REQUEST FOR BIDS (RFB)

Name of the Procuring Entity: Sri Lanka Air Force.

Title of Contract: Purchase of Qty 01 Brand new Aviation Re- fuel Bowser (10,000Ltrs Capacity)

Bid Number: AHQ/25/PUB/E/1007

1. This Request for Bids follows the General Procurement Notice/Advanced Procurement Notice for this purchase that appeared in:

   a. Sunday Observer *on 25May 25*
   b. Waramanjali *on 25May 25*
   c. Silumina *on 25May 25*

2. The Chairman Ministry Procurement Committee Department Procurement Committee (DPC) on behalf of the Sri Lanka Air Force now invites sealed bids/proposals from eligible and qualified bidders for Purchase of Qty 01 Brand new Aviation Re- fuel Bowser (10,000Ltrs Capacity)

3. **The delivery period is.**

   a. **Earliest Delivery Period**: 60 days
   b. **Latest Delivery Period**: 90 days

4. Bidding will be conducted through National Competitive Bidding (NCB).

5. **Qualifications requirements include:**

   a. Documents specified in eligibility and qualification requirements specified in Section V.
   b. A margin of preference for eligible locally produced goods **shall not be applied.**

6. **A complete set of Procurement Documents in English** may be purchased by interested bidders:
   a. Upon submission of a written request to the address given in para 5 above.
   b. Upon payment of a non-refundable fee of LKR 20,000.00 to the Director Finance of the Sri Lanka Air Force (SLAF) at the address given in para 12.

c. **Method of payment**: By cash.

7. Bids addressed to the Chairman Department Procurement Committee (DPC) must be delivered to the address mentioned in para 12.

a. **Bids** should only be **hand delivered, sent via registered post or couriered.**
b. **Emailed bids** and bids sent via fax **will not be accepted**.
c. Late bids shall be rejected.
d. Bids/proposals will be opened at 1030 hrs on 17 June 2025 in the presence of bidders' representatives (in-person or virtually) at LL2 Floor, Air Force Headquarters, Sri Jayewardenapuara, Kotte.

8. All bids must include a **Bid-Security for the value of LKR 1,200,000.00 validity date until 14 October 2025.**

9. If stated in the Data Sheet the Bidder shall submit a certificate from the manufacturer to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in Sri Lanka.

10. If the testing charges / samples are required by the Bidding Document (Please refer Section IV) the relevant conditions given in the Bidding Document shall be complied with in all respects without any reservation. The original cash receipt for testing charges issued by the Director Finance of the SLAF shall be attached to the original bid.

11. The successful bidder shall undertake to perform the resulting order/ contract with all-reasonable skill, diligence and care in accordance with sound industry practice to the satisfaction of the SLAF and accept full responsibility for the satisfactory quality of such goods/services as delivered /performed by them. Any non-conformity/ malfunction/ defect/ deficiency noticed in the goods delivered/ services rendered shall be promptly remedied by the successful bidder upon the receipt of written notice from the SLAF.

12. Interested eligible bidders may inspect the Procurement Documents at the address given above during 0900 hrs to 1500 hrs on any working day and obtain further information from

Chief Procurement Officer
Air Force Headquarters
P.O Box 594, Defence Headquarters Complex
Sri Jayewardenepura, Kotte
Sri Lanka
Tel: +94 112 328850/ 2441553
E-mail: lquote@slaf.gov.lk

(**HAD DIAS**)
Air Commodore
Chief Procurement Officer
for **COMMANDER OF THE AIR FORCE**

May 2025

SECTION I.
INSTRUCTIONS TO BIDDERS (ITB)

ITB shall be read in conjunction with the Section II, Bidding Data Sheet (BDS), which shall take precedence over ITB.

SECTION	ITB	Clause
GENERAL	**1. Scope of Bid**	1.1 The Purchaser indicated in the Bidding Data Sheet (BDS), issues these Bidding Documents for the supply of Goods and Related Services incidental thereto as specified in Section V, Schedule of Requirements. The name and identification number of this procurement are specified in the BDS. The name, identification, and number of lots (individual contracts), if any, are provided in the BDS. 1.2 Throughout these Bidding Documents: (a) the term "in writing" means communicated in written form by mail (other than electronic mail) or hand delivered with proof of receipt; (b) if the context so requires, "singular" means "plural" and vice versa; and (c) "day" means calendar day.
	2. Source of Funds	2.1 Payments under this contract will be financed by the source specified in the BDS.
	3. Ethics, Fraud and Corruption	3.1 The attention of the bidders is drawn to the following guidelines of the Procurement Guidelines published by National Procurement Agency: - Parties associated with Procurement Actions, namely, suppliers/contractors and officials shall ensure that they maintain strict confidentiality throughout the process; - Officials shall refrain from receiving any personal gain from any Procurement Action. No gifts or inducement shall be accepted. Suppliers/contractors are liable to be disqualified from the bidding process if found offering any gift or inducement which may have an effect of influencing a decision or impairing the objectivity of an official. 3.2 The Purchaser requires the bidders, suppliers, contractors, and consultants to observe the highest standard of ethics during

		the procurement and execution of such contracts. In pursuit of this policy: (a) "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution; (b) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract; (c) "collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Purchaser to establish bid prices at artificial, non-competitive levels; and (d) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract. 3.3 If the Purchaser found any unethical practices as stipulated under ITB Clause 3.2, the Purchaser will reject a bid, if it is found that a Bidder directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.
ELIGIBLE BIDDERS	**4. Eligible Bidders**	4.1 All bidders shall possess legal rights to supply the Goods under this contract. 4.2 A Bidder shall not have a conflict of interest. All bidders found to have conflict of interest shall be disqualified. Bidders may be considered to have a conflict of interest with one or more parties in this bidding process, if they: (a) are or have been associated in the past, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under these Bidding Documents; or

		(b) submit more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid. 4.3 A Bidder that is under a declaration of ineligibility by the National Procurement Agency (NPA), at the date of submission of bids or at the date of contract award, shall be disqualified. The list of debarred firms is available at the website of NPA, www.npa.gov.lk. 4.4 Foreign Bidder may submit a bid only if so stated in the BDS.
ELIGIBLE GOODS AND RELATED SERVICES	**5. Eligible Goods and Related Services**	5.1 All goods supplied under this contract shall be complied with applicable standards stipulated by the Sri Lanka Standards Institute (SLSI). In the absence of such standards, the Goods supplied shall be complied to other internationally accepted standards.
CONTENTS OF BIDDING DOCUMENTS	**6. Sections of Bidding Documents**	6.1 The Bidding Documents consist of 2 Volumes, which include all the sections indicated below, and should be read in conjunction with any addendum issued in accordance with ITB Clause 8. **VOLUME 1** Section I. Instructions to Bidders (ITB) Section VI. Conditions of Contract (CC) Section VIII. Contract Forms **VOLUME 2** Section II. Bidding Data Sheet (BDS) Section III. Evaluation and Qualification Criteria Section IV. Bidding Forms Section V. Schedule of Requirements Section VII. Contract Data Invitation For Bid 6.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents may result in the rejection of the bid.
CLARIFICATION AND AMENDMENT	**7. Clarification of Bidding Documents**	7.1 A prospective Bidder requiring any clarification of the Bidding Documents including the restrictiveness of specifications

		shall contact the Purchaser in writing at the Purchaser's address specified in the BDS. The Purchaser will respond in writing to any request for clarification, provided that such request is received no later than ten (10) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all those who have purchased the Bidding Documents, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under ITB Clause 8.
	8. Amendment of Bidding Documents	8.1 At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Documents by issuing addendum. 8.2 Any addendum issued shall be part of the Bidding Documents and shall be communicated in writing to all who have purchased the Bidding Documents. 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to ITB Sub-Clause 23.2.
PREPARATION OF BIDS	**9. Cost of Bidding**	9.1 The Bidder shall bear all costs associated with the preparation and submission of its bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
	10. Language of Bid	10.1 The Bid, as well as all correspondence and documents relating to the Bid (including supporting documents and printed literature) exchanged by the Bidder and the Purchaser, shall be written in English language.
	11. Documents Comprising the Bid	11.1 The Bid shall comprise the following: (a) Bid Submission Form and the applicable Price Schedules, in accordance with ITB Clauses 12, 14, and 15; (b) Bid Security or Bid-Securing Declaration, in accordance with ITB Clause 20; (c) documentary evidence in accordance with ITB Clauses 18 and 29, that the Goods and

