

Biman Bangladesh Airlines
Engineering & Material Management Directorate

Name of the Tender: Selection of Agency for Repair/Overhaul of PW150A Engine

01. Introduction

Biman Bangladesh Airlines Ltd. (Biman) is currently operating 03 De Havilland Dash8-400 aircraft. 02 more brand new aircraft are scheduled to join in the fleet by first quarter of 2021. Among 05 Dash8-400 aircraft, 04 aircraft are owned by Biman and remaining 01 will be operated under dry lease until October 2023. Currently Biman has 01 spare PW150A engine to support operation of 05 Dash8-400 aircraft fitted with PW150A engines.

Biman hereby invites offer from the OEM and OEM approved engine MRO having proven capability and experience on repair/ overhaul of PW150A engines. The engine MRO selected by this Tender shall be responsible for all scheduled and unscheduled Repair /Overhaul of Biman PW150A engine fleet.

02. Biman Fleet Status

Biman PW150A engine fleet status as of 30th November 2020 is as follows:

| SI | Engine S/N | TSN | CSN | TSLSV | CSLSV | Remarks |
|-----|------------|-------|-------|-------|-------|--|
| 01. | PCE-FA0811 | 9011 | 13158 | 3309 | 5448 | In Operation. |
| 02. | PCE-FA1383 | 749 | 1214 | 749 | 1214 | In Operation. |
| 03. | PCE-FA0808 | 8155 | 11717 | 2589 | 4094 | Currently under repair. |
| 04. | PCE-FA0749 | 10038 | 11686 | 2646 | 4402 | Dry Leased. Currently under repair. |
| 05. | PCE-FA0458 | 13535 | 15097 | 2604 | 4334 | Dry Leased. In Operation. |
| 06. | PCE-FA1404 | 36 | 12 | 36 | 12 | In Operation. |
| 07. | PCE-FA1406 | 36 | 12 | 36 | 12 | In Operation. |
| 08. | PCE-FA1409 | 0 | 0 | 0 | 0 | EIS in February, 2021 |
| 09. | PCE-FA1410 | 0 | 0 | 0 | 0 | EIS in February, 2021 |
| 10. | TBD | 0 | 0 | 0 | 0 | EIS in February, 2021 |
| 11. | TBD | 0 | 0 | 0 | 0 | EIS in February, 2021 |

03. Biman Operation

Biman operates Dash8-400 Aircraft in domestic and regional routes with average monthly utilization 120 flying hour with an engine hours/cycle ratio of 0.65/1 (approximately).

04. Term of Agreement:

The agreement shall be valid for a period of five (05) years from the date of signing unless terminated by either party giving to the other party not less than 3 months in advance written notice prior to the date such termination becomes effective.

05. Tenderer Qualifications (Mandatory):

The Tenderer shall provide following Information / Technical Documents and must agree with the following term and conditions:

- (a) The Tenderer must be an approved MRO capable of in-house repair and overhaul of PW150A Engines having Certificate of Approval(s) from (i) either FAA and/or EASA and (ii) local Regulatory Authority. In addition, the Tenderer must agree to comply with all applicable directive(s) / instruction(s) issued by the Civil Aviation Authority of Bangladesh (CAAB).
- (b) The minimum period of general experience of Tenderer in repair/ overhaul of Aircraft Gas Turbine Engine shall be five years.
- (c) Tenderer should have the experience of Repair/Overhauling at least 10 (Ten) PW150A engines as of the date of participating this tender. Proven experience of repair/overhauling at least 05 (Five) PW150A engines over the last three years (January 2018 to December 2020 inclusive) is required.
- (d) A Tender submitted by a Joint Venture, Consortium or Association (JVCA) is not acceptable.
- (e) An engine MRO, capable to repair/ overhaul PW150A engines but without having in-house Engine Test Cell with certified Test capability, shall not be considered as capable.
- (f) Tenderer should have major in-house repair capability for repair/ overhaul of PW150A engine breakdown parts at piece part level and components.
- (g) Any discussion/ negotiation will be done directly with the Tenderer MRO. Biman shall not deal with any Agent/Broker during the process of evaluation and finalization of the proposal or agreement.

