Name / Date	PMI / Apr 01/24

This manual is published by Parker Meggitt (CAGE Code = 45402) d/b/a Pacific Scientific HTL.

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1. PLANNING INFORMATION

A. Effectivity

(1) This Service Bulletin (SB) covers all restraint systems with PNR 1111475 Series rotary buckles, which may contain suspect screws. According to Parker Meggitt records, the restraint systems and buckle assemblies subject to this SB are shown in Table 1 on page 3.

(2) This SB will provide details for inspection and if required, replacement of suspect screws used in the rotary buckles of the restraint systems. This SB includes tooling information, illustrations, and contact information.

(3) This SB is not applicable to new original equipment manufacturer (OEM) production units being delivered now, or to any units manufactured before January 2012 or after April 2013.

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B. Applicability

(1) Owners or operators of Parker Meggitt [Pacific Scientific / HTL] restraint systems that use PNR 1111475 Series rotary buckle assembly that have a Date of Manufacture (DOM) between January 2012 and April 2013, or those units that do not have a clear or legible DOM.

(2) This SB does not apply to new production units manufactured before January 2012 or after April 2013. New production units do not contain the suspect screws.

(3) This SB applies to all restraint systems and rotary buckles on-wing or in inventory that fall within the specified DOM ranges.

C. Concurrent Requirements

(1) Not applicable.

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Table 1

Restraint Systems and Corresponding Rotary Buckle Part Numbers

Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR
0118026-05	1111475-05	1109026-51-001	1111475-01	1111460-03	1111475-13
0118030-07	1111475-83	1109026-61-001	1111475-01	1111466-93	1111475-83
0118030-300	1111475-03	1109042-01-001	1111475-01	N/A	1111475-01
0118038-01	1111475-01	1109050-01-001	1111475-01	N/A	1111475-03
0118041-05	1111475-15	1109050-11-001	1111475-11	N/A	1111475-05
1101906-101	1111475-51	1109207-03-001	1111475-03	N/A	1111475-101
1101906-103	1111475-53	1111067-101	1111475-01	N/A	1111475-11
1101906-11	1111475-51	1111067-102	1111475-03	N/A	1111475-13
1101906-13	1111475-53	1111131-03	1111475-03	N/A	1111475-15
1106193-03	1111475-03	1111147-01-001	1111475-01	N/A	1111475-21
1106193-13	1111475-13	1111150-01-001	1111475-01	N/A	1111475-23
1106193-53	1111475-03	1111150-15-001	1111475-05	N/A	1111475-41
1109012-03-001	1111475-03	1111158-03-226	1111475-03	N/A	1111475-51
1109026-01-001	1111475-01	1111158-103-226	1111475-03	N/A	1111475-53
1109026-11-001	1111475-01	1111165-01-001	1111475-41	N/A	1111475-65
1109026-31-001	1111475-01	1111165-11-001	1111475-101	N/A	1111475-75
1109026-41-001	1111475-01	1111460-01	1111475-11	N/A	1111475-83

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Table 1 *(Continued)*
Restraint Systems and Corresponding Rotary Buckle Part Numbers

Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR
1111492-05	1111475-05	1111500-263	1111475-03	1111572-71-001	1111475-01
1111492-35	1111475-15	1111500-31	1111475-01	1111572-73-001	1111475-03
1111492-45	1111475-05	1111500-33	1111475-03	1111572-75-001	1111475-05
1111492-51	1111475-01	1111500-341	1111475-01	1111572-81-001	1111475-01
1111492-53	1111475-03	1111500-351	1111475-01	1111572-85-001	1111475-05
1111500-101	1111475-01	1111500-41	1111475-01	1111585-55-001	1111475-05
1111500-113	1111475-03	1111500-43	1111475-03	1111587-05-001	1111475-05
1111500-123	1111475-05	1111500-65	1111475-05	2000013-01-001	1111475-01
1111500-125	1111475-05	1111500-83	1111475-03	2000013-03-001	1111475-03
1111500-141	1111475-01	1111572-01-001	1111475-01	2000013-11-001	1111475-01
1111500-143	1111475-03	1111572-17-104	1111475-21	2000013-13-001	1111475-03
1111500-163	1111475-23	1111572-17-245	1111475-21	2000013-301-001	1111475-01
1111500-211	1111475-01	1111572-19-104	1111475-23	2000013-303-001	1111475-03
1111500-233	1111475-03	1111572-19-224	1111475-23	2000014-01	1111475-01
1111500-251	1111475-01	1111572-19-245	1111475-23	2000014-03	1111475-03
1111500-253	1111475-03	1111572-55-001	1111475-65	2000014-81	1111475-01

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Table 1 *(Continued)*
Restraint Systems and Corresponding Rotary Buckle Part Numbers

Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR
2000021-05-001	1111475-65	2000067-41	1111475-01	2000114-01-001	1111475-01
2000029-01	1111475-01	2000091-05-001	1111475-05	2000114-03-001	1111475-03
2000029-03	1111475-03	2000097-13	1111475-03	2000114-101-001	1111475-01
2000029-101	1111475-01	2000097-15	1111475-05	2000114-101-225	1111475-01
2000029-103	1111475-03	2000104-103-226	1111475-03	2000114-103-001	1111475-03
2000029-11	1111475-11	2000104-23-226	1111475-03	2000114-103-225	1111475-03
2000029-31	1111475-01	2000104-43-226	1111475-03	2000114-11-001	1111475-01
2000029-33	1111475-03	2000107-103	1111475-03	2000114-21-001	1111475-01
2000029-61	1111475-01	2000107-23	1111475-03	2000114-23-001	1111475-03
2000029-73	1111475-63	2000108-01-001	1111475-01	2000114-31-001	1111475-01
2000037-05	1111475-05	2000108-03-001	1111475-03	2000114-41-001	1111475-01
2000040-01	1111475-01	2000108-101-001	1111475-01	2000114-43-001	1111475-03
2000052-03	1111475-03	2000108-103-001	1111475-03	2000114-51-001	1111475-01
2000058-01	1111475-01	2000108-105-001	1111475-05	2000114-53-001	1111475-05
2000067-01	1111475-01	2000108-11-001	1111475-01	2000114-61-001	1111475-01
2000067-03	1111475-03	2000108-13-001	1111475-03	2000114-71-001	1111475-01

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Table 1 *(Continued)*
Restraint Systems and Corresponding Rotary Buckle Part Numbers

Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR	Restraint Systems PNR	Rotary Buckle PNR
2000114-71-225	1111475-01	2000124-103-001	1111475-03	2100018-03-104	1111475-23
2000114-73-001	1111475-03	2000124-21-001	1111475-01	2100018-03-245	1111475-23
2000114-73-225	1111475-03	2000124-23-001	1111475-03	2100018-13-104	1111475-23
2000115-101	1111475-01	2000124-31-001	1111475-01	2100018-13-224	1111475-23
2000115-103	1111475-03	2100011-03	1111475-03	2100018-13-245	1111475-23
2000115-121	1111475-01	2100018-01-104	1111475-21	2100023-15-001	1111475-05
2000124-101-001	1111475-01	2100018-01-245	1111475-21	Blank	Blank

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D. Reason

(1) In 2012 a specific lot of PNR 0901101-123 screws were improperly zinc chromate plated. This manufacturing issue resulted in the screws becoming brittle. Evidence has shown that the screw heads can break-off under load creating an unsafe condition and improper function of the rotary buckle used on the restraint system.