		Related Services conform to the Bidding Documents; (d) documentary evidence in accordance with ITB Clause 18 establishing the Bidder's qualifications to perform the contract if its bid is accepted; and (e) any other document required in the BDS.
BID SUBMISSION	**12. Bid Submission Form and Price Schedules**	12.1 The Bidder shall submit the Bid Submission Form using the form furnished in Section IV, Bidding Forms. This form must be completed without any alterations to its format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
	13. Alternative Bids	13.1 Alternative bids shall not be considered.
	14. Bid Prices and Discounts	14.1 The Bidder shall indicate on the Price Schedule the unit prices and total bid prices of the goods it proposes to supply under the Contract. 14.2 Any discount offered against any single item in the price schedule shall be included in the unit price of the item. However, a Bidder wishes to offer discount as a lot the bidder may do so by indicating such amounts appropriately. 14.3 If so indicated in ITB Sub-Clause 1.1, bids are being invited for individual contracts (lots) or for any combination of contracts (packages). Unless otherwise indicated in the BDS, prices quoted shall correspond to 100 % of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer any price reduction (discount) for the award of more than one Contract shall specify the applicable price reduction separately. 14.4 (i) Prices indicated on the Price Schedule shall include all duties and sales and other taxes already paid or payable by the Supplier: (a) on components and raw material used in the manufacture or assembly of goods quoted; or

		(b) on the previously imported goods of foreign origin. (ii) However, VAT shall not be included in the price but shall be indicated separately; (iii) the price for inland transportation, insurance and other related services to deliver the goods to their final destination; (iv) the price of other incidental services. 14.5 The Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected, pursuant to ITB Clause 31. 14.6 All lots, if any, and items must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items.
	15. Currencies of Bid	15.1 Unless otherwise stated in Bidding Data Sheet, the Bidder shall quote in Sri Lankan Rupees and payment shall be payable only in Sri Lanka Rupees.
	16. Documents Establishing the Eligibility of the Bidder	16.1 To establish their eligibility in accordance with ITB Clause 4, Bidders shall complete the Bid Submission Form, included in Section IV, Bidding Forms.
	17. Documents Establishing the Conformity of the Goods and Related Services	17.1 To establish the conformity of the Goods and Related Services to the Bidding Documents, the Bidder shall furnish as part of its Bid the documentary evidence that the Goods conform to the technical specifications and standards specified in Section V, Schedule of Requirements. 17.2 The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item by item description (given in Section V, Technical Specifications) of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to the technical specification, and if

		applicable, a statement of deviations and exceptions to the provisions of the Schedule of Requirements. 17.3 The Bidder shall also furnish a list giving full particulars, including quantities, available sources and current prices of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods during the period if specified in the BDS following commencement of the use of the goods by the Purchaser.
	18. Documents Establishing the Qualifications of the Bidder	18.1 The documentary evidence of the Bidder's qualifications to perform the contract if its bid is accepted shall establish to the Purchaser's satisfaction: (a) A Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section IV, Bidding Forms to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods; (b) that, if required in the BDS, in case of a Bidder not doing business within Sri Lanka, the Bidder is or will be (if awarded the contract) represented by an Agent in Sri Lanka equipped and able to carry out the Supplier's maintenance, repair and spare parts stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications; and (c) that the Bidder meets each of the qualification criterion specified in Section III, Evaluation and Qualification Criteria.
	19. Period of Validity of Bids	19.1 Bids shall remain valid until the date specified in the BDS. A bid valid for a shorter date shall be rejected by the Purchaser as non-responsive. 19.2 In exceptional circumstances, prior to the expiration of the bid validity date, the Purchaser may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 20, it shall also be extended for a corresponding period. A Bidder may refuse the

		request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid.
BID SECURITY	**20. Bid Security**	20.1 The Bidder shall furnish as part of its bid, a Bid Security or a Bid-Securing Declaration, as specified in the BDS. 20.2 The Bid Security shall be in the amount specified in the BDS and denominated in Sri Lanka Rupees, and shall: (a) at the bidder's option, be in the form of either a bank draft, a letter of credit, or a bank guarantee from a banking institution; (b) be issued by a institution acceptable to Purchaser. The acceptable institutes are published in the NPA website, www.npa.gov.lk. (c) be substantially in accordance with the form included in Section IV, Bidding Forms; (d) be payable promptly upon written demand by the Purchaser in case the conditions listed in ITB Clause 20.5 are invoked; (e) be submitted in its original form; copies will not be accepted; (f) remain valid for the period specified in the BDS. 20.3 Any bid not accompanied by a substantially responsive Bid Security or Bid Securing Declaration in accordance with ITB Sub-Clause 20.1 and 20.2, may be rejected by the Purchaser as non-responsive. 20.4 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the Performance Security pursuant to ITB Clause 43. 20.5 The Bid Security may be forfeited or the Bid Securing Declaration executed: (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder

		on the Bid Submission Form, except as provided in ITB Sub-Clause 19.2; or (b) if a Bidder does not agreeing to correction of arithmetical errors in pursuant to ITB Sub-Clause 30.3 (c) if the successful Bidder fails to: (i) sign the Contract in accordance with ITB Clause 42; (ii) furnish a Performance Security in accordance with ITB Clause 43.
	21. Format and Signing of Bid	21.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB Clause 11 and clearly mark it as "ORIGINAL." In addition, the Bidder shall submit a copy of the bid and clearly mark it as "COPY." In the event of any discrepancy between the original and the copy, the original shall prevail. 21.2 The original and the Copy of the bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. 21.3 Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the Bid.
SUBMISSION AND OPENING OF BIDS	**22. Submission, Sealing and Marking of Bids**	22.1 Bidders may always submit their bids by mail or by hand. (a) Bidders submitting bids by mail or by hand, shall enclose the original and the copy of the Bid in separate sealed envelopes, duly marking the envelopes as "ORIGINAL" and "COPY." These envelopes containing the original and the copy shall then be enclosed in one single envelope. 22.2 The inner and outer envelopes shall: (a) Bear the name and address of the Bidder; (b) be addressed to the Purchaser in accordance with ITB Sub-Clause 23.1; (c) bear the specific identification of this bidding process as indicated in the BDS; and (d) bear a warning not to open before the time and date for bid opening, in accordance with ITB Sub-Clause 26.1. If all envelopes are not sealed and marked as required, the Purchaser will assume no

		responsibility for the misplacement or premature opening of the bid.
	23. Deadline for Submission of Bids	23.1 Bids must be received by the Purchaser at the address and no later than the date and time specified in the BDS. 23.2 The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Documents in accordance with ITB Clause 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
	24. Late Bids	24.1 The Purchaser shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB Clause 23. Any bid received by the Purchaser after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.
	25. Withdrawal, and Modification of Bids	25.1 A Bidder may withdraw, or modify its Bid after it has been submitted by sending a written notice in accordance with ITB Clause 22, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB Sub-Clause 21.2, (except that no copies of the withdrawal notice are required). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be: (a) submitted in accordance with ITB Clauses 21 and 22 (except that withdrawal notices do not require copies), and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL," or "MODIFICATION;" and (b) received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB Clause 23. 25.2 Bids requested to be withdrawn in accordance with ITB Sub-Clause 25.1 shall be returned to the Bidders only upon notification of contract award to the successful bidder in accordance with sub clause 41.1. 25.3 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Submission Form or any extension thereof.