06. Tender Mandatory Requirements:

The Tenderer shall agree and provide response for the following Mandatory requirements to qualify as Responsive tenderer:

| Tender requirement | Tenderer Response |
|--|---|
| <p>(a) Each engine Shop-in to Shop-out Turn-Around-Time (TAT) shall not be more than 60 (Sixty) calendar days, lower preferable. The TAT and its term and condition(s) shall clearly be specified in the offer and draft agreement. Tenderer must agree to pay US\$500 compensation per day for extension of TAT. However, for zero-spare situation due to TAT failure, the Tenderer must support Biman with FOC (free-of-charge) lease engines. Biman shall pay only Utilization Charges but no Daily Rent for such FOC lease Engine.</p> | <p><input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____</p> |
| <p>(b) The workscoping of Biman's engine during any engine shop visit at Tenderer's facility will be carried out jointly by Biman's representative and Tenderer's engineering personnel in reference to the applicable documents/manuals issued by engine manufacturer. In case of lease aircraft engine, Lessor's designated representative would also participate during workscoping. Biman will maintain control of engine 'workscape' requirements at all times and will have the right to change the workscope during the early stages of shop visit.</p> | <p><input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____</p> |

| Tender requirement | Tenderer Response |
|---|---|
| (c) Warranty periods for engine repair/overhaul shall be minimum of 2000 Flight Hour or 15 months whichever earlier, after installation of the engine on aircraft, higher is preferable. The Tenderer must also warrant their subcontractor's work. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (d) The Tenderer shall agree to undertake any warranty claim(s)/issue(s) with Manufacturer/subcontractor on behalf of Biman. The Tenderer shall administer Primary Parts Service Policy ("PPSP"), Extended Engine Service Policy ("EESP") and Harsh Environment Commercial Support with P&WC and shall transfer benefit to Biman. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (e) If any engine is due for redelivery to aircraft Lessor before next planned shop visit, the repair agency needs to ensure at the time of delivery of engine to Biman after shop visit, that the engine meets all the redelivery requirements/conditions as per the aircraft lease agreement. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (f) Serviceable Biman parts left after any engine shop visit shall be monitored and maintained in Biman parts stock at Tenderer's facility for future use by Biman during the tenure of the contract. The Tenderer shall provide FOC storage and management of such parts. The stock of Biman parts should be returned to Biman or to a place designated by Biman once the contract is terminated for any reason. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (g) Tenderer shall provide FOC storage for unserviceable parts left after any engine shop visit for a mutually agreed period and shall allow for scrap parts review if requested by Biman. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (h) QEC/LRU overhaul / repair and test must be performed either in-house or by FAA/EASA approved subcontractor. This shall also include wiring harnesses and wire bundles. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (i) All Used Serviceable Parts (including LLPs, LRUs etc.) installed in Biman engines by Tenderer shall have proper documents, traceability, back to birth history and such parts should be of around same or lower age and same or higher modification standard than corresponding Biman parts. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (j) Engine delivery and re-delivery shall be done at Biman's base station Dhaka at the expense of Repair Agency. The repair agency shall be responsible for organizing such transportation to and from Biman Hangar located at Hazrat Shah Jalal Int'l Airport, Kurmitola, Dhaka. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (k) Engine transportation from the repair facility to any Biman Stations (Base/Outstation) for AOG shall be the responsibility of repair agency, when the engine would be at the MRO facility. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |

