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GENERAL REQUIREMENTS SUPPLEMENT TO
SPECIFICATION OR SOURCE CONTROL DRAWINGS
FOR BK117 HELICOPTER

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I. General

1. Purpose

This document contains the engineering administrative and technical procedures, policies, and requirements of KHI/MBB (Herein after called OEM: original equipment manufacturer) which, in conjunction with the terms, conditions and provision of;

- (1) The purchase order (P.O.)
- (2) Specification and/or source control drawings(S.C.D.)
- (3) Engineering specifications
- (4) Other related documents

will govern the procurement of supplier designed/OEM controlled parts, material and equipment for specific aircraft.

2. Application

The requirements and consideration contained herein will be applicable to all procurements for specific aircraft, when and to the degree specified in the P.O.

3. Duplication

This chapter is not intended to duplicate, replace or supersede any requirements, instructions or requests contained in;

- (1) Proposal instructions/standard requirements for specific aircraft RFQ's
- (2) Request for quotations/proposals
- (3) P.O. terms, conditions and special clauses
- (4) Specification and/or source control drawing(S.C.D.)
- (5) Engineering specifications

3.1 Precedences of Documents

Precedences of documents are as follows;

- (1) Purchase order
- (2) Specification or source control drawings
- (3) Engineering specification

- (4) Supplier's item specifications, if referenced in SCD or engineering specification.
- (5) Any specification referenced in (1), (2), (3) above shall have precedence over all applicable subsidiary specification referenced herein.
All referenced specifications shall apply to the extent specified and up-to-date revisions, unless otherwise specified in documents above.

3.2 Supplier shall inform OEM of any apparent conflict between P.O. and other documents referenced or called out therein, or between or among such documents.

4. Document Organizations

Rules and procedures, except, general section, are divided into two subsections.

- A. "Requirements" ; Enforceable as terms of contract between OEM and supplier.
- B. "Considerations"; Policies, procedures, objectives, principles and practices to which OEM expects suppliers to conform, the effects of which may be demonstrated in the equipment, but which may not be adaptable to objective measurement.

5. Applicable Documents

A list of OEM documents referenced herein is included in Appendix "A".

6. Definitions

Definitions and abbreviations used herein are defined in Appendix "B".

7. Applicable Forms

Examples of referenced forms are contained in Appendix "C"

IIA Administration Requirement

1. Supplier - initiated correspondence

All correspondence relating to supplier's equipment or material shall be directed to EOM procurement department, marked for attention of cognizant purchasing agent, as follows;

| | |
|--|--|
| AIRCRAFT DIVISION OF KAWASAKI HEAVY IND. LTD. SOHARA-MIKAKINO-CHO, KAKAMIGAHARA-CITY GIFU PREFECTURE JAPAN, 504 | HELICOPTER DIVISION OF MESSARSCHMIT-BÖLKOW-BLOHM GMBH P.O. BOX 801140 D-8000 MUNICH 80 F.R. OF GERMANY |
| ATTN: <u>Mr. T. KATO</u> PURCHASING DEPT. | ATTN: _____ PURCHASING DEPT. |
| TELEX; 4722-161 | TELEX; 5287-750 MBB D |
| TEL ; (0583)-82-5111 | TEL ; (089)-60 00-5120 |

2. Official OEM initiated correspondence

Only that correspondence initiated by or approved by OEM procurement department will be binding upon OEM and supplier.

3. Oral Agreement

Oral agreements between OEM and supplier will be binding upon only if,

- (a) Made by the OEM responsible buyer and responsible supplier personnel, and
- (b) Confirmed in writing within seventy-two hours after entering into the agreement.

4. OEM Initiated Changes

- 4.1 Changes to any requirements or applicable document, after P.O. contracted, will be negotiated in each case.

4.2 If time is insufficient to permit revision of SCD, or supporting specifications for an urgent requirement change, a letter or telegram from OEM procurement department to supplier may be used to authorize a change. Such change will be subsequently incorporated in a revision of the SCD or supporting specifications.

4.3 Supplier shall, upon the request of OEM thru cognizant buyer, enter into amendments to P.O.'s to incorporate additional provisions therein, or to change provisions hereof, as OEM may reasonably deem necessary, if any such amendment to a P.O. causes an increase or decrease in the cost of, or in the time required for the performance of P.O., an equitable adjustment shall be made in the price and/or schedule.

5. Supplier Proposed Changes - Prior to "Design Approval"

5.1 OEM does not intend to restrain supplier from developing optimum design: However, supplier shall proceed with detail design and development in accordance with the approved technical proposal unless or until changes therefrom are approved as described herein by OEM.

5.2 During the development span, it may be apparent that some design changes and corresponding changes to the OEM specifications or supplier design concept may result in advantage in cost, weight, size, delivery, schedule, function, proven reliability, use of existing design, etc. in such instances, supplier shall transmit the proposal information with supplier transmittal and approval request (Form "C") in sufficient detail to allow proper evaluation. If the change is approved, OEM will so indicate on supplier transmittal and approval request, which will be forwarded to supplier, the applicable SCD will be revised by OEM to reflect approved changes, and copies will be furnished to supplier. If the change is not approved, OEM will so indicate on the Form "C" and return the original to supplier.

6. Supplier Proposed Changes - After "Design Approval"

Following procedures shall be used for any changes in drawings, procedures, list, specifications and other data which have been submitted by supplier on and after (1) the date they have been approved "as shown", or approved "as marked", by OEM and returned to supplier; or, (2) the date of acceptance by OEM of the first unit under P.O. to which this procedure has been made applicable, whichever occurs first.