	26. Bid Opening	26.1 The Purchaser shall conduct the bid opening in public at the address, date and time specified in the BDS. 26.2 First, envelopes marked "WITHDRAWAL" shall be opened and read out and the envelope with the corresponding bid may be opened at the discretion of the Purchaser. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out at bid opening. Envelopes marked "MODIFICATION" shall be opened and read out with the corresponding Bid. No Bid modification shall be permitted unless the corresponding modification notice contains a valid authorization to request the modification and is read out at Bid opening. Only envelopes that are opened and read out at Bid opening shall be considered further. 26.3 All other envelopes shall be opened one at a time, reading out: the name of the Bidder and whether there is a modification; the Bid Prices, including any discounts and alternative offers; the presence of a Bid Security or Bid-Securing Declaration, if required; and any other details as the Purchaser may consider appropriate. Only discounts and alternative offers read out at Bid opening shall be considered for evaluation. No Bid shall be rejected at Bid opening except for late bids, in accordance with ITB Sub-Clause 24.1. 26.4 The Purchaser shall prepare a record of the Bid opening that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, or modification; the Bid Price, per lot if applicable, including any discounts, and the presence or absence of a Bid Security or Bid-Securing Declaration. The bids that were opened shall be rescaled in separate envelopes, promptly after the bid opening. The Bidders' representatives who are present shall be requested to sign the attendance sheet. A copy of the record shall be distributed to all Bidders who submitted bids in time.
EVALUATION AND	**27. Confidentiality**	27.1 Information relating to the examination, evaluation, comparison, and post-qualification (if applicable) of bids, and recommendation of

COMPARISON OF BIDS		contract award, shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the Contract Award. 27.2 Any effort by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post-qualification of the bids or contract award decisions may result in the rejection of its Bid. 27.3 Notwithstanding ITB Sub-Clause 27.2, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, from the time of bid opening to the time of Contract Award, it should do so in writing.
	28. Clarification of Bids	28.1 To assist in the examination, evaluation, comparison and post-qualification of the bids, the Purchaser may, at its discretion, request any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder in respect to its Bid and that is not in response to a request by the Purchaser shall not be considered for purpose of evaluation. The Purchaser's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the Evaluation of the bids, in accordance with ITB Clause 30.
	29. Responsiveness of Bids	29.1 The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself. 29.2 A substantially responsive Bid is one that conforms to all the terms, conditions, and specifications of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that: (a) affects in any substantial way the scope, quality, or performance of the Goods and Related Services specified in the Contract; or (b) limits in any substantial way, inconsistent with the Bidding Documents, the Purchaser's rights or the Bidder's obligations under the Contract; or

		(c) if rectified would unfairly affect the competitive position of other bidders presenting substantially responsive bids. 29.3 If a bid is not substantially responsive to the Bidding Documents, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.
	30. Nonconformities, Errors, and Omissions	30.1 Provided that a Bid is substantially responsive, the Purchaser may waive any non-conformities or omissions in the Bid that do not constitute a material deviation. 30.2 Provided that a bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid. 30.3 Provided that the Bid is substantially responsive, the Purchaser shall correct arithmetical errors on the following basis: (a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected; (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and (c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount in figures is greater, in which case the amount in figures shall prevail.

		30.4 If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited or its Bid-Securing Declaration shall be executed.
	31. Preliminary Examination of Bids	31.1 The Purchaser shall examine the bids to confirm that all documents and technical documentation requested in ITB Clause 11 have been provided, and to determine the completeness of each document submitted. 31.2 The Purchaser shall confirm that the following documents and information have been provided in the Bid. If any of these documents or information is missing, the Bid shall be rejected. (a) Bid Submission Form, in accordance with ITB Sub-Clause 12.1; (b) Price Schedules, in accordance with ITB Sub-Clause 12; (c) Bid Security or Bid Securing Declaration, in accordance with ITB Clause 20.
	32. Examination of Terms and Conditions; Technical Evaluation	32.1 The Purchaser shall examine the Bid to confirm that all terms and conditions specified in the CC and the Contract Data have been accepted by the Bidder without any material deviation or reservation. 32.2 The Purchaser shall evaluate the technical aspects of the Bid submitted in accordance with ITB Clause 17, to confirm that all requirements specified in Section V, Schedule of Requirements of the Bidding Documents have been met without any material deviation or reservation. 32.3 If, after the examination of the terms and conditions and the technical evaluation, the Purchaser determines that the Bid is not substantially responsive in accordance with ITB Clause 29, the Purchaser shall reject the Bid.
	33. Conversion to Single Currency	33.1 If the bidders are allowed to quote in foreign currencies in accordance with sub clause 15.1, for evaluation and comparison purposes, the Purchaser shall convert all bid prices expressed in foreign currencies in to Sri Lankan Rupees using the selling rates prevailed 28 days prior to closing of bids as published by

		the Central Bank of Sri Lanka. If this date falls on a public holiday the earliest working day prior to the date shall be applicable.
	34. Domestic Preference	34.1 Domestic preference shall be a factor in bid evaluation only if stated in the BDS. If domestic preference shall be a bid-evaluation factor, the methodology for calculating the margin of preference and the criteria for its application shall be as specified in Section III, Evaluation and Qualification Criteria.
	35. Evaluation of Bids	35.1 The Purchaser shall evaluate each bid that has been determined, up to this stage of the evaluation, to be substantially responsive. 35.2 To evaluate a Bid, the Purchaser shall only use all the factors, methodologies and criteria defined in this ITB Clause 35. 35.3 To evaluate a Bid, the Purchaser shall consider the following: (a) the Bid Price as quoted in accordance with clause 14; (b) price adjustment for correction of arithmetic errors in accordance with ITB Sub-Clause 30.3; (c) price adjustment due to discounts offered in accordance with ITB Sub-Clause 14.2; and 14.3 (d) adjustments due to the application of the evaluation criteria specified in the BDS from amongst those set out in Section III, Evaluation and Qualification Criteria; (e) adjustments due to the application of a domestic preference, in accordance with ITB Clause 34 if applicable. 35.4 The Purchaser's evaluation of a bid may require the consideration of other factors, in addition to the factors used in ITB Sub-Clause 35.3, if specified in BDS. These factors may be related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services. The effect of the factors selected, if any, shall be expressed in monetary terms to facilitate comparison of bids. 35.5 If so specified in the BDS, these Bidding Documents shall allow Bidders to quote for one or more lots, and shall allow the Purchaser to

		award one or multiple lots to more than one Bidder. The methodology of evaluation to determine the lowest-evaluated lot combinations, is specified in Section III, Evaluation and Qualification Criteria.
	36. Comparison of Bids	36.1 The Purchaser shall compare all substantially responsive bids to determine the lowest-evaluated bid, in accordance with ITB Clause 35.
	37. Post qualification of the Bidder	37.1 The Purchaser shall determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated and substantially responsive bid is qualified to perform the Contract satisfactorily. 37.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 18. 37.3 An affirmative determination shall be a prerequisite for award of the Contract to the Bidder. A negative determination shall result in disqualification of the bid, in which event the Purchaser shall proceed to the next lowest evaluated bid to make a similar determination of that Bidder's capabilities to perform satisfactorily.
AWARD OF CONTRACT	**38. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids**	38.1 The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.
	39. Award Criteria	39.1 The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
	40. Purchaser's Right to Vary Quantities at Time of Award	40.1 At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section V, Schedule of Requirements, provided this does not exceed twenty five percent (25%) or one unit whichever is higher and without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.