| Tender requirement | Tenderer Response |
|--|---|
| (l) Engines shall be checked at receipt and dispatch time. A list of missing items must be made shop-in & shop-out, should be reported at engine induction & redelivery and such list shall accompany the engine documentation. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (m) Engine release documentation should be to a format that is acceptable to Biman. A list of all AD's and SB's with applicability/ compliance data applicable to the engine model should be provided in the shop visit report. Both Electronic copy Hard copy of engine shop visit report to be provided after each engine shop visit. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (n) Use of PMA part and DER repairs are not allowed for the engines. However, any specific cost effective DER repair may be discussed, and can only be applied subjected to an approval from aircraft Lessor and Biman. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (o) All disassembly, assembly, repair, Overhaul, inspection, cleaning, testing, modification, alteration, or any other process, technique required during engine shop visit must be up to the manufacturer's approved repair standard and must comply with regulatory requirement. An NTO (No Technical Objection) should be sought for repairs not covered within applicable Repair Manuals and prior concurrence from Biman must be taken before incorporation of the same. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (p) The Tenderer shall have an independent Quality Assurance program that monitors compliance with applicable airworthiness regulations, requirements and their own maintenance procedure manual. Such program shall also address the specific requirement of the customer's Quality Assurance program as detailed in customer's Maintenance Control Manual. Tenderer must comply with applicable clauses of Biman Quality Assurance Audit Checklist, Form - QA/AUD/CHK/002/029. Tenderer must ensure and provide Certificate annually that their personnel are trained and competent to perform SMS (Safety Management System) duties. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (q) The repair agency must assist Biman by providing Lab report, estimated cost of repairing/overhauling an engine due to FOD (Foreign Object Damage), accident/incident, unscheduled removal etc. whenever requested by Biman. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (r) 12 months Preservation, Packaging, shipment and transportation requirements must be of Industry standard and acceptable to Biman. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (s) The Tenderer must respond to quality complaints formally and promptly. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |

| Tender requirement | Tenderer Response |
|--|---|
| (t) Full In-house capability is preferred however, for the parts subcontracted, the agency must agree to provide subcontractor's invoice. Charges for handling of parts including insurance and warranty will be the responsibility of the agency. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (u) The Tender validity period shall be 120 days minimum. Biman may request further validity extension, if needed. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (v) In case of multiple facility owned under the same Group, the Tenderer may participate in the bid separately against each of the facility and provide Certificate of Approval for that corresponding facility along with the offer. During the contracted period, the Tenderer must agree on not to send the complete engine to any Sub-contractor or any other facility under the same Group, than contracted facility. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (w) Biman shall have full control over engine removal and shop visit planning. Biman may decide to not repair any engine at its sole discretion. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (x) Guaranteed On-wing Inter Turbine Temperature (ITT) Margin after engine shop visit shall be minimum 30°C. Up to 25°C ITT margin Biman may accept the engine with US\$2000 compensation for each °C shortfall from guaranteed ITT margin. If ITT margin falls below 25°C, Repair Agency shall arrange necessary engine repair at no additional cost to Biman. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |
| (y) Tenderer must quote Fixed Price in Annexure para A-4.1 for a single shop visit of Biman PW150A engine fleet. The quoted Fixed Price must include following services: <ul style="list-style-type: none"> i. All Routine/Non-routine Labor, consumables and expendables cost. ii. Engine Disassembly, assembly, inspection, balancing, grinding, and shipping preparation and preservation. iii. Repair/overhaul of all parts including Life Limited Parts (LLP) and Fuel Nozzles. iv. Scrap replacement of necessary parts including HPT Shroud Segments, Vanes and Blades; LPT Shroud Segments, Vanes and Blades; Combustor Liners, Small Exit Duct, Carbon Seals, LPT shaft and Fuel Nozzles. v. Inspection, Repair and Overhaul of all Engine LRUs. vi. Compliance with all Airworthiness Directives (AD) published up to the date of contract signing. Both material and labor cost to be covered under Fixed Price. vii. Compliance with all Service Bulletins (SB) Category 1~6 published up to the date of contract signing. Both material and labor cost to be covered under Fixed Price. viii. If compliance of any SB beyond Category 6 published up to the date of contract signing is mandatory to make the engine serviceable, such SB compliance must be covered under Fixed Price. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign _____ |