(2) Screws (PNR 0901101-123) used on rotary buckles (PNR 1111475 Series) are susceptible to premature failure of the screw.

(3) Parker Meggitt has received field reports of cracked and missing screw heads. Figure 1 on page 7 shows an example of a PNR 1111475 Series buckle with a broken screw head.

NOTE 1 : This image is for reference only. In most cases, the broken screw head will be missing and not immediately obvious. Inspection per section 4.B. is required to determine whether a buckle has broken screws.

Front View

Back View

Figure 1
PNR 1111475 Series Rotary Buckle and Broken Screw Head

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E. Description

(1) Summary :

(a) In review and analysis of the evidence and data gathered from an investigation, Parker Meggitt has determined that restraint systems with the rotary buckles in question require inspection in order to validate the presence and integrity of the screw heads inside the buckle.

(2) Conclusion and Corrective Actions :

(a) In September 2012, Parker Meggitt added the DOM to the buckle assembly.

(b) A buckle assembly design change in July 2013 introduced a hex stainless steel screw (PNR 0901101-149). These screws are a different material, and have a different screw head, which makes them visually distinguishable from the previous part number.

(c) Based on a comprehensive review of material certs of the affected batches, we will include an additional batch that was introduced into production immediately following the corrective action implemented in 2012. We are therefore increasing the applicability window to April 2013.

(3) Suggested Operator Action :

(a) Refer to the flowchart in Figure 2 on page 10.

(b) Operators should check all restraint systems and buckle assemblies in service and inventory that meet the criteria in sections 1.A. & 1.B. This also applies to restraint systems in storage or any restraint system that may have had a buckle replaced with one of these part numbers, or that may have been repaired using the suspect screws.

NOTE : Any buckle assemblies with a missing screw head should be removed from service immediately.

(c) Visually inspect the restraint system's rotary buckle to determine the DOM (refer to section 4.A.).

1 Restraint systems with rotary buckles that have a DOM outside of the applicable ranges identified do not require inspection, replacement or any additional actions.

NOTE : Zinc chromate plated screw head type does not relate to the susceptibility to cracking. A design change replaced the zinc chromate plated screws (PNR 0901101-123) with stainless steel screws (PNR 0901101-149) that do not require zinc chromate plating. The new screws happened to have a hex head instead of a Torx head.

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(d) If the DOM does fall in the applicable range, visually inspect the restraint system's rotary buckle to determine whether any of the four screw heads are missing (refer to section 4.B.).

1 Buckles which have any missing screws should be taken out of service immediately. Replace the rotary buckle with a spare compliant rotary buckle and send the broken item back to Parker Meggitt for repair or replacement (refer to section 4.F.).

(e) If the rotary buckle has a broken/loose screw head, the rotary buckle should be removed from service immediately.

1 Replace the rotary buckle with a spare compliant rotary buckle and send the broken item back to Parker Meggitt for repair or replacement (refer to section 4.F.).

(f) If the four screw heads are intact, visually inspect the restraint system's rotary buckle to determine whether the screws have Torx heads (PNR 0901101-123) or hex heads (PNR 0901101-149) (refer to section 4.B.).

1 Buckles which have the suspect Torx head screws (PNR 0901101-123) that are still intact, should have the screws replaced with the hex head screws (PNR 0901101-149) per the instructions in this SB at a time convenient to the operator.

(g) If the four screw heads have hex heads, identify the rotary buckle with "**INS. A**" (refer to 4.B.(6) on page 20).

(h) (Optional) If the rotary buckle's DOM is outside the specified date range and is compliant per this SB, you may identify the rotary buckle with "**INS. A**" (refer to 4.B.(6) on page 20).

(i) (Optional) If the rotary buckle is missing its part number, identify the rotary buckle (refer to 4.B.(7) on page 20).

(j) This SB does not affect restraint systems which use other types of Parker Meggitt [Pacific Scientific] buckles.

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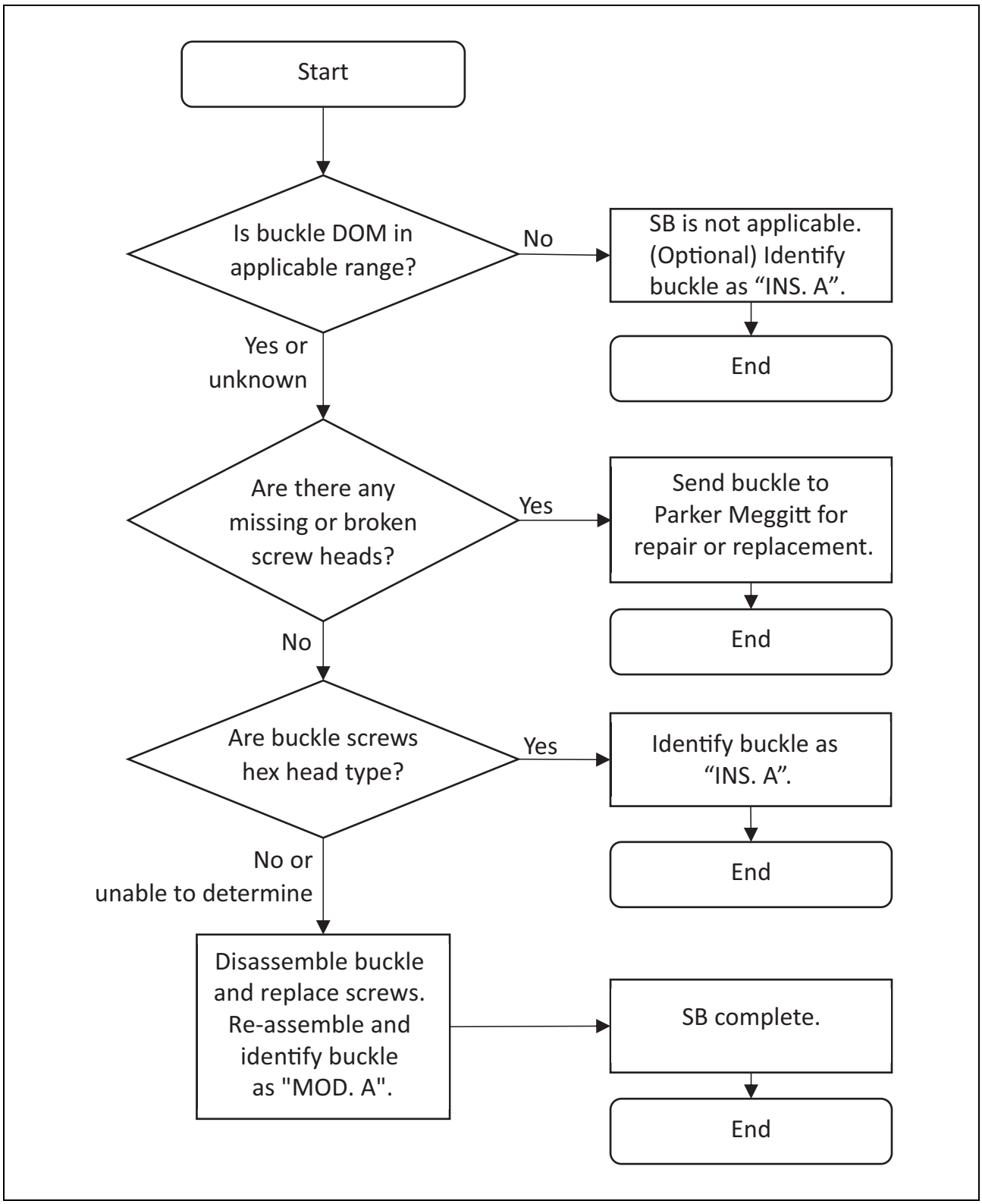