6.1 Change Classification

6.1.1 Class A Changes

A proposed engineering change to any equipment, part or assembly listed on a bill of materials shall be designated as a class A change when one or more of the following is affected.

- (1) Specification or price, by either increase or decrease, weight, guarantees, delivery, or test schedules.
- (2) Reliability or maintainability
- (3) Performance (Contractually defined or as known to be inherent in like equipments previously accepted).
- (4) Interchangeability
- (5) Safety
- (6) Electromagnetic interference to communications or electronic equipment.
- (7) Ground support equipment (GSE), trainers, or training devices.
- (8) Buyer furnished equipment or tool.
- (9) Present adjustments affecting operating limits or affecting equipment performance to such an extent as to require assignment of new identification.
- (10) Item produced by OEM or other contractors, to the extent that an engineering change is required to maintain compatibility at the interface(s).
- (11) Retrofit of accepted items.

- (11) Retrofit of accepted items.
- (12) Delivered operational maintenance manuals including the illustrated parts breakdown.

6.1.2 Class B Changes

Any engineering change, such as a product improvement change not affecting form, fit, function, or interchangeability, not falling within class A, defined above, shall be designated a class B change.

6.1.2.1 In a event a supplier's item include class B changes discovered by OEM, and which OEM considers questionable as to classification, OEM shall make the final binding determination.

6.1.2.2 Supplier is responsible for any action or cost necessary to correct problems associated with changes incorporated in items where a misclassification exists.

6.2 Classification Designation Approval

- (1) All proposed changes designated as class A require submittal of a supplier change proposal (SCP) (Form "D") to OEM and subsequent OEM approval prior to incorporation.
- (2) Supplier is not required to furnish copies of class B change to OEM, or obtain, OEM approval prior to incorporation, unless the change(s) affect documentation or test procedures previously approved by OEM. In such case submittal of documentation and re-approval by OEM is not required prior to incorporation of such changes.
- (3) The responsibility for designating the change classification, and for controlling changes originating with lower-tier and sub-supplier, rests with the OEM supplier.

6.3 Class A change Procedure

Subsequent to determination of a class A designation, an supplier change proposal (Form "B") shall be initiated and transmitted to OEM procurement division at the earliest practical date.

- 6.3.1 Every line and block on supplier change proposal (Form "D") shall contain an entry. If the information requested is not applicable, it shall be so stated. Attachments explaining line information in more detail to facilitate interpretation and decision, should be provided.
- 6.3.2 Supplier shall assign an SCP (supplier change proposal) number for each class A change proposed, in sequence, beginning with number 1. If a revision to the Form "D" is revision shall follow the SCP number.
- 6.3.3 Discussion prior to submittal of proposed changes
Supplier may informally discuss proposed changes with OEM before actual submittal of the SCP, in order to obtain an advanced opinion of proposed change(s), classification and priority.
- 6.3.3.1 SCP's affecting safety or hazardous conditions shall be submitted immediately by teletype, telephone, in person, or by other expeditious means. All communications shall be identified by SCP number. If the initial communication regarding a proposed change is by other than written message, it shall be confirmed by written message within seventy-two hours.
- 6.3.4 If submitted changes affected any data used in inspection or test, supplier shall submit corrected data with SCP, or at a time acceptable to the OEM buyer. If a temporary procedure for inspection and testing is required before final inspection and test procedure, a temporary procedures shall be negotiated.

7. Age Controls

The items which will require the age controls between supplier's cure date and customer's installation of equipment (e.g. the rubber material or the equipments which include rubber material parts) shall be identified and controlled in accordance with MIL-STD-1523 "age controls of age-sensitive elastomeric material".

8. Deviation from Specification

Any deviation from requirements may cause for rejection of items submitted to OEM for acceptance unless prior approval for such deviation has been received from OEM by supplier.

OEM, at its option, may accept for use equipment that deviates from the established requirements by SCD.

In such cases, supplier shall correct such deviations at its cost, or, at the option of OEM negotiate an equitable. Reduction in price on all delivered unit incorporating the deviations.

9. Second-Tier Responsibilities

Supplier shall assume full responsibility for ensuring that equipment and components procured from sub-suppliers, and incorporated into its design, are in compliance with all provisions of this document and other applicable specifications.

10. Preparation for Delivery

10.1 Supplier shall furnish a removable instruction tag, affixed to the equipment, when special receiving inspection, installation, or operational instructions are required.

10.1.1 Item supplied to OEM for test purposes shall be clearly marked "Test article" in addition to the contract marking requirement.

IIB Administrative Consideration

This subsection contains recommendations, procedures, and objectives with which supplier's full compliance is expected, but for which quantitative/qualitative measurements may not be practicable.

1. Value Engineering

Supplier shall use value analysis/value engineering to ensure that the design, manufacture and marketing of its products result in the optimum value/price relationship or, in other words, to equate prices with cost, the cost used should be both accurate and realistic. The objective is to develop a product, component, system or program which will reliably and effectively perform the intended function at the lowest total cost.

Change proposal under value engineering concept shall be proposed in SCP (Form "D").

2. Production Improvement

Supplier is expected to continue product improvement after item enter into service and throughout the life of the procurement.

IIIA Engineering Requirement

This section includes repetitive, and essentially standard, engineering requirement of a general nature.

1. Design Responsibility

OEM will furnish to supplier the actual minimum performance requirements, maximum envelope, maximum weight, environmental conditions, power requirements, and installation and mounting information pertaining to the intended application.

Supplier shall be responsible for designing and providing equipment which meets these requirements and operates satisfactorily in the aircraft in conjunction with all other systems, and in the required environments. Supplier shall be responsible for obtaining any additional information that is necessary to assure satisfactory performance of the equipment in its intended operating environment.