	41. Notification of Award	41.1 The Standstill Period will be observed to provide sufficient time for Bidders to consider whether they should submit an appeal against the Purchaser's decision to award the contract. The Standstill Period shall apply to all competitive bidding processes, except in the following circumstances: (a) Only a single bid/proposal has been received in response to the bidding process. (b) The procurement is conducted through Direct Contracting, Request for Quotations (RFQ), or Shopping methods. (c) The procurement is made to address an emergency situation, as determined by the relevant Government Authorities. 41.2 Any unsuccessful Bidder may request a debriefing from the Purchaser to obtain further clarification on the reasons for the decision. The request for debriefing must be submitted in writing to the Purchaser before the expiry of the third (3rd) working day of the Standstill Period. The Purchaser shall conclude the debriefing and provide the requested information to the Bidder before the expiry of the fifth (5th) working day of the Standstill Period. If any Bidder wishes to submit an appeal against the Purchaser's decision to award the contract, such appeal must be submitted in writing to the Purchaser before the expiry of the Standstill Period 10 working days. (b) The appeal shall include the grounds for the appeal and any supporting evidence. (c) The Purchaser shall review the appeal and respond in accordance with the applicable laws, regulations, and procurement guidelines. 41.3 After the Standstill Period or any appeals being resolved, prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. 41.4 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

		41.5 Upon the successful Bidder's furnishing of the signed Contract Form and performance security pursuant to ITB Clause 43, the Purchaser will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 20.4.
	42. Signing of Contract	42.1 Within Seven (7) days after notification, the Purchaser shall complete the Agreement, and inform the successful Bidder to sign it. 42.2 Within Seven (7) days of receipt of such information, the successful Bidder shall sign the Agreement.
	43. Performance Security	43.1 Within fourteen (14) days of the receipt of notification of award from the Purchaser, the successful Bidder, if required, shall furnish the Performance Security in accordance with the CC, using for that purpose the Performance Security Form included in Section VIII Contract forms. The Employer shall promptly notify the name of the winning Bidder to each unsuccessful Bidder and discharge the Bid Securities of the unsuccessful bidders pursuant to ITB Sub-Clause 20.4. 43.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security or execution of the Bid-Securing Declaration. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder, whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

SECTION II.
BIDDING DATA SHEET

SECTION	CLAUSE	GENERAL
GENERAL	ITB 1.1	The Purchaser is Sri Lanka Air Force.
	ITB 1.1	**The name of the Contract is**: **Error! Reference source not found. Bid Identification Number**: **AHQ/25/PUB/E/1007**
	ITB 2.1	The source of funding Government of Democratic Socialist Republic of Sri Lanka.
	ITB 3.2 (c)	Submit a **Non-Collusion Affidavit** (refer to in Section IV Form V) as part of their bid submission, affirming that they have not engaged in any collusive, corrupt, or fraudulent practices in connection with the procurement process.
	ITB 4.4	Foreign bidders are NOT ALLOWED to participate in bidding.
CONTENTS OF BIDDING DOCUMENTS	ITB 7.1	For Clarification of bid purposes only, the Purchaser's address is: Chief Procurement Officer Air Force Headquarters P.O Box 594, Defence Headquarters Complex Sri Jayewardenepura, Kotte Sri Lanka **Tel**: +94 112 328850/ 2441553 **E-mail**: lquote@slaf.gov.lk
PREPARATION OF BIDS	ITB 11.1 (e)	The documents that should be included in your bid: **i. Forwarding/ covering letter duly signed by the Authorized person. The following documents must be firmly attached to this letter:** **a. The original cash receipt issued for the purchase of the Bidding Document, by the Director of Finance (DF), Sri Lanka Air Force (SLAF).** **b. The original payment receipt for testing charges, issued by the DF, SLAF (if applicable).** **ii. Bid Security if applicable (if applicable, shall be as per the form available in Section IV – Form III).** **iii. Bid Submission Form (shall be as per the form available in Section IV – Form I).** **iv. Non-Collusion Affidavit (refer to in Section IV Form V)** **v. Price Schedule (shall be as per the form available in Section IV – Form II)** **vi. A copy of the letter issued by Inland Revenue Department as an active VAT payee or Non- VAT payee.** **vii. Company Profile (shall be as per the form available in Section IV – Form VI).**

		viii. Authority of signing officer (if applicable), whether a power of attorney or any relevant document (i.e., Letter of Authorization, Board Resolution) for the authorized person. In case of Joint Venture copy of JV Agreement or intent to form a Joint Venture. **ix. Documents required to establish ELIGIBILITY as per Section V Schedule of Requirements.** **x. Documents required to establish QUALIFICATION as per Section V Schedule of Requirements.** **xi. Duly prepared Certificate of Compliance for the Schedule of Requirements given in Section V. This certificate shall evidence that the Goods/Services conform to the technical specifications, conditions and requirements and standards specified in Section V- Schedule of Requirements.** **xii. Manufacturer's Authorization (shall be as per the form available in Section IV – Form IV)** **xiii. Any other document specified in the ITB BDS.** **xiv. A copy of this Bidding Document.** ***Bidders are advised to compile the relevant documents as appropriate as per the sequence given in ITB C-1***.
	ITB 13	Alternative Bids WILL NOT BE considered.
	ITB 14.3	Bidders are not allowed to quote less than 100% quantity for each item.
	ITB 15.1	The bidder shall quote in Sri Lankan Rupees (LKR).
	ITB 17.1	a. Technical Specifications / Brochures for each product offered.
	ITB 17.2	a. A statement of deviations and exceptions to the provisions of the Technical Specifications given.
	ITB 17.3	**Spare Parts List Requirement:** The Bidder **shall submit** a detailed list of spare parts, special tools, and consumables necessary for the **proper functioning of the Goods for …… years** after commissioning. The list must include: **(a) Quantities:** Minimum required stock for ……. years of operation. **(b) Sources:** OEM or approved alternative suppliers (with proof of authorization). **(c) Current Prices:** Unit prices in **LKR** . **(d) Delivery Time:** Lead time for each item. **(e) Compatibility:** Certification of compatibility with supplied Goods.

	ITB 18.1 (b)	After-sales service is: “REQUIRED”.
	ITB 19.1	The bid shall be valid until 19 September 2025.
	ITB 20.1	Bid shall include a Bid Security (issued by bank) included in Section IV Bidding Forms.
	ITB 20.2	The amount of the Bid Security shall be 1,200,000.00. The validity period of the bid security shall be until **Error! Reference source not found.**.
SUBMISSION AND OPENING OF BIDS	ITB 21.1	Bidders shall submit their bids in duplicate in sealed envelopes marked as ORGINAL and DUPLICATE, containing all required documents, including all documents ITB 11.1 (BDS).
	ITB 22.2 (c)	The envelope must be clearly marked as "ORIGINAL" and DUPLICATE along with the Tender Details as follows and addressed to the Purchaser as specified in the Bidding Data Sheet (BDS). **Bid Number:** **Title of Contract: AHQ/25/PUB/E/1007** **Opening Date**: **Date: 17 June 2025** **Opening Time**:1030 hrs.
	ITB 23.1	For bid submission purposes, the Purchaser’s address is: Chief Procurement Officer Air Force Headquarters P.O Box 594, Defence Headquarters Complex Sri Jayewardenepura, Kotte Sri Lanka **Tel**: +94 112 328850/ 2441553 **E-mail**: lquote@slaf.gov.lk
	ITB 23.1	The deadline for the submission of bids is: **Date: 17 June 2025** **Time**: 1030 hrs
	ITB 26.1	The bid opening shall take place at: Chief Procurement Officer Air Force Headquarters P.O Box 594, Defence Headquarters Complex Sri Jayewardenepura, Kotte Sri Lanka **Tel**: +94 112 328850/ 2441553 **E-mail**: lquote@slaf.gov.lk **Date: 17 June 2025** **Time**: 1030 hrs
EVALUATION AND COMPARISON OF BIDS	ITB 34.1	A margin of preference for eligible locally produced goods shall **not be applied.**
	ITB 35.3(d)	The adjustments shall be determined using the following criteria, from amongst those set out in Section III, Evaluation and Qualification Criteria: (a) Deviation in Delivery schedule: +1% of bid price per week beyond the earliest delivery date.