| Tender requirement | Tenderer Response |
|---|--|
| ix. Engine Test. x. Both ways engine Transportation in and out of DAC. xi. Maintenance of Engine Transportation Stands/Containers. xii. All handling charges and exchange fees. xiii. Technical Documentation and Technical services. Following services may be excluded from quoted Fixed Price: i. Life Limited Parts (LLP) replacement. ii. Repair and Scrap replacement of Power Turbine blades and vanes. | |
| (z) Prices quoted by the Tenderer in this Price Schedule Annexure-A shall preferably be fixed for duration of the contracted period. In case of changes in quoted price during the proposed contracted period, the methodology and financial figure should be clearly mentioned for any escalation or reduction of prices. Annual price escalation rate must be capped by a certain value in percentage which will be used during financial evaluation process. As such Tenderer must propose an Annual Escalation Cap in addition to the methodology and financial figure in Annexure-A para 6.1. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |
| (aa) All prices shall be quoted in US\$. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |
| (bb) The engine shall be repaired on Time-and-Material basis with Fixed Price as quoted in Annexure-A para A-4.1. Tenderer must quote flat rated prices as stipulated in paragraphs of Annexure-A. Biman shall pay either the Fixed Price amount quoted in Annexure-A para A-4.1 or the actual repair/overhaul cost of any engine, whichever is lower. Annexure-A shall be part of the agreement. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |
| (cc) Tenderer must agree that new part prices should be applicable as of Workscope Finalization date and not at the date of Final Invoice. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |
| (dd) Tenderer must agree that Used Serviceable part price must not exceed 60% of new part price. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |
| (ee) Biman shall be responsible for all taxes/ GST/VAT payable in Bangladesh. Tenderer must agree to pay all taxes/ GST/VAT (if any) outside of Bangladesh. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |
| (ff) The Tenderer must agree to provide on-site support at Dhaka or any out-station as and when required. Price to be quoted for each person per day in US\$ in Annexure-A para A-5.1. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |

| Tender requirement | Tenderer Response |
|---|---|
| (gg) Tenderer must possess engines available for lease and will provide Biman lease engine when required in AOG condition. Biman shall not provide any of its engines in Tenderer lease engine pool. Tenderer must quote daily rent and utilization fees for lease engine in Annexure-A para A-3.1. | <input type="checkbox"/> Agreed <input type="checkbox"/> Not agreed Sign_____ |

07. Documents to be provided along with the Tender Offer (Mandatory):

The Tenderer shall submit the following additional documents in English with Tender offer:

- (a) Copies of approval of FAA and / or EASA as applicable and Certificate of Approval from local regulatory authority of the approved engine maintenance services organization are to be provided.
- (b) Original tender offer must be submitted with signature of tenderer in every page along with original copy of Tender documents.
- (b) **A draft copy of the Engine Maintenance Agreement highlighting each corresponding requirements of the Tender Mandatory requirements as mentioned in para 06 above.**
- (c) List of PW150A engines serial number repaired/overhauled during the period from January 2018 to December 2020 (inclusive).

08. Other Requirements:

- (a) The following documents will also be part of the draft Engine Maintenance Agreement and to be finalized during contract negotiation.
 - i) Engine Lease GTA highlighting the terms and conditions.
 - ii) PW150A Engine parts repair directory mentioning in house and subcontractor repair /overhaul price list and TAT.
- (b) Engine Maintenance Agreement shall include/address following requirements:
 - ✓ A list of facilities where the maintenance is to be carried out, including a list of satellite facilities that the tenderer may use;
 - ✓ A `Statement of Work' (SOW) for the Maintenance Agreement that contains the detailed technical requirements, including references to maintenance intervals, manuals, Airworthiness Directives (ADs), Service Bulletins (SBs) and operator special requirements. A clear, unambiguous and sufficiently detailed SOW and assignment of responsibilities are required to ensure no misunderstanding arises between the operator, the Contractor and the operator's Authority that could result in a situation where the work, which has a bearing on the airworthiness or the serviceability of operator's aircraft, is not properly performed;
 - ✓ A requirement for the repair agency to produce a suitable quality plan for the project;
 - ✓ Use and control of parts and materials;
 - ✓ Process for the approval of deviations from maintenance documents;
 - ✓ A need for an internal evaluation system by the repair agency;
 - ✓ Access by the customer's quality assurance department staff for the purpose of evaluating ongoing quality;