2. Identification

2.1 To the extent possible, supplier and sub-supplier should have their identification method in compliance with MIL-STD-100.

2.2 Part No. shall not exceed fifteen digit including dash in length.

3. Equipment Serialization

When serialization is required, each unit of equipment delivered shall be assigned an individual serial number in a numerical sequence established for the type or model series of equipment being supplied. Serial number shall not exceed ten digit in length. Duplicable serial shall not be used within a type or model series.

4. Interchangeability

All items having the same manufacturer's part number shall be interchangeable, and possess such functional and physical characteristics as to be equivalent in performance and durability. Parts shall be capable of being exchanged one for the other without alternation to themselves or to associated items except for adjustment, and without selection for fit or performance.

5. Qualification Test (Pre-production Test)

5.1 Qualification test (Q/T)(Pre-production Test), when required, is specified in the SCD or P.O.

The purpose of such test is to verify that supplier designed equipment meets the requirement established by the applicable SCD.

5.2 From the stand point of economical interest, and with OEM approval, qualification by similarity shall be used in full or in part, provided the equipment is basically the same as the one which has been successfully qualified.

5.3 When the qualification by similarity is sought the data submitted by supplier shall include drawing of, and a summary of, differences between the old equipment and new equipment, with a concise statement justifying the qualification equivalence of the new equipment to the old.

Certified qualification test reports on the old items of equipment showing successful completion of tests, or qualified product list letter of approval to applicable specifications, shall accompany its data.

5.4 When qualification by similarity is only partially achievable, a limited qualification test program shall be conducted in accordance with the OEM approved test procedure.

Approved results of the limited test, plus approved similarity documentation, shall then be used to apply for complete qualification approval.

5.5 Qualification test shall be performed by supplier or a OEM approved independent agency. The P.O. will specify the agency to perform these test, if applicable. Supplier shall inform OEM, not exceeding over two week after receiving P.O., whether supplier could recommend to apply the TSO approval or similarity report or limited qualification test or complete qualification test, from economical stand point, and its draft schedule.

(1) When the complete or limited qualification test is apparently required, the supplier shall proceed to prepare the detail qualification test approval request with using "Form E, F and G" as follows and forward them to OEM for approval.

(2) When OEM request the complete or limited qualification test after reviewing the supplier's similarity proposal, supplier shall prepare and submit the detail qualification test approval request with using "Form E, F and G" as follows.

(a) Qualification test plan approval request cover sheet (Form E)

(b) Contents-qualification test procedures (Form F)

- . Specification list
- . Qualification test item and test procedures
- . Test equipment list

(c) Implementation Schedule (Form G)

Note; The detail qualification test approval request must be reproceable copies.

(3) Filling instructions of the forms.

Instructions shall be followed with marked number on forms in appendix C.

a. "Form E"

- ① Purchase order number
- ② Nomenclature of equipment or material
- ③ Part number; in the case of standard part number (e.g. AN MS etc.), add equivalent manufacturer factory part number in ().

- ④ Applicable drawing and specification number with revision or amendment identification.
- ⑤ Manufacturer factory name and address where supplier produce the product.

b. "Form F"

- ① As of ② on "Form E"
- ② As of ③ on "Form E"
- ③ Left to be blank
- ④ As of ⑤ on "Form E"
- ⑤ Specification number which relate to qualification test.
- ⑥ Nomenclature of specification above.
- ⑦ Sequential number of test item
- ⑧ Test item title with applicable specification and paragram number.
- ⑨ Brief requirement.
- ⑩ Test method which is specified in drawing or applicable specification.
- ⑪ Actual test method
- ⑫ Test equipment or test stand name.
- ⑬ Applicable test item sequential number(s) in column ⑦ .
- ⑭ Test stand capacities and/or accuracy.
- ⑮ Accuracy inspection authority registrated number ond latest inspected date.

c. "Form G"

- ① Nomenclature and part no.
- ② As of ⑦ in "Form F"
- ③ As of ⑧ in "Form F"(specification paragraph no. are not required).
- ④ Test place; factory name or agency name.
- ⑤ Scheduled start date of each test item.
- ⑥ Detail schedule for each test item.
- ⑦ Personnel concerned and assignment for each test item.
- ⑧ Necessary condition and note to attain the object and the schedule.

- ⑨ Result of adjusted conditions to attain the object and the schedule.
- ⑩ Top responsible personnel signature
- ⑪ Coordinator signature.
- ⑫ Manufacturer name and address.

5.6 Adjustment on qualification test plan will be made on the supplier's proposed plan at OEM, then, reproduceable copy of approved plan will be forwarded to supplier.

5.7 Witness of Qualification Test

OEM inform the supplier about the witness of qualification test by OEM and/or government authorized personnel of manufacturer country, with the comment of JCAB or LBA representative.

5.8 Qualification Test Result Report

- (1) Must be reproduceable copy.
- (2) Shall be submitted OEM and government authorized personnel if necessary, immediately after completion of tests.
- (3) Filling instructions of "Form H "Qualification test result report"
Instructions are followed with marked number on forms in Appendix C.
 - a. "Form H" qualification test result report cover sheet same as on "Form E".
 - b. "Form I" qualification test result contents
 - ① As of ① on "Form F"
 - ② As of ② on "Form F"
 - ③ Left to be blank.
 - ④ As of ④ on "Form F"
 - ⑤ As of ⑤ on "Form F"
 - ⑥ Approved test procedure number by OEM
 - ⑦ Test place(s)

- ⑧ Test date; start date and finished date.
- ⑨ Test witness name, also government authorized personnel name, if applicable.
- ⑩ As of ⑦ on "Form F"
- ⑪ As of ⑧ on "Form F"
- ⑫ As of ⑨ on "Form F"
- ⑬ Brief result of qualification test
- ⑭ Left to be blank

(4) For each tested item detail, result report, shall be attached under the cover "Form H". Each tested item result report is consist of

- (a) Purpose
- (b) Test conditions
- (c) Requirements
- (d) Quantity of tested product(s)
- (e) Test method
- (f) Detailed test result
- (g) Actual data record
- (h) Calculated data
- (i) Comment(s)
- (j) Other document which has witness signature of OEM and/or government authorized personnel

Note; Test result report may be same as report of manufacturer factory-in-side use.