		(b) Deviation in payment schedule: +Interest cost (AWPR+3%) for days below the 45-day standard. (These adjustments are comprehensively described in III).
	ITB 35.4	The following factors will also be considered for evaluation in line with the criteria specified in Section III: a. Assessment of the quality standards of the goods or services offered. This will include certifications, compliance with industry standards, or past performance records. . b. The length and terms of warranties offered, as well as the availability and quality of after-sales service and support. c. Compliance with the technical specifications outlined in the bidding documents. This will include performance characteristics, durability, and compatibility with existing systems. d. The track record and experience of the bidder in supplying similar goods or services. This will include references from previous clients or case studies of past projects. e. The financial health of the bidder, which may be assessed through financial statements, credit ratings, or other indicators of financial stability. f. Consideration of the environmental impact of the goods or services, including sustainability practices, eco-friendliness, and compliance with environmental regulations. g. Adherence to local laws and regulations, including labour laws, safety standards, and import/export regulations. h. Availability of training for the purchaser's staff on the use and maintenance of the goods or services, as well as ongoing support. i. The ability of the bidder to customize the goods or services to meet specific needs of the purchaser, as well as their flexibility in accommodating changes.
	ITB 35.5	Refer to Section III Evaluation and Qualification Criteria, for the evaluation methodology.

SECTION III

EVALUATION CRITERIA

1. The Sri Lanka Air Force (SLAF) reserves the right to evaluate and award a contract or contracts based on the following principles:

a. **Price Evaluation.** Bids will be evaluated based on the Total Amount, excluding VAT, contingencies, and provisional sums. The lowest bidder will be evaluated after adjusting for arithmetical errors, omissions, and other factors as specified in the Procurement Documents.

b. **Award Options**.

a. Evaluate total extended pricing for all items and award to a single bidder.

b. Evaluate total extended pricing by item, section, or category and award to multiple bidders.

c. Evaluate and make partial or no award of items.

2. **Clarifications**. To assist in the examination, evaluation, and comparison of bids, the Bid Evaluation Committee (BEC) may, at its discretion, request clarifications from bidders. However, no modifications to bid prices, delivery terms, or other key contractual conditions will be permitted.

3. **Preliminary Examination of Bids.** Before conducting a detailed evaluation, the Bid Evaluation Committee (BEC) will determine bid responsiveness based on the following criteria:

Criteria	**Yes**	**No**
The bid is complete and does not deviate from the scope.		
Bid bond/security has been furnished as per the requirements.		
Bid bond/security is submitted in the correct format.		
The bid security amount meets the specified percentage/requirement.		
The validity of the bid security matches the bid validity period.		
The bid remains valid for the duration specified in the bidding document.		
All other required forms, schedules, and annexures are included as provided in the Bidding Document.		
All pricing is firm, fixed, and valid for the contract duration.		
Clear Breakdown of costs is provided as required by the Bidding Document.		
Any computational errors have been corrected.		

All documents are properly signed by an authorized representative.		
Company stamp/seal is applied where necessary.		
Copies are certified/notarized if required.		
The completion period offered is within the specified limits.		
The bidder has fulfilled the eligibility and qualification requirements as per the bidding document.		
The bid does not deviate from basic technical requirements.		
The bid is generally in order.		

Reasons for Bid Rejection

Reason	Yes	No
The bid is unsigned.		
The bid is delivered via fax/email.		
The bid is received after the deadline (late submission).		
The bid's validity period is shorter than required.		
The bid security is missing, invalid, or insufficient for validity required.		
The bidder refuses correction of arithmetical errors.		
Prices are conditional (e.g., linked to currency fluctuations or stock sales).		
All pricing is not firm, fixed, and valid for the contract duration.		
The bidder requests an advance payment.		
Mandatory pre-bid inspections have not been carried out (per bid conditions).		
Testing charges for samples (by a professional institution) are not deposited.		
Warranty terms (duration, coverage) do not meet requirements.		
Critical deviations from technical specifications or commercial terms.		
Price breakdown is insufficient for comprehensive evaluation as required by the Bidding Document.		
The bid lacks brochures, required certifications, technical details, or samples as required.		
The bidder fails to meet legal/financial/technical eligibility criteria.		
Eligibility or qualification requirements have not been met.		
The bid is submitted for an incomplete scope of work.		
The bid proposes a completion period beyond limits or deviates critically from the requirements.		

4. **Detailed Evaluation.** After passing the preliminary examination, bids will undergo a detailed evaluation based on the following criteria:

CRITERIA	**JUDGMENT**
Technical Evaluation	- Compliance with required technical specifications including verification of proof of compliance with test reports/certificates - Scope of supply, delivery, or services. - Warranty, spare parts availability, and after-sales service requirements.

	Products/services may undergo testing/certification as specified in Section V (inspection and tests) from professional local institutions such as **SLSI, SLITA, ITI, Moratuwa University**, etc.
Commercial Evaluation	- Terms of payment. - Delivery schedule or completion period. - Compliance with duties and taxes.
Experience & Past Performance	- Experience in the respective field. - Experience in similar contracts.
Financial	Financial soundness of the bidder.
Technical and managerial competence.	**Technical Expertise and Project Management Strength** - Availability of **certified/qualified professionals** (engineers, technicians, specialists) -Proposed methodology. -and management plan. - Available resources (equipment & manpower). **Quality & Compliance -** Technical certifications (ISO, industry-specific standards).
Additional Considerations	- Risk assessment. - Innovation & sustainability (if applicable).

5. **Price Evaluation & Adjustments.** Bids will be evaluated based on the Total Amount, excluding VAT, contingencies, and provisional sums. The lowest bidder will be determined after adjustments for the following factors:

a. **Delivery Period**. Bids that proposes a delivery

- **Before the Earliest Delivery Date (Section VI, Delivery Schedule)**: No credit given; delivery timeline treated as offered.
- **After the Latest Delivery Date**: Non-responsive and rejected.
- **Within the acceptable range (Earliest to Final Date, inclusive)**: Eligible for evaluation.

b. **Price Adjustment**. For bids offering delivery later than the Earliest Delivery Date, an adjustment of 1% of the bid price per additional week will be applied:

Adjusted Price = Total Bid Price × [1 + (0.01 × (Offered Delivery Time – Earliest Delivery Time))]

c. **Credit Period**. A credit facility must be provided. The standard credit period required is 45 days, with a minimum acceptable credit period of 30 days. Bids offering credit terms below 45 days will be subject to an adjustment reflecting the financial cost of the variance, calculated based on the prevailing AWPR (weekly for LKR transactions) and SOFR (daily for Foreign Currency transactions) + 3% for administrative cost.

Adjusted Bid Price = Total Bid Price × [1 + ((AWPR + 0.03) × (45 – Offered Credit Days) / 365)]

AWPR (Sri Lanka Average Weighted Prime Lending) for LKR *Rate): https://www.cbsl.gov.lk/en/statistics/economic-indicators/daily-indicators*

SOFR (Secured Overnight Financing Rate) for Foreign Currency *Contracts: https://www.newyorkfed.org/markets/reference-rates/sofr*

d. **Domestic Preference**: +20% to foreign bids (if applicable).

6. **Award Options.** Depending on the evaluation, SLAF may opt for one of the following award methods:

a. Award to a single bidder based on total extended pricing.
b. Award by item, section, or category to multiple bidders.
c. Partial or no award of certain items.

7. **Domestic Preference.** If applicable, domestic preference will be applied per PG 2024, Section 7.7.1. For comparison, an amount equal to **20% of the bid price** will be added to foreign (Group B) bids when compared with domestic (Group A) bids.

Domestic Preference Criteria for Locally Manufactured Goods. The domestic preference provision shall apply exclusively to manufactured goods, with bidders required to demonstrate compliance with all of the following conditions:

a. **Local Content Requirement**. A minimum of thirty percent (30%) of the EXW (Ex-Works) price must comprise:

(1) Local labour costs
(2) Locally sourced raw materials
(3) Domestically produced components

b. **Manufacturing Facility Qualification.** The production facility must:

(1) Be operational in Sri Lanka
(2) Have prior experience manufacturing the offered goods
(3) Demonstrate continuous manufacturing capability before the bid invitation date

c. Legal Registration

(1) The bidder must be duly registered under the Companies Act No. 7 of 2007 (as amended)

d. **Documentary Evidence Requirements.** Bidders must submit:

(1) A notarized affidavit certifying:
Minimum 30% local value addition
Detailed breakdown of the EXW price structure

(2) Certified audited financial statements:
Substantiating the claimed 30% local value addition covering the most recent financial year.

e. Verification Process. All claims of local content will be subject to:

(1) Independent verification by the Procuring Entity
(2) Potential audit by authorized government agencies

f. **Any false declarations will result in**:

(1) Immediate disqualification
(2) Potential blacklisting proceedings

Note: Domestic preference will only be applied after full verification of all stipulated requirements, and bidders must facilitate the Bid Evaluation Committee's (BEC) verification process by providing access to manufacturing facilities for site visits and submitting all relevant supporting documents, including audited financial statements, procurement records, and payroll documentation. Bidders that fail to meet any of the domestic preference criteria will be reclassified as international suppliers and evaluated without price preference benefits. All verification findings will be formally documented and, upon request, shared with bidders to ensure transparency. Any false declarations or non-compliance will result in disqualification from the bidding process and may lead to further legal or administrative actions.