Figure 2
Flowchart of Required Operator Action

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2. INDUSTRY SUPPORT STATEMENTS

A. Warranty Information

(1) The manufacturing issue that resulted in the suspect screws occurred in 2012. Restraints that use PNR 1111475 Series buckle assemblies that were manufactured during the specified time period are no longer in warranty.

(2) Parker Meggitt will provide the replacement screws (PNR 0901101-149, Qty = 4) free of charge.

(3) Rotary buckles or restraint systems returned to Parker Meggitt with more damages or repairs outside the described warranty coverage of the SB 1111475-25-001-2023 will be chargeable scope.

B. Compliance

(1) Compliance with this SB is mandatory for the restraint system rotary buckles or rotary buckles in inventory with PNR 1111475 Series that meet the applicability requirement (refer to section 1.B.).

C. Approval

(1) Not applicable.

D. Manpower

(1) The manpower estimate is for direct labor only. The estimate does not include lost time.

(2) Adjust the estimate with operator man-hour data if necessary.

(3) The time required for the procedures described in section 4. of this SB is estimated to be :

(a) 0.1 man-hour to inspect and replace the rotary buckle from the restraint system.

(b) 0.5 man-hour to disassemble the rotary buckle, replace suspect screws with new screws, and reassemble the rotary buckle.

E. Weight and Balance

(1) Not applicable.

F. Electrical Load Data

(1) Not applicable.

G. Software Accomplishments Summary

(1) Not applicable.

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H. References

(1) Not applicable.

I. Other Publications Affected

(1) CMM 25-11-19 for rotary buckle assembly PNR 1111475 Series

(2) Restraint CMMs that contain PNR 1111475 Series rotary buckle Assemblies, including :

(a) CMM 25-11-44

(b) CMM 25-11-56

(c) CMM 25-11-57

(d) CMM 25-11-58

(e) CMM 25-11-60

(f) CMM 25-11-61

(g) CMM 25-11-64

J. Interchangeability

(1) Not applicable.

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3. MATERIAL INFORMATION

A. Material – Price and Availability

(1) The replacement screws, logo button, and steel balls will be provided free of charge (FOC).

(2) Please contact Parker Meggitt for information regarding parts availability.

(3) Please visit the following website for updated information regarding this SB :

(a) https://www.meggitt.com/services_and_support/customer_experience/update-on-buckle-assembly-service-bulletins/

B. Industry Support Information – Warranty

(1) There are no additional warranty provisions related to this bulletin.

C. Material Necessary for Each Component

NOTE : The following item listed is provided FOC.

(1) Hex Screw, PNR 0901101-149 (Qty = 4)

D. Additional Materials

NOTE : The following items listed will most likely not be needed. However, if a need arises due to loss or damage during modification, they are available FOC on an as-needed basis.

(1) (Available As-Needed) Replacement Logo Button, PNR 1101813-01

(2) (Available As-Needed) Replacement Steel Balls, PNR 0908100-40

E. Material Necessary for Each Spare

(1) Not applicable.

F. Re-identified Parts / Existing Parts Accountability

(1) Buckles with the new screws installed shall be identified as “**MOD. A**”. Refer to 4.D.(1).(m) on page 26 for the marking process for each buckle.

(2) Buckles that have been inspected and found to have the stainless steel screws with the hex head installed shall be identified as "**INS. A**". Refer to 4.B.(6) on page 20 for the marking process for each buckle.

(3) Removed buckles with missing part number shall be marked. Refer to 4.B.(7) on page 20 for marking process and refer to Table 1 on page 3 for part numbers of the restraint systems and related rotary buckles.

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G. Special Tooling – Price and Availability

NOTE : Equivalent items can be used.

Table 2
Special Tools or Equipment

Qty	Description	Manufacturer	Estimated Price and Availability
1	Neodymium magnet, 1/8 inch (3,175 mm) thick, 3/8 inch (9,525 mm) OD (https://www.mcmaster.com/5862k104/)	McMaster-Carr	Not available
1	Shim or feeler gauge (metal stock), 0.010 to 0.020 inch (0,25 to 0,50 mm) thick, 1/2 to 3/4 inch (13 to 19 mm), more than 2 inch (50 mm) long Specification: AMS-DTL-22499	Commercially available	Not available

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4. ACCOMPLISHMENT INSTRUCTIONS

A. Determine Applicability

(1) Check the PNR and DOM of the rotary buckle in service or inventory. Refer to Figure 1 on page 7 or Figure 15 on page 27 for PNR and DOM locations.

(2) If the rotary buckle is PNR 1111475 Series and has a DOM between January 2012 and April 2013, or does not have a clear or legible DOM, proceed with the screw inspection per section 4.B.

(3) If the DOM is later than April 2013, then the rotary buckle can remain in service with no further actions.

B. Screw Inspection Procedure for PNR 1111475 Series Rotary Buckle Assemblies

NOTE : Inspection is only applicable for rotary buckles with DOM described above.