5.9 Conditional Approval

Reviewing the test result of manufacturer, OEM issue the conditional approval notice for qualification test to supplier.

5.10 After successful type certificate of aircraft, OEM issue the final approval notice for qualification test to supplier.

5.11 Failure of the equipment to meet any of the test requirements shall reported imediately OEM. The report shall contain fully documented information and photographs concerning both the nature of the failure and supplier's proposed corrective action.

5.12 Supplier shall be responsible for the cost of all modifications or replacements of equipments delivered prior to or subsequent to production testing when such or replacement may be required to overcome equipment discrepancies disclosed by the reported test failures.

5.13 Pending completion of qualification testing submittal of test reports, and approval by OEM, supplier will continue to manufacture and deliver equipments in accordance with negotiated schedules.

6. Reliability Quantative Requirement

Supplier shall propose a reliability program plan if numerical reliability is specified on SCD, P.O. or related document(s). However, when there is no numerical reliability requirement is specified on SCD, P.O. or related document(s), supplier shall propose a reliability effort which represents an effective and economical reliability program that is planned, interated, coordinated and developed in conjunction with supplier's other planning functions, if possible. The program shall suit the type and phase (design, development and production) of the procurement.

7. Maintainability Quantative Requirement

Supplier shall apply quantitative and qualitative maintainability requirements to the design and development of new equipment, if specified on SCD, P.O. or related documents, with applicable engineering specifications.

IIIB. Engineering Consideration

This section include engineering recommendation, desired procedures, and objective for which supplier's full conformance is expected but for which quantitative and qualitative measurements may not be practical.

1. Weight

Supplier shall take all reasonable measure to minimize equipment weight throughout the design effort, consistent with cost, performance and other required factors.

2. Safety

Supplier shall incorporate accepted principle and practices involving safety throughout all phase of the equipment development.

IVA Data Requirements

This section includes the rules and procedures for the management of all required data relative to the P.O..

1. Data Requirement Identification

OEM shall identify, on "Data required list (Form A)", all data items for inclusion in initial award of the P.O.s.

In the event an unforeseen need for additional data arises subsequent to the initial award, these requirements shall be provided by supplier at no cost to OEM when such data has been prepared to satisfy supplier's development/manufacturing needs. However, if this additional data has not been created to satisfied supplier's need's. such data shall be subjected to negotiation.

- 1.1 A "Data requirement sheet (Form B)" will be furnished by OEM for the data which is to be specified more in detail.

2. Data Preparation

Language of used in the data shall be English and data preparation shall be in accordance with "Data required list (Form A)", except as otherwise agreed.

Existing data which satisfies the purpose of the data required need not be redrawn, rewritten or modified solely for the purpose of meeting the format requirement specified on the form of data requirement sheet (Form B), if specified. And also modification to existing data may be made by simple revision consistent with the original format of existing data.

2.1 Data Format and Requirement

When specified on the form of data required list (Form A), data shall be supplied in accordance with the following:

- (1) Reproducible Copies - shall be direct reading, dark line on translucent background, free of excessive background, and shall be of such legibility and contrast that each copy or print made shall reveal each line, number, letter and character.
- (2) Magnetic Tapes - Format and controls for any data to be submitted via magnetic tape or punched cards shall be negotiated by OEM and supplier.

3. Data Compatibility with Hardware

- 3.1 Equipment furnished to OEM or its customer shall conform in every respect to the data approved by OEM.
Changes to the item, which effect OEM approved data, require the submittal and approval of revised data within thirty days or as otherwise specified on the applicable forms of data required list (Form A) and data requirement sheet (Form B).
- 3.2 A record shall be maintained by supplier of all changes to the equipment that require revision of engineering data delivered to OEM or as otherwise specified by OEM. These records shall identify the change(s), the date change was made and the origination receiving data, wether OEM or its customer.
- 3.3 When changes to a SCD necessiate changes to supplier documentation, supplier shall, prior to commencing work, notify OEM as to:
 - (1) The description of all data item requiring revision, and
 - (2) The estimated cost of accomplishing the revision.

4. Document Identification

Each document submitted must have, on the cover or title page, the following information as a minimum:

- (a) Supplier's name
- (b) Document title
- (c) Date of issue
- (d) Document identification number not exceeding fifteen characters.
- (e) A revision code in progression A ~ Z, AA ~ AZ, BA ~ BZ --- , ZA ~ ZZ.

Each page of the document must carry the document identification number and revision code which is separately identical from document identification number.

5. Data Approval

- 5.1 Data requiring OEM approval are identified with "*" mark on the seq. No. column in the form of data requirement list (Form A).

- 5.2 OEM Approval System

Conditional approval of supplier drawings, test reports and other data by OEM indicates that, when applicable, the equipment described, approved "as shown" or "as marked", is considered suitable "Form and fit" for installation. Such approval does not constitute acceptance by OEM of the equipment or relieve supplier of the design or functional responsibility for the equipment, nor does such approval relieve supplier of the obligation to meet applicable specs.

- (1) Data are approved "as shown" with approving stamp on supplier's reproducible drawings by OEM engineering when supplier has defined the configuration in accordance with the requirement of the SCD.