- ✓ A reporting structure that immediately notifies the customer immediately if there is any defect, non-airworthy condition, failure or malfunction which are related to aircraft structure, powerplant, aircraft systems or equipment;
 - ✓ A system of completing, reviewing, retaining maintenance records;
 - ✓ A system of calibration of tooling and equipment;
 - ✓ A system of managing customer supplied parts;
 - ✓ A system of inspecting and testing, i.e., a quality control system;
 - ✓ A system of handling unsatisfactory product;
 - ✓ A system of handling, storage, packaging and delivery;
 - ✓ A system of product identification and traceability;
 - ✓ A system of training by the repair agency of its staff including continuation training not exceeding 36 months interval,
 - ✓ A system of Release To Service of an aircraft or component;
 - ✓ A system for communication between the customer and the repair agency;
 - ✓ A Service Level Agreement (SLA) that includes clear Key Performance Indicators as agreed between the customer and the repair agency for the assessment of achievement of ongoing quality levels (the definition of the specific indicators depends on the policy of the customer);
 - ✓ A system of periodic review meetings to include some or all of those below:
 - Contract Review Meeting
 - Technical Review Meeting
- (c) After signing of contract a customized SHG (Shop Handling Guide) to be prepared jointly Biman and Repair Agency for proper handling of Biman engines during shop visits. SHG shall reflect details of repair and test process for different Workscope. Specific requirements of Biman such as Shop Visit Report contents, Service Bulletins compliance requirement etc. to be addressed in the SHG.
- (d) Repair Agency will provide Free of Charge training to Biman engineering personnel upon requested by Biman.
- (e) Under this Tender the selected bidder have to execute an agreement with the Biman, which shall be treated an independent agreement, more specifically it should not be correlated/interlinked with other existing (if any) or future agreement with the bidder.
- (f) Repair Agency will agree to redeliver engine after shop visit with partial payment of Estimated Cost as provided after engine induction.

09. Tender Financial Evaluation

Only Technically Responsive offers shall be considered for Financial Evaluation. To be Technically Responsive, Offer must comply with all the mandatory requirements above. The following points shall be considered during Tender Financial Evaluation:

- (a) Fixed Price per engine shop visit as quoted in Annexure-A, para A-5.1; and
- (b) Annual price escalation or reduction rate as quoted Annexure-A, para A-7.1.

10. Tender offer submission procedure:

- a) Offer may be sent by Courier to the Office of Director Engineering and Material Management, Biman Engineering Hangar Complex, HSIA, Dhaka-1229, Bangladesh. or

- b) Offer may also be submitted in the Tender Box that will be placed only at Biman Engineering Hangar Gate # 8, HSIA, Dhaka on 04 February 2021. or
- c) Offer may also be sent through email to: pw150tender2020@bdbiman.com

11. Clarification / Further Information:

For any further information/ clarification to the Tender, Tenderer is requested to contact with the following official:

Mr. A. R. M. Kaiser Zaman
Chief Engineer, Engineering Services
Biman Bangladesh Airlines
Tel: +880-2-890-1333
Cell: +8801777715539
email: chiefengr@bdbiman.com

Annexure - A

Price Schedule For Repair, Overhaul, Loan/Lease of PW150A Engine and its Components/ Accessories Installed on De-Havilland Dash8-400 Aircraft

A-1.0 LABOR AND EXPENDABLES

A-1.1 Please quote **Labor Hour Rate**.