(1) Use an inspection light to look through the belt openings in the rotary buckle. Refer to Figure 3 and Figure 4 on page 16 to locate the screws.

(2) Inspect for the presence of 2 screw heads each on the left side and the right side of the buckle. Refer to Figure 5 on page 16.

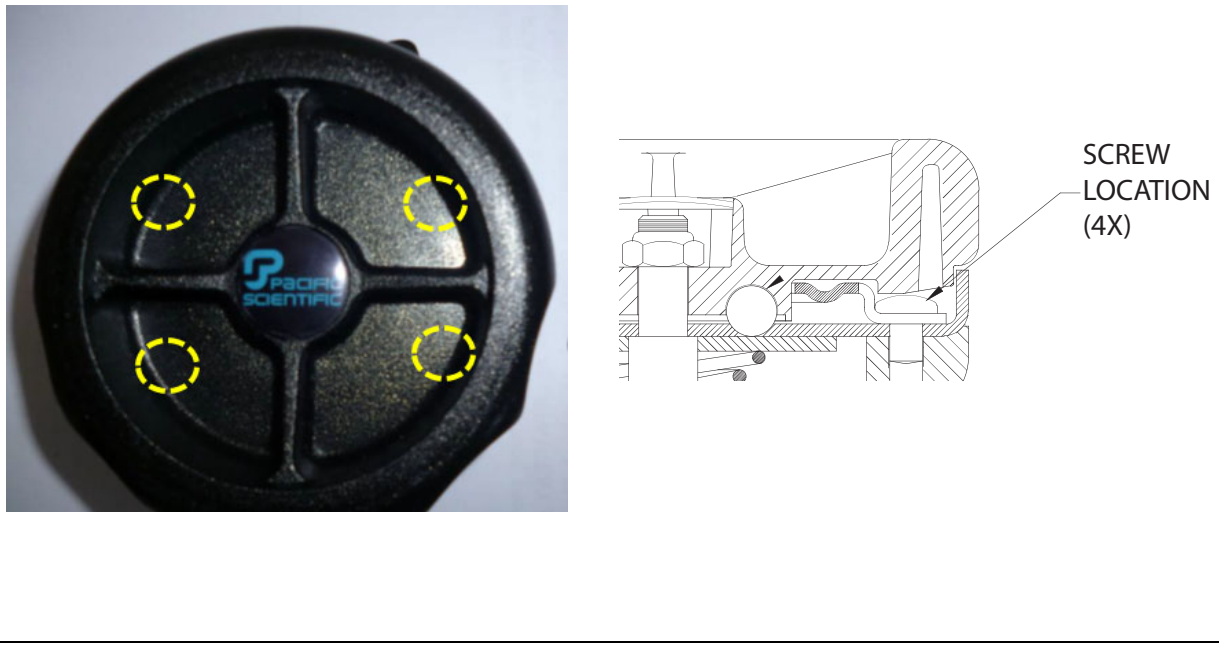

Figure 3
PNR 1111475 Series Rotary Buckle Screw Location

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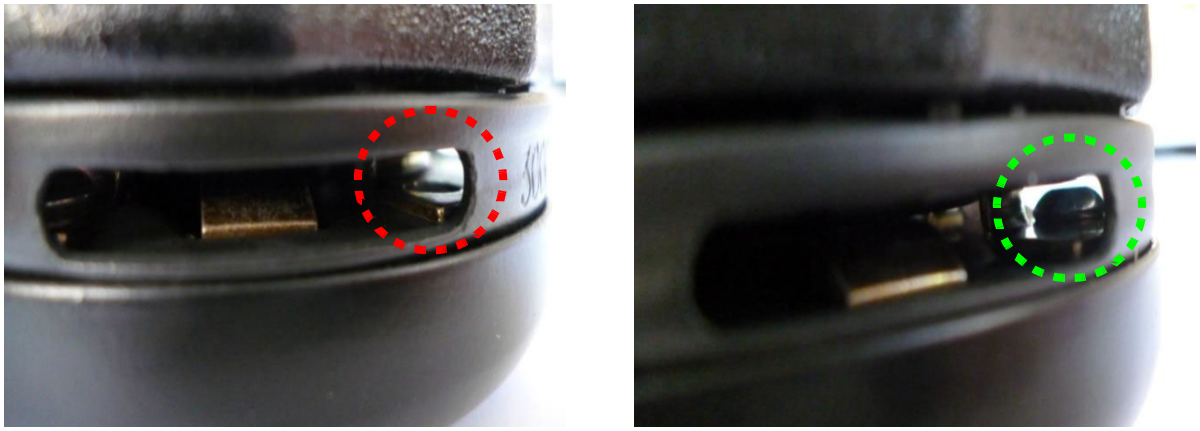
Figure 4
PNR 1111475 Series Rotary Buckle Openings for Inspection



Missing Screw Head

Intact Screw Head

Figure 5
PNR 1111475 Series Rotary Buckle Screw Head

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(3) If any screw head is not present or is separated or not attached to the screw shank in the buckle :

(a) Remove the buckle from service immediately. Refer to the procedure in section C. to remove the buckle from the restraint system.

(b) Replace the buckle with a new item. Refer to the procedure in section E. to install the new buckle in the restraint system.

(c) Send the damaged buckle back to Parker Meggitt for repair. Refer to section F. for contact information.

(4) If the screw heads are intact, do one of the three following methods to determine if the screws are Torx head (alloy steel) or hex head (stainless steel) screws :

(a) Method # 1 - Magnet Test

NOTE : Do not use the magnet test on a buckle with a rotary buckle pad, except if the pad has been removed.

1 Use a disc magnet (recommended 3/8 inch diameter by 1/8 inch thick) [9,5 mm diameter by 3,2 mm thick] to check the magnetism of the alloy versus stainless steel screws.

2 Hold the rotary buckle as follows :

a If the rotary buckle does not have Velcro attached, hold the rotary buckle with the back plate vertically and with one screw hole at a 12 o'clock position.

b If the rotary buckle does have Velcro attached as shown in Figure 6 on page 18, hold the rotary buckle such that the through (bolt) holes align vertically, one directly above the other.

3 Put a magnet against the buckle back in the circled yellow area in Figure 6 on page 18 or Figure 7 on page 18 and release the magnet.

4 Repeat 2 and 3 for the other 3 through (bolt) holes.

5 Interpret results for each of the following :

a If the magnet stays in place over the through (bolt) hole, this shows that the buckle has the Torx head (alloy steel) screws installed. The buckle WILL need the screws replaced. An example of this is shown in the left image of Figure 7 on page 18.

b If the magnet slips down to and stops at the center of the buckle, this shows that the buckle has the hex head (stainless steel) screws. The buckle will NOT need the screw replaced. An example of this is shown in the right image of Figure 7 on page 18.

c If the magnet slips off the buckle, the magnet is not strong enough to do this test. Use an applicable magnet.