Approval stamp are shown next page.

| | |
|---|----------------|
| APPROVED | |
| APPD No | _____ |
| D A T E | _____ |
| APPROVED BY | _____ _____ |
| BK117 PROJECT DEPT AIRCRAFT DIVISION KAWASAKI HEAVY INDUSTRIES, LTD | |

- (2) Data are approved "as marked" when any errors noted or any changes are required in the document(s).
- (3) Data are marked "unapproved" or "not acceptable" when OEM considers that supplier has not complied with the established requirements. In the event a data item is not approved, the original data requirement has not been satisfied and the supplier has the obligation of resubmitting the data.
- (4) Supplier shall complete one supplier transmittal & approval request (Form C) to accompany each document which must be approved.
- (5) Production hardware may not be shipped to OEM until documents, submitted in response to requirement bearing "*" mark approval code in SEQ. NO. column of data requirement list (Form A) have been approved.

6. Data Submittal

- 6.1 Data shall be submitted in the format, number of copies, frequency and schedule indicate on the data required list (Form A).
- 6.2 The data show in the due date column is the OEM on dock required date, documents shall be shipped sufficiently in advance of this date to assure their receipt at OEM on or before the "due date".

6.3 Packing Instructions

- (1) Document submitted against each item number on Form A must be separately packed with enclosing two copy of the packing sheet or shipper in the package. The shipper shall contain at least the following minimum information:
 - (a) Supplier's name, address and telex No. if available.
 - (b) Supplier's document identification number and revision code.
 - (c) Purchase order number
 - (d) Part number (or specification number) which document relates.
 - (e) The data required list (Form A) item number (Seq. No.) which state the requirement.
 - (f) "Partial submittal" or "Total submittal" note to indicate whether document partially or totally satisfies the requirement in referenced in (e) above.
 - (g) If the document represents the final increments to be submitted for requirement, the words "-final increment" must follow the words "Partial submittal".
- (2) With clearly labeling "Data for approval" on the exterior, each data package submitted for approval shall not intermixed with those not submitted for approval.

6.4. Shipping Instructions

- (1) Documents which require OEM approval shall be shipped directly to the cognizant buyer, unless otherwise notified.

7. General Conditions

Data requirements specified by the OEM P.O. shall be imposed contractually by supplier on its sub-supplier and lower-tier sources.

8. Data Retention

Suppliers shall retain a complete set of all original data necessary for the manufacture of its equipment in the "Built"/"as delivered" configuration(s) for a period of not less than six years after delivery of last production item of equipment, or for six years after mutually agreed-upon date.

9. Discontinuance

In the event supplier, for any reason, desires to discontinue the item, OEM shall be provided with the manufacturing data and granted those rights necessary to prevent production line stoppage.

IVB Data Consideration**1. Proposed Changes**

- (1) Supplier may propose whatever changes (additions, deletions or modifications) to the Form A and/or Form B which it considers necessary or desirable, to accomplish any of the following.
 - (a) Cost reduction.
 - (b) Maximum utilization of existing data
 - (c) Correction of deficiencies in Form A or B
 - (d) Elimination of redundant data

- (2) Supplier is expected to proceed on the basis of satisfying the requirements stated in Form A and B until such time as OEM may accept its proposed changes.

Appendix A Applicable Documents

KHI/MBB Forms & Publications

| <u>No.</u> | <u>Document Designation</u> | <u>Document Title</u> |
|------------|-----------------------------|--|
| 1 | () | Product Support Agreement for Supplier Proprietary Equipment during OEM Flight Test Program |
| 2 | () | Product Support Agreement for Supplier Proprietary Equipment during Customer Operational Period. |
| 3 | KKR-77-007 | Basic Maintainability and Reliability Program Plan BK117 |
| 4 | () | Interface Contract |

Note : () indicates "Provided later" or "Negotiated when required in each case."

Appendix B

Definition & Abbreviations

I. Definitions

1. Acceptance Test - See quality conformance test
2. Administrator - The administrator of the manufacturer's country government or federal aviation administration of U.S.A.
3. Data - Drawings, supporting standards, specifications, manuals, associated list, reports, schedules, computer programs, plans, photographs, motion pictures, and other documentation.
4. Envelope Drawing - A drawing that discloses configuration, performance and test requirements to the extent necessary to enable development of details of design.
5. Equipment - A part, component, assembly, unit, set, system or subsystem whether airborne or ground, manufactured by or for supplier, from supplier's design drawings.
6. Equipment Specification or Engineering Specification - A OEM document containing requirements and pertinent information with which supplier-designed equipment must comply.
7. Government - The supplier's country government, or an agency thereof.
8. Ground Support Equipment (GSE) - Equipment required to maintain or return an equipment to satisfactory operable condition. This shall mean all test equipment, ground handling equipment, tools, jigs, holding fixtures or any equipment needed by a commercial or general aviation aircraft for operation, service, maintenance, overhaul repair, modification, assembly, disassembly, calibration, test, adjustment of the supplier's product.

9. Nonreparable Item - Equipment not normally capable of service maintenance and repair, or disassembly without destruction.
10. Qualification Test (Q/T) - Those test required to demonstrate that the equipment meet requirements established by the applicable documents, such test should include, but are not limited to, qualification, reliability demonstration, maintainability demonstration, safety, etc.
11. Quality Conformance Test (and Verification) - All examination and test necessary to verify that all the requirements of the specification or source control drawing (and specifications) have been met for all production items.
12. Reparable Item - Equipment containing stockable parts as components normally replaceable, capable of normal service maintenance and repair and adjustment.
13. SCD-Specification and/or Source Control Drawing - A drawing containing technical requirements for a specific equipment. SCD may be either specification control drawings or source control drawings and may define reparable or none reparable equipment.
14. Source Control Drawing - A OEM procurement control drawing which specifies the supplier-critical equipment that must be used without substitution in the application for which it is specified.
15. Special Support Equipment - Support equipment which must be designed and developed in conjunction with the development of the specified equipment.
16. Specification Control Drawing - A OEM procurement control drawing which discloses, without reference to specific supplier drawings, the design requirements, the design requirements, test requirements, develop a new supplier's equipment or to develop additional sources for existing supplier's equipment.