8. **Determination of the Lowest Evaluated Substantially Responsive Bid.** After applying all necessary adjustments (e.g., delivery period penalties, domestic preference adjustments, and credit period adjustments), the lowest evaluated substantially responsive bid will be selected.

9. **If alternative Bids allowed (Please refer BDS)**. If the lowest evaluated substantially responsive and post-qualified bidder has submitted an alternative bid/offer, the alternative offer will be assessed using the same evaluation process and criteria applied to the original bid. This includes verification of technical details, compliance with bidding requirements (e.g., separate bid security, if applicable), and financial evaluation. The alternative offer will only be considered if its evaluated price is lower than the original bid's evaluated price.

Important: If alternative bids are allowed, the prospective Bidders are advised not to offer more than one alternative for the same item but furnish the most competitive among the options available to the bidder if so wishes. Alternative Bids / Offers made other than one will not be considered.

10. **Post-Qualification Checks.** Before awarding the contract, the selected lowest evaluated bidder will undergo a **final verification process** to confirm compliance with all financial, technical, and contractual requirements. The post-qualification verification will include:

(1) **Financial Capacity Review**: Ensuring the bidder can meet financial obligations considering current work commitments.
(2) **Performance Review**: Examination of past contract performance and compliance history including past SLAF experience with the bidder.
(3) Verification that the bidder meets all necessary legal (litigation, sanctions – as per Form- VI of Section IV), and regulatory including Environmental compliance (if applicable).
(4) **Compliance with Contract Requirements:** Ensuring the bidder's agreement for the following contractual requirements as given in Section VI and Section VII.

S/No	Feature	Whether agreed by the firm	If deviates the reason
1.	Scope of Supply		
2.	Contract Price & Payment Terms		
3.	Quantity & Delivery		
4.	Transportation		
5.	Inspection & Tests		
6.	Rejection & Replacement		
7.	Warranty		
8.	Taxes & Duties		
9.	Signing of Contract		
10.	Performance Security		
11.	Liquidated Damages		
12.	Assumption of Compliance		
13.	Settlement of Disputes		
14.	Termination & Expiry of the Contract		
15.	Severability		
16.	Governing Law		
17.	Joint Venture		
18.	Force Majeure		
19.	Amendments		
20.	Confidentiality		

11. If the lowest evaluated bidder fails post-qualification, the next substantially responsive bid will be considered.

Section IV.

Bidding Forms Table of Forms

FORM I - BID SUBMISSION FORM

[Note: the purchaser is required to fill the information marked as "*" and delete this note prior to selling of the bidding document]

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date: [insert date (as day, month and year) of Bid Submission]

No.: **AHQ/25/PUB/E/1007**

To: **Commander of the Sri Lanka Air Force, Air Force Headquarters, P.O Box 594, Defence Headquarters Complex, Sri Jayewardenepura, Kotte, Sri Lanka**

We, the undersigned, declare that:

(a) We have examined and have no reservations to the Bidding Documents, including Addenda No.: [insert the number and issuing date of each Addenda];

(b) We offer to supply in conformity with the Bidding Documents and in accordance with the Delivery Schedules specified in the Schedule of Requirements the following Goods and Related Services; Supply of Qty 01 Brand new Aviation Re- fuel Bowser (10,000Ltrs Capacity)

(c) The total price of our Bid without VAT, including any discounts offered is: [insert the total bid price in words and figures];

(d) The total price of our Bid including VAT, and any discounts offered is: [insert the total bid price in words and figures];

(e) Our bid shall be valid for the period of time specified in ITB Sub-Clause 18.1, from the date fixed for the bid submission deadline in accordance with ITB Sub-Clause 23.1, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;

(f) If our bid is accepted, we commit to obtain a performance security in accordance with ITB Clause 43 and CC Clause 17 for the due performance of the Contract;

(g) We have no conflict of interest in accordance with ITB Sub-Clause 4.3;

(h) Our firm, its affiliates or subsidiaries—including any subcontractors or suppliers for any part of the contract—has not been declared blacklisted by the National Procurement Commission;

(k) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.

(l) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signed: [insert signature of person whose name and capacity are shown]

In the capacity of [insert legal capacity of person signing the Bid Submission Form]

Name: [insert complete name of person signing the Bid Submission Form]

Duly authorized to sign the bid for and on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing]

FORM II - PRICE SCHEDULE

Item No	Item Description	Den of Qty	Qty	Unit Price without VAT	VAT Rs	Total Price with VAT Rs	Total Price with VAT Rs	Brand Name	Country of Manufacture	Warranty	Bidder's Remarks (Different Pack Size / Description, Part No, Model No, Colour, Item Discount % etc)
1.	Aviation Refuelling Bowser (10,000 Ltr)	**Ea**	**01**								
Total Rs											
Discounts Rs											
Total Price after Discount Rs											
The Prices shall be inclusive of Transport Charges including unloading at the given delivery location (i.e Supply & Maintenance Depot SLAF Base Katunayake)											

VAT REGISTRATION LETTER (applicable for VAT payees)	**YES / NO**	**VAT REGISTRATION NUMBER :**
VAT EXCEPTION LETTER ATTACHED (applicable for non VAT payees)	**YES / NO**	
VAT LETTER AS AN ACTIVE VAT PAYEE ATTACHED	**YES / NO**	
VALIDITY OF BID		
VALUE OF BID SECURITY		
VALIDITY OF BID SECURITY		
BID SECURITY NO		
BID SECURITY OBTAINED FROM		

IMPORTANT

***** Each page of the price schedule shall be authenticated by the bidder.

* The bidder shall ensure that all the details provided herein are 100% accurate.

* It is mandatory that the unit price of the article or service be inclusive of NBT Tax, if applicable. Based on that, VAT shall be indicated on the price which includes NBT.

* Manufacturing details of the goods and warranty details shall be provided in a separate list prepared by the bidder as applicable.

ADDRESS AND CONTACT DETAILS OF THE BIDDER:

Name & Address:

Company Name:

……

……....

Registered Address.

……

……

Contact Person

Name.	**Phone**	**Email**
1.……	**……**	**…….**
2.……	**……..**	**……..**

Date …… **Signature of Bidder ……**

FORM III - BID SECURITY (GUARANTEE)

[This bank Guarantee form shall be filled in accordance with the instructions indicated in brackets]

---------- [Insert issuing agency's name and address of issuing branch or office]

Beneficiary: **Commander of the Sri Lanka Air Force, Air Force Headquarters, P.O Box 594, Defence Headquarters Complex, Sri Jayewardenepura, Kotte, Sri Lanka**

Date: ---------- [Insert (by issuing agency) date]

BID GUARANTEE No.: ---------- [Insert (issuing agency) number]

13. We have been informed that ---------- [Insert (issuing agency) name of the bidder; if a Joint Venture, list complete legal names of partners] (hereinafter called "the bidder") has submitted to you its bid dated ---------- [Insert (issuing agency) date] (hereinafter called "the bid") for Purchase of Purchase of Qty 01 Brand new Aviation Re- fuel Bowser (10,000Ltrs Capacity) for SLAF requirement under invitation for bids No. **AHQ/25/PUB/E/1007** ("the IFB").