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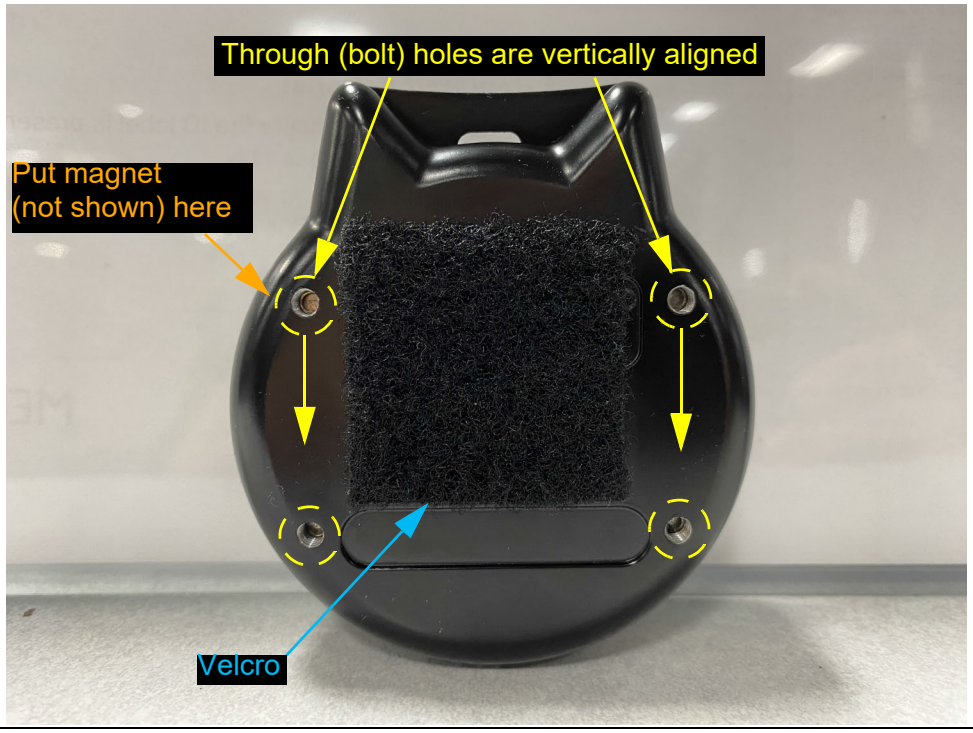
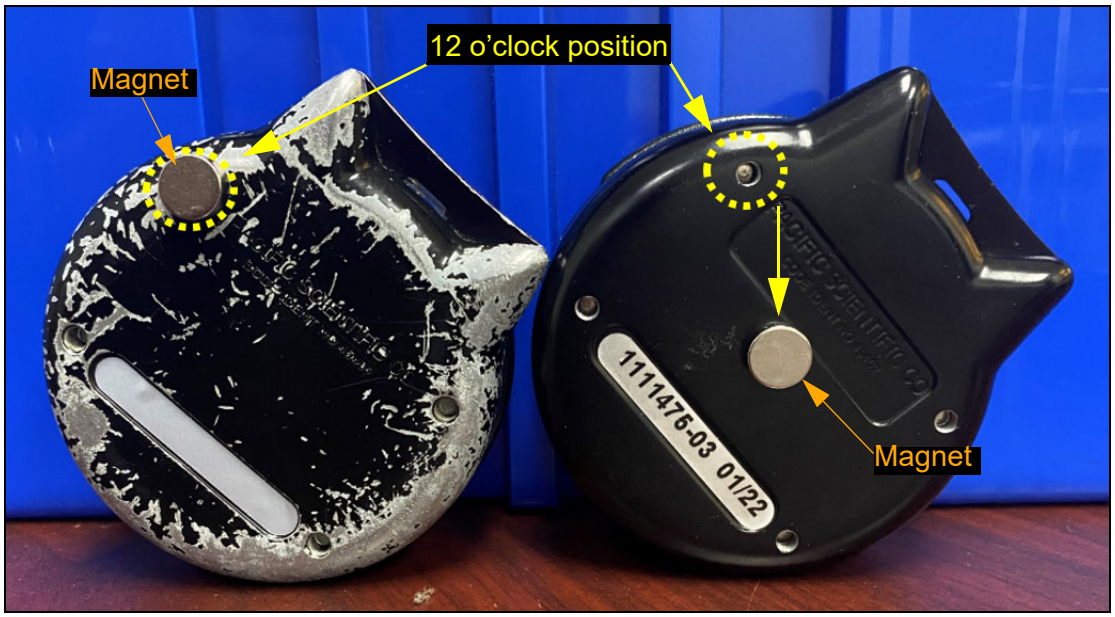


Figure 6
Magnet Test on PNR 1111475 Series Rotary Buckle with Velcro



Magnet is over the through (bolt) hole. Left rotary buckle uses Torx head (alloy steel).	Magnet slips to the center of the buckle. Right rotary buckle uses hex head (stainless steel).

Figure 7
Magnet Test on PNR 1111475 Series Rotary Buckle

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(b) Method # 2 - Inspection

1 Use an inspection light (100+ lumens light with eye loupe recommended) to look through the aperture between the handle and the non-rotating portion of the buckle (Figure 8) and inspect the screws to determine whether they have Torx heads or hex heads. The handle will need to be rotated slightly to provide the best view of the two lower screws and rotate fully to view the top screws. All screws will be in the same configuration within the affected production window. Refer to Figure 9 on page 20 to distinguish the screw head types.

(c) Method # 3 - Disassembly

1 Disassemble the rotary buckle. Refer to 4.C. on page 21.

2 Reassemble the rotary buckle if the screws have hex heads. Refer to 4.E. on page 26.

(5) If the screws have Torx heads (PNR 0901101-123), the buckle may remain in service temporarily, but the screws should be replaced as convenient to the operator. Refer to the procedure in section 4.D.(1) on page 23 to replace the screws.