17. Standard Support Equipment - Support equipment of such universal nature that it has application to other than a specific prime system program. Equipment in this category is normally available on the open market.
18. Supplier - The firm or bussiness house suppling or proposing to supply the equipment, raw materials, components, or service specified by the SCD and equipment specification.

II Abbreviations

| | |
|------|--|
| BFE | Buyer Furnished Equipment |
| DER | Designated Engineering Representatives by FAR PART 183. |
| DMIR | Designated Manufacturing Inspection Representatives by FAR PART 183. |
| FAA | Federal Aviation Administration of united State Government. |
| FAR | Federal Aviation Requation of united States Government. |
| GSE | Ground Support Equipment |
| JCAB | Japan Civil Aviation Bureau |
| KHI | Kawasaki Heavy Ind. Ltd. Aircraft Division |
| LBA | Luftfahrt - Bunesamt |
| MBB | Messerschmit Bolkow Blohm GmbH, Helicopter Division |
| Q/T | Qualification Test |
| RFP | Request For Proposal |
| RFQ | Request For Quotation |
| SCD | Specification and/or Source Control Drawing |
| SCP | Supplier Change Proposal |
| SPEC | Specification |
| TSO | Federal Aviation Administration Technical Standard Order |

Appendix C

Applicable BK117 Forms

- Form A Data required list
- Form B Data requirement sheet
- Form C Supplier (Manufacturer) transmittal and approval request
- Form D Supplier change proposal form
- Form E Qualification test plan approval request cover form
- Form F Qualification test procedures, specifications items and test procedures, test equipment list.
- Form G Qualification test implementation plan
- Form H Qualification test result report cover form
- Form I Qualification test report
- Form J Approval notice for qualification test

DATA REQUIRED LIST

CONTROL NO. _____

SIGNATURE _____

DATE _____

FROM

AIRCRAFT DIVISION OF
KAWASAKI HEAVY IND. LTD.
SOHARA-MIKAKINO CHO
KAKAMIGAHARA-SHI, GIFU 504
JAPAN

ATTN: MR. KATO, MT'L DEPT.

- IN ORDER TO USE YOUR PRODUCT IN MAXIMUM APPROPRIATENESS IN OUR AIRCRAFT, PLEASE, PROVIDE US YOUR UP-TO-DATE CONTROLLED DRAWINGS AND DATA COPIES AS FOLLOWS, AND ALSO INFORM US IN THIS FORM WHEN YOU CAN SEND US THEM, IMMEDIATELY AFTER RECEIPT OF THIS REQUEST.
- WHEN PREPRODUCTION TESTING (QUALIFICATION TESTING) REQUIRED ON DRAWING OR P.O., SUPPLIER SHOULD INFORM US, NOT EXCEEDING OVER TWO WEEK AFTER RECEIVING P.O., WHETHER SUPPLIER COULD RECOMMEND TO APPLY THE TSO APPROVAL OR SIMILARITY REPORT OR LIMITED QUALIFICATION TESTING OR COMPLETE QUALIFICATION TESTING, FROM ECONOMICAL STAND POINT, AND ITS SCHEDULE.

| MANUFACTURER | PART OR MATERIAL NAME | PART OR MATERIAL NO. | NOTE |
|--------------|-----------------------|----------------------|------|
| | | | |

SEND TOTAL REQUIRED COPIES TO ADDRESS ABOVE, WE SHARE THEM FOR KHI USE AND MBB USE.

NOTE 1: "V" MEANS ON HAND,

2: COPIES MUST BE REPRODUCEABLE AND KEPT TO UP-TO-DATE THRU ABOVE ADDRESS.

3: "*" IN SEQ. NO COLUMN INDICATE DOCUMENT TO BE APPROVED BEFORE HARDWARE SHIPPING.

| S E Q N O | NAME OF DATA | REQUIRED COPIES FOR | | | | TOTAL REQ'D COPIES NUMBER | DUE DATE | NOTE |
|-----------------------|---|---------------------|-----|-----------------------------|------------------------------|------------------------------------|--------------------------|------|
| | | KHI | MBB | APPROV'D COPY TO MFR. | JCAB OR LBA APPROVE | | | |
| 1* | ENVELOPE AND INSTALLATION DWG | | | | | | | |
| 2* | SCHEMATIC DWG | | | | | | | |
| 3* | MATERIAL AND PART LIST | | | | | | | |
| 4 | QUALIFICATION DATA | | | | | | | |
| 5 | *FAA APPROVED DATA | | | | | | e.g. TSO APPROVAL LETTER | |
| 6 | QUALIFICATION TEST IMPLEMENTATION PLAN | | | | | | | |
| 7 | QUALITY ASSURANCE PROGRAM/MANUAL | | | | | | | |
| 8 | STOCK LIFE INFORMATION | | | | | | | |
| 9 | TEST PROCEDURE BEFORE SHIPPING | | | | | | | |
| 10 | TEST TOOL DWG BEFORE SHIPPING | | | | | | | |
| 11 | MEAN TIME BETWEEN FAILURE DATA | | | | | | | |
| 12 | OPERATION SHEET FOR MFG | | | | | | | |
| 13 | OVERHAUL MANUAL | | | | | | | |
| 14 | MAINTENANCE MANUAL | | | | | | | |
| 15 | PARTS CATALOGUE | | | | | | | |
| 16 | DETAIL PARTS DWG | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

BK117 DATA REQUIREMENT SHEET

| | | |
|----------------------------------|--------------|----------|
| TO (SUPPLIER NAME) | | |
| TITLE | NUMBER | REVISION |
| REFERENCE | DATE | |
| | INITIATED BY | |
| PURPOSE | | |
| CONTENTS (DRAFT) | | |
| DETAIL INSTRUCTIONS AND DUE DATE | | |

AIRCRAFT DIVISION OF
KAWASAKI HEAVY IND. LTD.

