QUALIFICATION TEST Report

FOR THE

ALLEN P/N ### <DESCRIPTION>

<CUSTOMER> P/N <CUST PN>

ALLEN AIRCRAFT PRODUCTS, INC.

REPORT <report no>

SUBMITTED TO

<CUSTOMER>

PREPARED BY:

Project Design Engineer

APPROVED BY:

Rob Hyde, Engineering Manager

ALLEN AIRCRAFT PRODUCTS, INC.

RAVENNA, OHIO

RECORD OF REVISIONS

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| REV. LTR. | DESCRIPTION | DATE | APPROVAL |
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Administrative Data

A) Component: <description>

B) Part Number: <Allen pn>

C) Supplier: Allen Aircraft Products, Inc.

Ravenna, Ohio

Cage Code 82829

D) Test Sample: # units

E) Applicable Documents: <customer> Specification <cust spec>, Rev #

<description>

<customer> Drawing <cust dwg num> Rev #

RTCA-DO-160G Environmental Conditions and Test Procedures for Airborne Equipment

Allen Drawing <Allen pn> Rev A

Allen Report #\_\_\_\_, Qualification Test Procedure (QTP), Rev. #

Allen Report, #\_\_\_\_, Acceptance Test Procedure (ATP), Rev. #

Allen Report #\_\_\_\_, Qualification by Analysis (QBA), Rev. B

Allen Report #\_\_\_\_, Test Lab Report for the <Allen pn>, Rev.-

<other reports as necessary>

Acronyms

|  |  |  |  |
| --- | --- | --- | --- |
| AR | Allen Report | QBA | Qualification by Analysis |

1. Introduction

The purpose of this document is to report the results of the Qualification Testing of the <Allen pn>, <description> Assembly, performed by Allen Aircraft Products, Inc., for <customer> Aircraft. Testing was performed in accordance with the Qualification Test Procedure (QTP), Allen Report #\_\_\_\_, which is located in Appendix A of this report.

The <Allen pn> <desc>e is used in t<usage>.

<pic if necessary>

Table 2 - 8V1002 Scavenge Valve Ports

1. Test Units

(3) units were tested per QTP, Allen Report #\_\_\_\_. Their serial numbers were identified as:

|  |  |
| --- | --- |
| Test  Unit | Unit S/N |
| 1 |  |
| 2 |  |
| 3 |  |

The assemblies and their components were representative of production materials, finishes, manufacturing and assembly practices at the time of manufacture.

<Add below if conformity required>

All units under test are full production unit built in accordance with the governing drawing requirements, with no exceptions or deviations, and conformed by<customer> Supplier Quality in accordance with FAA Conformity Inspection Procedures (as documented in Certification Plan 15229) and recorded on FAA Form 8130-9 (Ref. Appendix M). Reference Allen Qualification Test Procedure #\_\_\_\_, Rev. #, for test descriptions and sequence.

A drawing of the unit is included in the QTP, Allen Report #\_\_\_\_, which is located in Appendix A of this report (therein Appendix II.)

1. Facilities

All the tests were conducted at the following Facilities:

|  |  |
| --- | --- |
| Allen Aircraft Products Inc.  6168 Woodbine Avenue  Ravenna, Oh 44266-1211  Phone: (330) 292-9621 | ##### <outside as necessary> |

1. Test Index

All test requirements are substantiated by Testing or by Analysis. The results of the Analysis are presented in the Qualification by Analysis, Allen Report #\_\_\_\_. All test data was collected and prepared, in accordance with QTP #\_\_\_\_ (see Appendix A.)

Table 3 – Qualification Matrix, <Allen pn> <description>

| **QTP**  **Para** | **Description** | **QTR Para** | **Test Facility** | **Qualification Method** | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **Analysis/ Similarity** |
| 4.2 | ATP AR150923 | 8.1.1 | Allen | X | X | X | X | X |  |
| 4.3.1 | Examination of Product by Inspection | 8.1.1 | Allen | X | X | X | X | X |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| 4.3.17 | Disassemble and Inspection | 8.2.17 | Allen | X | X | X | X | X |  |

A – Qualification by Analysis, Allen Report #\_\_\_\_ – QBA

1. Data Requirements

All data was prepared in accordance with the requirements of Qualification Test Procedure, #\_\_\_\_, Para. 3.1 (See Appendix A) as required by <cust. Spec>. All data provided in this report include, at a minimum:

1. Test Title
2. Allen part no., test unit no. and serial no.
3. Date of test
4. Initials and stamp of test inspector(s) and witnesses
5. All pertinent environmental conditions
6. Test procedure paragraph reference
7. Equipment, instruments, tolerances, and calibration
8. Input, output, and computed data
9. Photos of test setup and units before and after test
10. Test Witness Form
11. Type of fluid used and Temperature (if applicable)

Note that in some cases the data or plots provided in the attached Test Lab Reports are abbreviated due to the large file sizes. Because of this, the raw data is available upon request.

1. Instrumentation

For testing completed at Allen, a complete list of equipment used for all testing is presented in Paragraph 6.0, Instrumentation, in the Allen Test Lab Report, Allen Report #\_\_\_\_, therein page 4 (see Appendix C.) All test equipment and measuring means for the test are adequate for the test and appropriately calibrated.

For testing completed at <testing house>, a testing vendor, a complete list of the equipment is included in <tested> Report # <testing house report> (see Appendix F, therein page 3).

1. Test Summary and Conclusion

All data was prepared in accordance with the QTP, Allen Report #\_\_\_\_ (see Appendix A.) Following the successful completion of the testing per the Acceptance Test Procedure (ATP), Allen Report (see Appendix D) and in conjunction with the Qualification by Analysis (QBA), Allen Report #\_\_\_\_ (see Appendix E), the <Allen pn> has been verified to meet all performance requirements as specified in <customer> Specification <CUST SPEC>.