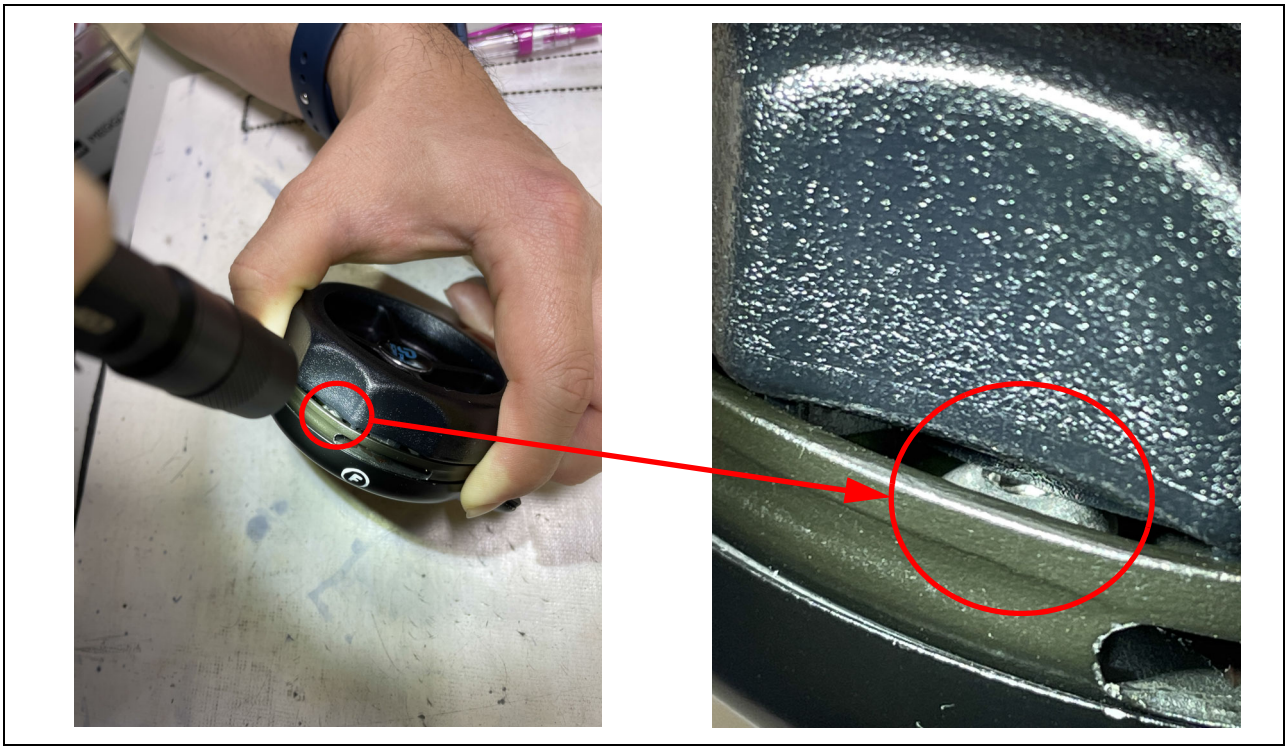

Figure 8
Side Belt Opening Inspection

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(6) If the screws have hex heads, then they are the newer stainless steel type (PNR 0901101-149) and do not need to be replaced. Re-identify the buckle as follows :

(a) Use a vibro engraving pen to engrave "**INS. A**" on the back of the buckle. If the buckle has a pad, use an ultra-fine permanent marker to mark **"INS. A"** on the label inside the buckle pad. Refer to Figure 10 for an example of the re-identified buckle and the location of the label for the buckle pad.

(b) Chem film touch up of marked area with MIL-DTL-81706 per manufacturer's instructions if vibro engraved on metal back.

(7) If the buckle assembly is missing its part number and removed from the restraint system, "Bag and Tag" the buckle assembly with records of the restraint system's part number. Re-identify the buckle as follows :

(a) Compare the "Bag and Tag" information with Table 1 on page 3 to identify the rotary buckle's part number.

(b) Use a vibro engraving pen to mark the part number. If the rotary buckle has a pad, use an ultra-fine permanent marker to mark the part number.

(c) Chem film touch up of marked area with MIL-DTL-81706 per manufacturer's instructions if vibro engraved on metal back.

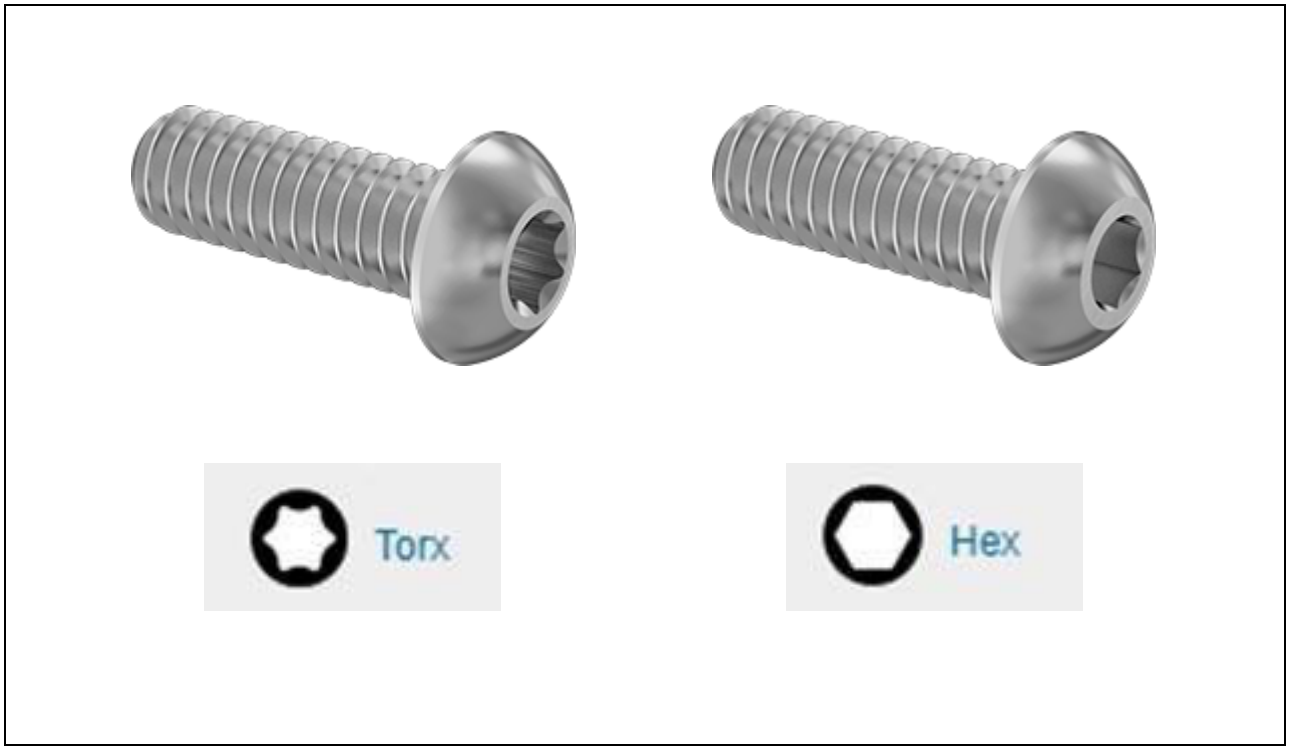

Figure 9
Torx Head Screws vs. Hex Head Screws

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C. Removal of Rotary Buckles

NOTE : Buckles can be removed from the restraint systems on-aircraft or off-aircraft.