HELICOPTER DIVISION
MESSERSCHMIT BOLKOW BLOHM GMBH

(FORM B)

BK117

SUPPLIER (MANUFACTURER) TRANSMITTAL & APPROVAL REQUEST

TO AIRCRAFT DIVISION OF
 KAWASAKI HEAVY IND., LTD.
 SOHARA-MIKAKINO-CHO
 KAKAMIGAHARA-CITY
 GIFU PREF. 504
 JAPAN

TO HELICOPTER DIVISION OF
 MESSERSCHMIT BOLKOW BLOHM GMBH
 P.O. BOX 801140
 D - 8000 MUNICH 80
 F.R. OF GERMANY

ATTN.: PURCHASING DEPARTMENT

ATTN.: PURCHASING DEPARTMENT

GENTLEMEN;

PLEASE, APPROVE THE FOLLOWING DOCUMENTS

| MANUFACTURER | | PART OR MATERIAL NAME | | PART OR MATERIAL NO. | | CHG | P.O. NO. |
|--------------|----------------------|-----------------------|-----|----------------------|-------------------|-----|----------|
| | | | | | | | |
| NO | DOCUMENT DISCRIPTION | DOCUMENT NUMBER | CHG | TYPE OF SUBMITTAL | NOTE OR REFERENCE | | |
| | | | | | | | |

NOTE: TYPE OF SUBMITTAL SIMBOL; O=ORIGINAL SUBMITTAL, R=RE-SUBMITTAL
 C=COMPLETE SUBMITTAL, P=PARTIAL SUBMITTAL, F=FINAL SUBMITTAL.

SIGNATURE : _____ DATE _____

DEPARTMENT : _____

MANUFACTURER NAME AND ADDRESS

SUPPLIER CHANGE PROPOSAL (SCP)

| | | |
|--------------------------|-------------------------------------|------------|
| NAME OF COMPLETE ARTICLE | SUPPLIER NAME ADDRESS AND TELEX NO. | SCP NUMBER |
| PART NO. | | DATE |

| | | | |
|----------------------|--|----------------------|--|
| SPECIFICATION NUMBER | SPECIFICATION AFFECTED <input type="checkbox"/> YES <input type="checkbox"/> NO | P.O. CONTRACT NUMBER | ARTICLES IN PRODUCTION <input type="checkbox"/> YES <input type="checkbox"/> NO |
|----------------------|--|----------------------|--|

| | |
|---|--|
| NAME OF PART OR LOWEST SUBASSEMBLY AFFECTED | PART NO. AND MODEL, OR TYPE NO. OF PART OR LOWEST SUBASSEMBLY AFFECTED |
|---|--|

| | |
|-------------------------|---------------------------------------|
| SUPERSEDING PART NUMBER | NAME AND PART NUMBER OF NEXT ASSEMBLY |
|-------------------------|---------------------------------------|

| | | |
|-----------------|--|------------------------------------|
| TITLE OF CHANGE | CPE FURNISHED EQUIPMENT AFFECTED <input type="checkbox"/> YES <input type="checkbox"/> NO | CPE DATA REQUIRED AT SUPPLIERS BY: |
|-----------------|--|------------------------------------|

DESCRIPTION OF CHANGE

| | |
|-------------------|--|
| REASON FOR CHANGE | <input type="checkbox"/> REQUESTED BY KHI/WBS PER |
| | <input type="checkbox"/> INITIATED BY SUPPLIER FOR |
| | 1. COMPLIANCE WITH NEW OR REV. SPEC. NO. _____ 2. FIX FOR UNSATISFACTORY REPORT NO. _____ 3. OTHER _____ |

ESTIMATED COST PROPOSAL FOR CHANGE IN PRODUCTION (Itemized costs and, if firm, so indicate)

EFFECT ON CONTRACT PRICE

| | | | |
|--|--|--|--|
| ITEMS AFFECTED BY CHANGE (Check appropriate boxes) | <input type="checkbox"/> AIRBORNE EQUIPMENT <input type="checkbox"/> TRNG EQUIP. & FACILITIES <input type="checkbox"/> SPARES PARTS EXHIBIT <input type="checkbox"/> CONTRACT WEIGHT <input type="checkbox"/> INSTALLATION <input type="checkbox"/> OPERATION FACILITIES <input type="checkbox"/> INTERCHANGEABILITY | <input type="checkbox"/> INDIVIDUAL TRAINING <input type="checkbox"/> SERVICE LIFE <input type="checkbox"/> GROUND SUPPORT EQUIP. <input type="checkbox"/> INTERFACE <input type="checkbox"/> PHYSICAL LIMITATIONS <input type="checkbox"/> PERFORMANCE <input type="checkbox"/> RELIABILITY | <input type="checkbox"/> DELIVERY SCHEDULE <input type="checkbox"/> OPERATING PROCEDURE <input type="checkbox"/> MAINTENANCE PROCEDURE <input type="checkbox"/> ACTIVATION SCHEDULE |
| <input type="checkbox"/> SAFETY <input type="checkbox"/> CONTRACT PRICE <input type="checkbox"/> OVERHAUL METHODS <input type="checkbox"/> RF INTERFERENCE <input type="checkbox"/> COMPUTER PROGRAMMING | | | |