A-1.2 Please quote **Fixed Routine Labor (Man Hour) and Flat-rated Expendables Cost (USD)** as per following table:

| Type of Workscope | Quoted Price in USD |
|--|---------------------|
| 1. Fixed Routine Labor for a. Overhaul of entire engine b. Overhaul of TMM c. Overhaul of RGB d. Hot Section Inspection with Impeller Replacement e. Hot Section Inspection (HSI) f. Cold Section Inspection (CSI) | |
| 2. Flat-rated Expendables Cost for a. Overhaul of an entire engine b. Overhaul of TMM c. Overhaul of RGB d. Hot Section Inspection with Impeller Replacement e. Hot Section Inspection f. Cold Section Inspection (CSI) | |

Note:

- 1) **Fixed Routine Labor** must include disassembly, cleaning, inspection, non-destructive testing (FPI/MPI), balancing, assembly, preparation for test, final inspection and preparation for shipment of engines, technical documentation for the respective workscope.
- 2) **Flat-rated Expendables Cost** must include all materials, expendables and parts which are replaced every time during disassembly regardless of their condition (eg. packings and o-rings).

A-1.3 Please quote **Engine Test Run** fixed price (including Fuel, Oil and man hour).

A-1.4 Please quote **Component Flat Rate** charge which must include all Labor, material and break down part cost as pre following table:

| Components | Typical P/N | Bench check cost in USD | Repair cost in USD | Overhaul cost in USD |
|---|-------------|-------------------------|--------------------|----------------------|
| CONTROL-ENGINE ELECTRONIC | 3122400-16 | | | |
| WIRING HARNESS-ELECTRICAL | 3122401-06 | | | |
| ELECTRICAL WIRING HARNESS | 3122402-05 | | | |
| ELECTRICAL WIRING HARNESS | 3122404-05 | | | |
| ROTOR-ALTERNATOR, PERMANENT MAGNET | 3122405-02 | | | |
| HOUSING-ALTERNATOR, PERMANENT MAGNET | 3047143-01 | | | |
| EXCITER-IGNITION | 3122413-08 | | | |
| FUEL METERING UNIT | 3122419-10 | | | |
| LOW, SWITCH, FUEL FILTER IMPENDING BYPASS | 3122426-04 | | | |
| TRANSDUCER-PRESS, AIR P3 | 3122435-02 | | | |
| VALVE-P2.7/P3 CHECK | 3122444-02 | | | |
| SENSOR-MAIN OIL PRESSURE | 3122448-01 | | | |
| PUMP-OIL | 3047121-06 | | | |

| | | | | |
|----------------------------------|------------|--|--|--|
| SENSOR-TEMPERATURE,T1.8 | 3047237-02 | | | |
| SPEED SENSOR AND PROBES | 3047251-01 | | | |
| TORQUE PROBE AND SENSOR | 3047252-01 | | | |
| SPEED SENSOR AND PROBES | 3047267-01 | | | |
| ITT WIRING HARNESS | 3047287-01 | | | |
| VALVE ASSY-FLOW DIVIDER | 3047604-04 | | | |
| CBV,P2.2 INTERSTAGE BLEED VALVE | 3047683-08 | | | |
| VALVE-INTERCOMPRESSOR BLEED OFF | 3047966-05 | | | |
| SENSOR-OIL TEMP. & COLD JUNCTION | 3048148-02 | | | |
| THERMOCOUPLE-IMMERSION | 3048221-01 | | | |
| HEATER-FUEL | 3049409-05 | | | |
| BYPASS INDICATOR VALVE ASSY | 3049411-01 | | | |
| CABLE-IGNITION | 3056566-02 | | | |
| NOZZLE-FUEL,ASSY | 3073558-01 | | | |
| FUEL MANIFOLDPORT | 3074469-01 | | | |
| FUEL MANIFOLD,STARBOARD | 3074470-01 | | | |
| PLUG-CHARACTERIZATION,ASSY | 3113199-02 | | | |