(1) Before removing the rotary buckle from the restraint system, make sure the rotary buckle is identified (refer to Figure 10). If the rotary buckle is not identified, the rotary buckle should either be “Bag and Tagged” with restraint system upon removal or re-identified (refer to 4.B.(7) on page 20).

Figure 10

Re-Identified PNR 1111475 Series Rotary Buckle Assembly with “INS. A”

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(2) Refer to Figure 11.

(3) Insert a piece of thin metal stock or shim into the slot of the rotary buckle and push inward between the fitting and the buckle locking mechanism.

(4) Pull the fitting from the buckle.

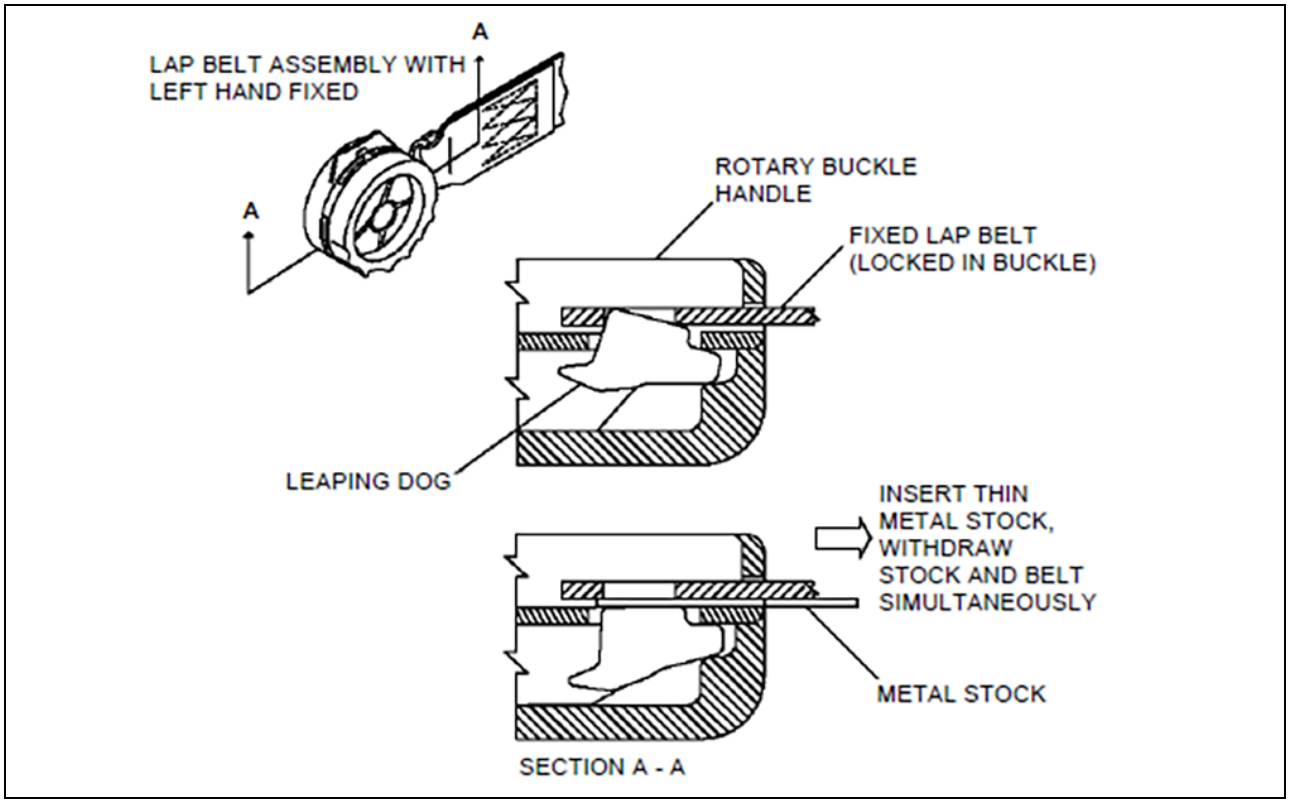

Figure 11
Removal of Rotary Buckle

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D. Replace Suspect Screws

(1) Screw Replacement Procedure for PNR 1111475 Series Rotary Buckle Assemblies

(a) Use a pry tool to pry the nameplate button (PNR 1101813-01) free from the buckle. If necessary, pierce the middle of the button (button is soft material). Try to damage the button as little as possible so that it can be used again.

NOTE : An example of the optimal pierce location is shown with a red dot in Figure 12.

(b) Remove the self-locking nut (PNR MS21083N4 or PNR MS20364-428) and the four vane handle (PNR 1111419-01, 1111419-03, 1111419-05, 1111432-01 or 1111517-01) by inserting a 1/8 inch [3,2 mm] Allen wrench in the socket of the center screw (PNR 1101548-1).

(c) Turn the center screw (PNR 1101548-1) clockwise while holding the handle firmly to keep the nut from turning. Raise the handle slightly, as it loosens, to keep the nut captured in the hex opening until the nut is completely free.

(d) Remove the three steel balls (PNR 0908100-40) and temporarily store them in a clean, safe place.

Figure 12
Logo Button Optimal Pierce Location

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(e) If the screws are the Torx head type (PNR 0901101-123) (as shown in Figure 13), then replace the screws with the new stainless steel hex head type (PNR 0901101-149) as follows :

WARNING : **DO NOT REMOVE ALL FOUR SCREWS AT THE SAME TIME. REMOVAL OF ALL SCREWS SIMULTANEOUSLY MAKES RE-ASSEMBLY OF THE BUCKLE MUCH MORE DIFFICULT.**

NOTE 1 : If re-assembly of buckle is not possible, return unit to Parker Meggitt.

NOTE 2 : Screws can be removed and installed in any sequence.

1 Use a T15 Torx bit to remove one screw (PNR 0901101-123).

NOTE : If a screw head breaks off during disassembly, return the unit to Parker Meggitt.

2 Use a 3/32 inch [2,4 mm] hex drive bit to install one new screw (PNR 0901101-149).

3 Repeat 1) and 2) for each of the four screws.

4 Torque the four screws (PNR 0901101-149) to 15 to 25 in-lbs (1.69 to 2.82 N-m).

Figure 13
Disassembled Rotary Buckle with Suspect Torx Head Screws

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(f) Inspect greased areas, and if there is any contamination, clean as required.