PUBLICATIONS AFFECTED BY CHANGE (List publications by number, short title, and cost effect)

ESTIMATED PRODUCTION EFFECTIVITY POINT AND DATE (if firm, so indicate)

| | |
|---|--|
| DOES SUPPLIER RECOMMEND CHANGE BE MADE RETROACTIVE IN ARTICLES DELIVERED <input type="checkbox"/> YES <input type="checkbox"/> NO | IS SERVICE BULLETIN RECOMMENDED <input type="checkbox"/> YES S/B NUMBER _____ <input type="checkbox"/> NO |
|---|--|

REASON FOR RECOMMENDATION

BELOW SHALL BE COMPLETED ONLY FOR CHANGES WHEN THE SUPPLIER RECOMMENDS OR THE CHANGE WILL BE RETROACTIVE

| | |
|---|--|
| ESTIMATED PRICE OF MODIFICATION KITS OR PARTS AND SERIAL NUMBER OF UNITS AFFECTED | ESTIMATED COST OF SPECIAL TOOLS, JIGS AND TEST EQUIPMENT |
|---|--|

| | | | |
|--|-----------------|--|-----------------|
| ESTIMATED MANHOURS/UNIT TO ACCOMPLISH CHANGE <u>OPERATING ACTIVITY</u> <u>FIELD SERVICE</u> <u>OVERHAUL</u> | SOURCE OF PARTS | APPROXIMATE DATE KITS AND PART WILL BE AVAILABLE | KIT PART NUMBER |
|--|-----------------|--|-----------------|

| | |
|---|---|
| SOURCE OF SPECIAL TOOLS, JIGS & TEST EQUIP. | APPROXIMATE AVAILABILITY DATE OF TOOLS, JIGS AND TEST EQUIPMENT |
|---|---|

MODEL BK117

| QUALIFICATION TEST PLAN APPROVAL REQUEST | | | |
|--|---|-------------------------|---|
| P.O. | ① | | |
| NOMENCLATURE | ② | APPLI- CABLE | ④ |
| PART NO. | ③ | SPECI- FICAT- ION | |

AS PER ATTACHED

DATE _____

MANUFACTURER

FROM

ADDRESS

SUPPLIER NAME

⑤

REPRESENTATIVE

PHONE AND TELEX NO.

TO AIRCRAFT DIVISION OF
KAWASAKI HEAVY IND., LTD.

Qualification Test Procedures

| Nomenclature | Part Number | Classification | Manufacturer |
|--------------|-------------|----------------|--------------|
| ① | ② | ③ | ④ |

1. Specifications List

| Specification Number | Specification Name |
|----------------------|--------------------|
| ⑤ | ⑥ |

2. Qualification Test Items and Test Procedures

| No. | Test Item | Requirement | Test Procedure in Specification | Actual Test Procedure |
|-----|-----------|-------------|---------------------------------|-----------------------|
| ⑦ | ⑧ | ⑨ | ⑩ | ⑪ |

3. Test Equipments List

| Test Equipment Name | Applicable Test Item | Main Dimensions and Performance | Periodical Inspection Authorized by or with |
|---------------------|----------------------|---------------------------------|---|
| ⑫ | ⑬ | ⑭ | ⑮ |

QUALIFICATION TEST IMPLEMENTATION PLAN

DATE: _____

| | |
|---------|---|
| SUBJECT | ① |
|---------|---|

| | |
|-------------|---------|
| DEPT. CHIEF | MANAGER |
| ⑩ | |

| |
|--------------|
| CO-ORDINATOR |
| ⑪ |

⑫ DIVISION

| DETAIL TEST ITEMS AND/OR ITS CONTENTS | TEST PLACE | SCHEDULE START DATE | IMPLEMENTATION PLAN SCHEDULE | | PERSONNEL CONCERNED AND ASSIGNMENT |
|---------------------------------------|------------|---------------------|------------------------------|---|------------------------------------|
| | | | | | |
| ② | ④ | ⑤ | | ⑥ | |
| ③ | | | | | |

| | |
|--|---|
| NECESSARY CONDITIONS AND NOTE TO ATTAIN THE OBJECT | ⑧ |
| RESULT OF ADJUSTED CONDITIONS | ⑨ |

MODEL BK117

| QUALIFICATION TEST RESULT REPORT | | | |
|----------------------------------|---|--|---|
| P.O. | ① | APPLI- CABLE SPECI- FICAT- ION | ④ |
| NOMENCLATURE | ② | | |
| PART NO. | ③ | | |

AS PER ATTACHED

DATE _____

 MANUFACTURER

FROM

ADDRESS

COMPANY

REPRESENTATIVE

TELEPHONE AND

TELEX NO.

⑤

 TO AIRCRAFT DIVISION OF
 KAWASAKI HEAVY IND., LTD.

Qualification Test Report

| | | | | |
|----------------------|-----------|--------------------|--------------------------------|--------------|
| Nomenclature | | Part Number | Classification | Manufacturer |
| ① | | ② | ③ | ④ |
| Specification Number | | | Approved Test Procedure Number | |
| ⑤ | | | ⑥ | |
| Test Place | ⑦ | | Test Witness | |
| Test Date | ⑧ | | ⑨ | |
| No. | Test Item | Required Condition | Test Results | |
| ⑩ | ⑪ | ⑫ | ⑬ | |
| Total Judgment | | ⑭ | | |