A-2.0 MATERIAL

A-2.1 Please quote prices for replacement materials used during engine repair/overhaul as per following table. **Used parts price must not be more than 60% of New Parts price.**

| | Price Source | Price (%) | Handling Charge | Handling Charge Ceiling |
|------------|--------------|----------------|-----------------|-------------------------|
| New Parts | | | | |
| Used Parts | | | | |
| LLPs | | Pro-rata Value | | |

A-2.2 For the parts exchanged utilizing rotatable pool, Biman would pay repair price of the part. Please quote Exchange Fee as per following table

| | Exchange Fee | Exchange Fee Ceiling |
|------------------------|--------------|----------------------|
| Non LLPs & Accessories | | |
| LLPs | | |

A-2.3 For Repair/Overhaul of parts by Subcontractor, please quote Handling Charge as per following table

| | Handling Charge | Handling Charge Ceiling |
|------------------------|-----------------|-------------------------|
| Non LLPs & Accessories | | |
| LLPs | | |

A-3.0 ENGINE LEASE SUPPORT

Tenderer shall agree to support Biman with lease engine whenever required. In case of AOG due to TAT extension, Tenderer must provide FOC (Free of Charge) loan Engine in Biman's QEC configuration. Only usage fee may be paid by Biman (excluding daily fee).

A-3.1 Lease Engine Charges

Please quote Daily and Utilization charge for Lease Engine.

A-4.0 FIXED PRICE QUOTE

A-4.1 Tenderer must quote Fixed Price in Annexure para A-4.1 for a single shop visit of Biman PW150A engine fleet. The quoted Fixed Price must include following services:

- i. All Routine/Non-routine Labor, consumables and expendables cost.
- ii. Engine Disassembly, assembly, inspection, balancing, grinding, and shipping preparation and preservation.
- iii. Repair/overhaul of all parts including Life Limited Parts (LLP) and Fuel Nozzles.
- iv. Scrap replacement of necessary parts including HPT Shroud Segments, Vanes and Blades; LPT Shroud Segments, Vanes and Blades; Combustor Liners, Small Exit Duct, Carbon Seals, LPT shaft and Fuel Nozzles.
- v. Inspection, Repair and Overhaul of all Engine LRUs.
- vi. Compliance with all Airworthiness Directives (AD) published up to the date of contract signing. Both material and labor cost to be covered under Fixed Price.
- vii. Compliance with all Service Bulletins (SB) Category 1~6 published up to the date of contract signing. Both material and labor cost to be covered under Fixed Price.
- viii. If compliance of any SB beyond Category 6 published up to the date of contract signing is mandatory to make the engine serviceable, such SB compliance must be covered under Fixed Price.
- ix. Engine Test.
- x. Both ways engine Transportation in and out of DAC.
- xi. Maintenance of Engine Transportation Stands/Containers.
- xii. All handling charges and exchange fees.
- xiii. Technical Documentation and Technical services.

Following services may be excluded from quoted Fixed Price:

- i. Life Limited Parts (LLP) replacement.
- ii. Repair and Scrap replacement of Power Turbine blades and vanes.

A-5.0 ON-SITE SUPPORT

A-5.1 Tenderer must provide on-site support at Dhaka or any out-station as and when required. Please quote price for onsite support (cost for each person per day in USD).

A-6.0 PRICE ESCALATION / REDUCTION

A-6.1 Prices quoted by the Tenderer in this Price Schedule Annexure-A shall preferably be fixed for duration of contracted period. In case of changes in quoted price during the proposed contracted period, the methodology and financial figure should be clearly mentioned for any escalation or reduction of prices. **Annual price escalation rate must be capped by a certain value in percentage which will be used during financial evaluation process.** As such Tenderer must quote an Annual Escalation Cap in addition to the methodology and financial figure.