Furthermore, we understand that, according to tour conditions, Bids must be supported by a Bid Guarantee.

At the request of the Bidder, we ---------- [Insert name of issuing agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of **LKR** [Insert amount in words] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder.

(a) has withdrawn its Bid during the period of bid validity specified; or
(b) does not accept the correction of errors in accordance with the instructions to Bidders (herein after "the ITB") of the IFB; or
(c) having been notified of the acceptance of its Bid by the Employer/Purchaser during the period of bid validity,

(i) fails or refuses to execute the contract form, if required, or
(ii) fails or refuses to furnish the Performance Security, in accordance with the ITB. This Guarantee shall expire:

(a) if the Bidder is the successful bidder, upon our receipt of copies of the Contract signed by the Bidder and of the Performance Security issued to you by the Bidder; or
(b) if the Bidder is not the successful bidder, upon the earlier of

(i) our receipt of a copy of your notification to the Bidder that the Bidder was unsuccessful, otherwise it will remain in force up to ---------- (Insert date)

Consequently, any demand for payment under this Guarantee must be received by us at the office on or before that date ----------.

[signature(s) authorized representative(s)]

Notes:

Bank Guarantees issued by any of the following Banks/Institutions are acceptable;

(a) A local commercial bank approved by the Central Bank of Sri Lanka, which is operating in Sri Lanka;

(b) A foreign commercial bank operating in Sri Lanka, which is approved by the Central Bank of Sri Lanka;

(c) A foreign bank operating outside of Sri Lanka, provided that the relevant Bank Guarantee is confirmed by a local or foreign bank operating in Sri Lanka, which is approved by the Central Bank; and

Note: The requirement of confirmation referred to above is not necessary, if the entity that issues the guarantee is an Export Import Bank (EXIM Bank), Export Credit Agency of any foreign Government or a reputed international financier acceptable to the Central Bank of Sri Lanka if proof concerning such approval is available.

FORM IV - MANUFACTURER'S AUTHORIZATION

[The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the BDS.]

Date: [insert date (as day, month and year) of Bid Submission]

No.: **AHQ/25/PUB/E/1007**

To: **Commander of the Sri Lanka Air Force, Air Force Headquarters, P.O Box 594, Defence Headquarters Complex, Sri Jayewardenepura, Kotte, Sri Lanka**

WHEREAS

We [insert complete name of Manufacturer], who are official manufacturers of [insert type of goods manufactured], having factories at [insert full address of Manufacturer's factories], do hereby authorize [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following Goods, manufactured by us [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 27 of the Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: [insert signature(s) of authorized representative(s) of the Manufacturer]

Name: [insert complete name(s) of authorized representative(s) of the Manufacturer]

Title: [insert title]

Duly authorized to sign this Authorization on behalf of: [insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing]

FORM V - NON-COLLUSION AFFIDAVIT (TEMPLATE)

The undersigned bidder or agent, hereby solemnly, sincerely, and truly declares and affirms/makes an oath and states as follows;

a) That he/she has not, nor has any other member, representative, or agent of the firm, company, corporation, or partnership representing him/her, entered into any combination, collusion, or similar agreement with any person in connection with the price to be bid;

b) That he/she or anyone representing him/her has not taken any step whatsoever to prevent any person from bidding, nor to induce anyone to refrain from bidding; and

c) That this bid is made without reference to any other bid and without any agreement, understanding, or combination with any other person in reference to this bid.

He/she further states that no person, firm, or corporation has received or will receive, directly or indirectly, any rebate, fee, gift, commission, or thing of value in connection with the submission of this bid.

The bidder accepts full responsibility for ensuring the absence of collusion and hereby pledges to abide by fair and ethical competition practices throughout the procurement process and fully comply with the applicable Procurement Guidelines.

I hereby affirm, under the penalties for perjury, that all statements made by me in this affidavit are true and correct.

The foregoing Affidavit having been duly
read over and explained by me to the
Affirmant above named and he/she having
understood the contents therein and admitted
to be correct, affirmed and set his/her signature
hereto before me) on this .... day of ... at ...

BEFORE ME,

JUSTICE OF THE PEACE/COMMISSIONER OF OATHS

FORM VI - COMPANY DETAILS

1.	**COMPANY DETAILS**	
	Name of the Company	
	Address	
	PV Number/ Company Registration Number	
	Date of Registration:	
2.	**VAT**	
	VAT Registration Number	
3.	**POINT OF CONTACT**	
	Contact name for enquiries about this submission:	
	Contact position (Job Title)	
	Address:	
	Tel number:	
	Fax number:	
	E-mail address:	
4.	**OTHER DETAILS**	
Does any of the following apply to your organisation, or to (any of) the director(s) / partners / proprietor (s)?		
Is in a state of bankruptcy, insolvency, compulsory winding up, receivership or subject to relevant proceedings:		
Has been convicted of a criminal offence related to business or professional conduct.		
Has committed an act of grave misconduct in the course of business		
Has not fulfilled obligations related to payment of taxes		
Is guilty of serious misrepresentation in supplying information		
Is not in possession of relevant licences or membership of an appropriate organisation where required by law		
Whether from a country sanction under UN?		
If the answer to any of these is "Yes" please give brief details, including what has been done to put things right.		

Section V.
Schedule of Requirements

Contents

1. DELIVERY SCHEDULE

Earliest Delivery Period	Latest Delivery Period	Bidders offered Delivery Date	
60 days	**90 days**		
Delivery Destination:	Supply and Maintenance Depot, Sri Lanka Air Force Base Katunayake	**Agreed**	**Not Agreed**

The Bidder must indicate whether he **agreed** to deliver the goods / services to **the designated location of the SLAF** within the maximum allowable period. In other words, d*eliveries beyond the latest delivery period will be rejected.*

Instructions:

1. Cross out (✕) **either** "Agreed" **or** "Not Agreed" to confirm compliance.
2. Fill in the proposed delivery date within the range above.

DETAILED EXPLANATION OF DELIVERY PERIOD CLAUSE

Key Definitions

1. **Latest Delivery Period.**

   a. Absolute deadline set by the SLAF for delivery/completion.
   b. Bids exceeding this period **automatically rejected**.

2. **Earliest Acceptable Delivery Period.**

   a. SLAF's preferred timeline for delivery/completion.
   b. Bids meeting this date gain a competitive advantage.

3. **Compliance Rules.**

   a. **Non-negotiable rejection.** Proposals exceeding the maximum allowable period (Latest Delivery Period) will be disqualified.
   b. **Adjustment for delays beyond earliest date.** A **1% cost will be added** to the total bid price **per additional week** beyond the earliest delivery period.

2. ELIGIBILITY AND QUALIFICATION REQUIREMENTS FOR BIDDERS

1. **General Eligibility Criteria**. Bidders must meet the following requirements to participate in the bidding process:

a. Legal Status: Must be a legally registered entity (or natural person, where applicable) with valid documentation.

b. Financial Standing: Must demonstrate financial stability and capability to perform the contract.

c. Experience: Must have relevant experience in similar contracts (minimum years/scope to be specified based on the procurement nature).

d. Technical Capacity: Must possess the necessary technical expertise, equipment, and personnel to execute the contract.

e. Compliance with Laws: Must not be debarred, blacklisted, or under sanctions (as per Section 10.4 of the Procurement Guidelines).

2. **Ineligible Bidders**. A bidder shall be disqualified if:

a. They are debarred or blacklisted by the Procuring Entity (PE) or any relevant authority.

b. They have provided consulting services for the same contract (conflict of interest).

c. In case of Joint Ventures (JV):

d. No JV partner can submit more than one bid (individually or collectively).

e. They are from a country under UN sanctions (for natural persons: nationality; for legal entities: country of incorporation).

3. **Qualification Assessment**.

a. After passing the preliminary examination, bids will undergo a detailed evaluation based on the following criteria:

CRITERIA	JUDGMENT
Technical Evaluation	- Compliance with required technical specifications including verification of proof of compliance with test reports/certificates - Scope of supply, delivery, or services. - Warranty, spare parts availability, and after-sales service requirements. Products/services may undergo testing/certification by designated institutions (e.g., **SLSI, SLITA, ITI, Moratuwa University**) if specified in Section V.
Commercial Evaluation	- Terms of payment. - Delivery schedule or completion period. - Compliance with duties and taxes.

