

QUALITY ASSURANCE IN THE AUTOMOTIVE FIELD BY MONITORING NON-CONFORMITIES RELATED TO WATER INGRESS IN DOORS

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Rezumat. *Infiltrațiile de apă la nivelul ușii reprezintă o problemă recurentă în procesul de asamblare finală, afectând semnificativ satisfacția clienților și costurile de garanție. Această lucrare prezintă o abordare practică pentru identificarea cauzelor principale ale defectelor de etanșare și implementarea unor acțiuni corective eficiente în cadrul procesului de etanșare a ușii. Analiza se bazează pe constatări reale din audituri și reclamații ale clienților din teren. Studiul demonstrează cum auditurile stratificate de proces, combinate cu metode de analiză a cauzei principale, pot reduce recurența acestor probleme în perioadele reci.*

Abstract. *Water ingress at door level is a recurring issue in the final assembly process, significantly affecting customer satisfaction and warranty costs. This paper presents a practical approach to identifying the root causes of water leakage defects and implementing effective corrective actions within the door sealing process. The analysis is based on actual audit findings and customer claims from the field. The study demonstrates how layered process audits, combined with root cause analysis methods, can reduce the recurrence of such issues during colder periods.*

Keywords: water ingress, door sealing, quality assurance, layered process audit, automotive assembly.

1. Introduction

This paper focuses on one of the most common and costly challenges encountered at the end of the assembly process: water ingress through car doors. This type of nonconformity directly affects the customer's perception of quality and may lead to expensive repairs during the warranty period. The objective of the study is to highlight strategies for preventing and managing such defects by using specific audit tools and root cause investigation methods.

2. Current Status

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