(g) Apply a light coat of Mobil #28 grease to the three steel balls (PNR 0908100-40) and then place the steel balls in the three openings in the plate.

(h) Install the four vane handle (PNR 111419-01, 1111419-03, 1111419-05, 1111432-01 or 1111517-01).

(i) Start tightening the self-locking nut (PNR MS21083N4 or PNR MS20364-428) on the center screw (PNR 1101548-1) in counter-clockwise direction.

1 Make sure the handle is positioned with the cut-out portion facing downwards to capture the nut in the hex opening.

2 Use a 1/8 inch [3,2 mm] Allen wrench to tighten the assembly.

3 When the assembly is completely tight, back the nut off slightly (approximately 1/8 rotation) until the handle turns and causes the proper release.

(j) Put the buckle in an arbor press or equivalent tool. Put the logo on the center of the buckle, with the “PACIFIC SCIENTIFIC” text levelled evenly with the two plates.

NOTE : An example of the alignment can be seen in Figure 14.

(k) Hold a 7/16 inch [11 mm] socket in place on the button. Use arbor press or equivalent tool to press the button in place on the buckle.

Figure 14
PNR 1111475 Series Rotary Buckle Logo Button Alignment

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(l) Check the functionality of the buckle as follows :

1 Rotate the buckle handle fully clockwise and release. Make sure the handle freely self-centers.

2 Repeat in the counter-clockwise direction. Repeat alternating directions for a total of 3 times minimum in each direction. Make sure that the buckle rotates freely in either direction without resistance and the handle should freely self-center

3 Insert a belt fitting and shake the unit. Make sure the belt fitting stays in the buckle and does not fall out.

4 Hold the buckle up so that the belt fitting is vertical.

5 Rotate the handle clockwise until the belt fitting falls freely.

6 Repeat steps 3 and 4 above releasing the belt fitting by rotating the handle counter-clockwise.

(m) Use a vibro engraving pen to engrave "**MOD. A**" on the back of the rotary buckle to re-identify the rotary buckle. If the buckle has a pad, use an ultra-fine permanent marker to mark **"MOD. A"** on the label inside the rotary buckle pad to re-identify the rotary buckle. Refer to Figure 15 on page 27 for an example of the re-identified rotary buckle and the location of the label for the rotary buckle pad.

(n) Chem film touch up of marked area with MIL-DTL-81706 per manufacturer's instructions if vibro engraved on metal back.

E. Installation of Rotary Buckles

(1) Insert lap belt fitting into new or repaired buckle. Refer to Figure 4 on page 16 for location of lap belt fitting.

NOTE : Fixed strap location is indicated by appropriate marking on buckle housing.

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F. Instructions to Return Damaged Buckle Assemblies

(1) If a buckle does not pass inspection for missing or broken screw heads, remove the rotary buckle and return to Parker Meggitt for repair or replacement.

NOTE : The entire restraint assembly can also be returned to Parker Meggitt.

(2) Refer to paragraph 4.C. for removal of the existing rotary buckle from the restraint system.

(3) Replace the rotary buckle or restraint assembly with a spare, new, or repaired rotary buckle or restraint assembly.

(4) Refer to paragraph 4.E. for assembly of the new buckle to the restraint system.

(5) For repair of buckle assemblies or restraint systems, send affected units to one of the following locations for replacement. Refer to Table 3 on page 28 or Table 4 on page 28.

(6) For existing customers of Parker Meggitt who already have Spares ordering capability, please refer to Table 3 to place orders of FOC Hex Screws PNR 0901101-149.

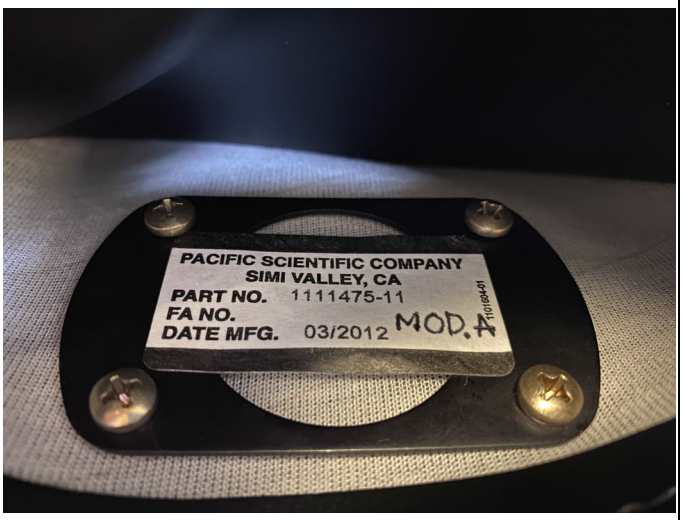

Figure 15

Re-Identified PNR 1111475 Series Rotary Buckle Assembly with "MOD. A"

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(7) For customers who have never ordered from Parker Meggitt directly, please refer to Table 4 to contact our Authorized Distributor Proponent for ordering of FOC Hex Screws PNR 0901101-149 (SB 1111475-25-001-2023).

Table 3

Parker Meggitt Aftermarket Services

Worldwide Support :			
Parker Meggitt Aftermarket Services 11700 NW 102nd Road Suite 6 Miami, FL 33178 USA	Phone FAX Email	: : :	+ 1 305 477 4711 Ext. 260 / 229 + 1 305 477 9799 CX.USA@meggitt.com
Parker Meggitt Aerospace Asia Pacific Pte Ltd 1A Seletar Aerospace Link Singapore 797552	Phone DID Email	: : :	+ 65 6511 7200 + 65 6511 6282 CX.APAC@meggitt.com
Parker Meggitt - Service and Support Ansty Business Park Unit 2 Pilot Way Coventry CV7 9JU United Kingdom	Phone Email	: :	+ 44 2477 708 7299 CX.EMEA@meggitt.com

Table 4

Parker Meggitt Authorized Repair Shop

Parker Meggitt Authorized Repair Shop :			
John Cameron Aviation (Australia) Hangar 473, Birch Street Bankstown Airport, NSW 2200 Australia	Email	:	htlworkshop@jcaviation.com.au peter@jcaviation.com.au

Table 5

Parker Meggitt Authorized Distributor

Parker Meggitt Authorized Distributor :			
Proponent	Email	:	meggittreferral@proponent.com

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G. Assistance

(1) For assistance on this SB information, requests for further information, or spare parts purchasing, please contact Parker Meggitt Customer Support. Refer to Table 6.

Table 6

Parker Meggitt Customer Support

Worldwide Support :			
Parker Meggitt Customer Services and Support	E-mail	:	TechSupport@meggitt.com

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