* 1. Summary of Test Units Schedule and Results

The following Table (Table 3) provides a summary of the entire test schedule. The table shows test performed, test unit, pass / fail results, notes, test location and the dates of the test. The test requirements are situated in order of test sequence for each of the individual test units, with the exception of pre-test examination of product, (performed on all test units prior to the start of testing) and post-test examination of product, static resistance check, disassembly & inspection (performed on all test units at the conclusion of testing).

Table 3 – Test Summary, <part no and desc>

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Requirement** | **Test Unit** | **Result (Pass/Fail)** | **Notes** | **Location** | **Start Date** | **End Date1** |
| Pre-Test Examination of Product | 1,2,3,4,5 | Pass | Examination of Product successfully completed. | Allen Aircraft Products, Ravenna, OH, USA | 7/5/2018 | 7/5/2018 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

* 1. Summary of Failure of Test Unit # – <as needed>

Test Unit # of the <pn and desc> successfully completed the production ATP (prior to qualification Conformity), Examination of Product (<all test passed>.

On <date>, Test Unit # was subjected to <test>, per QTP #\_\_\_\_\_. The unit was tested at the <info as necessary>…

1. Test Results and Discussion
   1. General

Unless deviation was taken from the QTP Allen Report, #\_\_\_\_ (see Appendix A) the testing procedure with pass/fail criteria and results will not be repeated in this report. Discussion will be limited to presenting test conclusions. The specific QTP procedure is referenced in parenthesis after each test requirement in each of the test discussions.

The majority of the test lab results are included in a separate report provided by Allen’s Test Lab. See Appendix C for the Allen Test Lab Report, Allen Report #\_\_\_\_. This report is referenced throughout the discussions.

As noted in Section 6.0 above, one testing requirement was completed by a testing facility other than Allen. Salt Spray was tested by Auto Technology Company (ATC). The report is referenced in the representative discussion below.

All of the analysis studies are included in the QBA, Allen Report #\_\_\_\_ in Appendix E and will not be repeated in this report.

* + 1. ATP Testing

Each unit was tested in accordance with Acceptance Test Procedure, Allen Report #\_\_\_\_ (see Appendix D). 100% Acceptance Testing was performed at the conclusion of the production process, prior to final inspection, and as a part the qualification program, as required by the success criteria of the specific qualification test. ATP data sheets are included in the Allen Test Lab Report, Allen Report #\_\_\_\_, therein Appendix A (see Appendix C.)

* 1. Qualification Testing
     1. Examination of Product

(QTP #\_\_\_\_, para. 4.2.1)

Examination of the test units was conducted by Allen’s Quality Assurance Department. Test units were inspected for conformance with drawings Allen Aircraft <Allen pn> Rev A and <customer><spec> Rev#.

All dimensions, finishes, workmanship, and weight were in compliance with the Assembly Drawings located in the QTP, Allen Report #\_\_\_\_, therein Appendix III (see Appendix A of this report). A summary of dimensional observations for the test units, prior to qualification tests, are presented in pages B-1 through B-3 of Appendix B.

* + 1. <Testing requirement>

(QTP #\_\_\_\_, para. 4.2.2)

Test unit # was subjected to <Testing requirement> testing per <spec>. The unit was tested <procedure as required>... Following the <re> testing, the unit was subjected to the ATP, Allen Report #\_\_\_\_ (see Appendix D.)

<info as necessary>

Photos of the test setup are shown in the Allen Test Lab Report #\_\_\_\_, therein page 15 (see Appendix C.) Data from the test is shown on pages ## through ## of the test lab report. The unit passed the ATP performance requirements. Results of the ATP are shown in Allen Test Lab Report, Allen Report #\_\_\_\_, therein page 12 (see Appendix C.)

* + 1. <additional sections from QTP>

<list info as required. Refer to pictures as required>

* + 1. Disassemble and Inspection

(QTP #\_\_\_\_, para. 4.3.11)

The test units were carefully examined and inspected to determine the cumulative effects of the qualification program.

Post-test inspection showed no evidence of structural damage or any sort of deterioration that would impact functionality or structural integrity of the components, and all dimensions measured before and after all qualification testing remained unchanged. Refer to pages B-1 through B-3 of Appendix B for post-test recorded dimensions.

* + 1. Test Unit Disposition

After conclusion of the Post-Test Examination of Product, the test units were placed in storage and are available upon request.

* 1. Conformity Paperwork <as needed>

Conformity paper work is included in Appendix M. These include:

* 8120-10 Request For Conformity
* 8130-9 Statement of Conformity
* 8100-9 Statement of Compliance with Airworthiness Standards
* Test Setup Conformity

In addition to the above Conformity Paperwork, the follow is also included in Appendix M:

* <info as needed>

Appendix A

Allen Qualification Test Procedure (QTP), AR #\_\_\_\_

Appendix B

Allen Aircraft Test Data Sheets

Table 4 – Examination of product S/N ####

Table 5 - <CUST PN> Picture

Figure B-1, XXXXX

Appendix C

Allen Aircraft Test Lab Report, AR #\_\_\_\_

Appendix D

Allen Acceptance Test Procedure (ATP) AR #\_\_\_\_

Appendix E

Allen Qualification by Analysis (QBA)#\_\_\_\_

Appendix F

<Testing house> <Requment tested> Test Lab Report

Appendix G

Conformity Paperwork - <CUST PN>

Appendix H

Allen FAI <allen pn> REV A FAI

Appendix I

Appendix J

Additional Conformity Paperwork

<as needed>