Experience & Past Performance	- Experience in the respective field. - Experience in similar contracts.
Financial	Financial soundness of the bidder.
Technical and managerial competence.	**Technical Expertise and Project Management Strength** - Availability of **certified/qualified professionals** (engineers, technicians, specialists) -Proposed methodology. -and management plan. - Available resources (equipment & manpower). **Quality & Compliance -** Technical certifications (ISO, industry-specific standards).
Additional Considerations	- Risk assessment. - Innovation & sustainability (if applicable).

b. Before awarding the contract, the selected lowest evaluated bidder will undergo a **final verification process** to confirm compliance with all financial, technical, and contractual requirements. The post-qualification verification will include:

(1) **Financial Capacity Review**: Ensuring the bidder can meet financial obligations considering current work commitments.

(2) **Performance Review**: Examination of past contract performance and compliance history including past SLAF experience with the bidder.

(3) Verification that the bidder meets all necessary legal (litigation, sanctions - please provide the details required by Form- VI of Section IV), and regulatory including Environmental compliance (if applicable).

(4) **Compliance with Contract Requirements:** Ensuring the bidder's agreement for the following contractual requirements as given in Section VI and Section VII.

S/No	Feature	Whether agreed by the firm	If deviates the reason
21.	Scope of Supply		
22.	Contract Price & Payment Terms		
23.	Quantity & Delivery		
24.	Transportation		
25.	Inspection & Tests		
26.	Rejection & Replacement		
27.	Warranty		
28.	Taxes & Duties		
29.	Signing of Contract		
30.	Performance Security		
31.	Liquidated Damages		
32.	Assumption of Compliance		
33.	Settlement of Disputes		

34.	Termination & Expiry of the Contract		
35.	Severability		
36.	Governing Law		
37.	Joint Venture		
38.	Force Majeure		
39.	Amendments		
40.	Confidentiality		

4. **Documentation Required**. Bidders must submit:

   a. Proof of legal registration (business license, tax certificates).

   b. Audited financial statements (last 3 years, if applicable).

   c. Experience records (similar projects completed).

   d. Declaration of non-debarment and compliance with sanctions.

3. TECHNICAL SPECIFICATIONS

SPECIFICATION OF 10,000 LITRES CAPACITY AIRCRAFT REFUELLER

This specification covers requirements for Construction of a 10,000 Litres Capacity, Aircraft Refueller on Diesel Powered suitable Chassis, capable of Fuelling Jet Aircraft Under-Wing at Flow Rates up to 1000 litres/min. with a suction defueling capability up to 400 litres/minute from reel hose and, minimum 200 litres/minute from Over-Wing Refuelling facility.

The basic vehicle shall be with the, Hose Reels, Pumping, Metering, Filtration Equipment and Operation Panel located between the drivers cab and the tank.

1.1 General

This specification sets out the requirements for the design, construction and testing of the Aircraft Refuellers. The vehicle is intended for use on public roads and airside areas at the speed of 72 km/h. It is intended for general transportation and delivery on public highways.

The dimensions and other requirements set forth by Motor Traffic Department, Sri Lanka (Motor Traffic Act chapter. 203) are listed below for reference. The Aircraft Refuellers offered shall comply with said requirements.

(1) The dimensions of any motor vehicle must not exceed the dimensions specified hereunder for motor vehicles of the class or description to which the motor vehicle belongs:-

Length, width and Height	Millimetres
Overall width of motor vehicle,	2,500
Height of motor vehicle (other than a double decked motor coach)	3,800
Height of a double decked motor coach	4,600
Overall length of motor vehicle with two axles other than a motor coach	10,000
Overall length of motor vehicle with more than two axles	11,000
Overall length of an articulated vehicle	14,000
Overall length of motor coach	10,700

Overall length of a combination vehicle with one trailer	17,000

(2) GROSS VEHICLE WEIGHT	Kgs
(a). No motor vehicle with a 4 wheeled rear axle Shall exceed	15,275
(b). No motor vehicle with an wheeled dual rear Axle shall exceed	20,000
(c). No articulated or combination vehicle with a 4 Wheeled rear axle for driving unit and a 4 wheeled Axle for trailer shall exceed	21,000
(d). No articulated or combination vehicle having a lesser Number of wheels than (c) above shall exceed	16,500
(e). No articulated or combination vehicle with two Wheeled front axle and 4 wheeled rear axle driving unit And dual axle 8 wheeled trailers shall exceed	27,500
(f). No articulated or combination vehicle with 2 wheeled Front axles and 8 wheeled dual rear axle for driving unit And 8 wheeled dual axle trailers shall exceed	30,500

1.1 (a) The overhang of any motor vehicle other than an articulated vehicle must not exceed 60 per centum of the distance between the plane perpendiculars to the longitudinal axle of the vehicle which passes through the centre of centres of the front wheel or wheels and the rearmost vertical plane from which the overhang is to be measured as defined in regulation 57:

Provided that the preceding provisions of this regulations shall not apply to a motor vehicle designed for use and used buy or on behalf of a local authority solely in connection with the clearing of streets , the collection of disposal of refuse or the collection of disposal of the contents of gullied or cesspool.

1.1. (b). A vehicle designed so that it can dispose of its load by tripping to the rear shall in addition to the requirements of 2(1)(a) have a distance not exceeding one thousand one hundred and fifty millimetres, between the vertical passing through the axis on which the load is pivoted and the second plane described in the definition of wheel base in Regulation 57.

(2). the overhang of an articulated vehicle must not exceed that specified for any motor vehicle in paragraph (1) of this Regulation or 1,850 millimetres whichever is less.

1.1.1 Standards and specifications

The following shall be the applicable standards for the respective equipment.

TABLE 1: APPLICABLE STANDARDS

Int'l /Euro/ German	**British**	**USA**	**Subject (not necessary the full and proper title**
DIN ISO 1185	BS AU 197	SAE J 560b	Electrical connections, 24V type 24N normal - 7 contact
DIN ISO 3731	BS AU 198		Electrical connections, 24V type 24S Supplementary -7 contact
DIN ISO 4009	BS AU 195a		Mounting of electrical connections on the rear cross members
DIN ISO 4141		SAE J1067	Seven conductor jacketed cable for truck/trailer connections
German GGVS			Electrical connection for vehicles, 13 contact
ISO 7638			Brake anti - lock device connector - truck to trailer
DIN ISO 1728		SAE J318	Pneumatic braking connections - Palm/Glad-hand type
	BS AU 138a		Contact type brake couplings
ISO 1728	BS AU 138a		Location of brake couplings on rear cross members
ISO 1102	BS AU 220		Dimensions of 50 mm drawbar couplings
ISO 3584	BS AU 166		Mounting of drawbar couplings on rear cross members

		SAE J697	Safety chain for full trailers or converter dollies
DIN ISO 7706	BS AU 215		Power take off's (PTO's) - Clearance envelope
DIN ISO 7653	BS AU 203a		Dimensions of couplings between PTO's and ancillary units
ISO – various	BS AU 50		Vehicle tyres, loads, rims, wheels
ISO 2882/3	BS 2050		Elect. resistance-conductive/anti static products/inc. tyres
ISO 45	BS 3C 14	MS 24484	Adapter, Pressure Fuel Servicing, nominal 2.5 inch diameter
		MIL.A 25896	Adapter, Fuel, 2.5 inch diameter-includes strength tests.
Int'l /Euro/ German	**British**	**USA**	**Subject** **(not necessary the full and proper title)**
		API RP 1004	Tank Vehicle Bottom loading and Unloading-4 inch Adapters
ISO 102	BS 2C 13	SAE AS 1852	Gravity/over-wing fuelling nozzles and ports
		API 1542	Airport Equipment Marking for Fuel Identification
		EI 1581	Aviation Filter Water Separators
EN/ISO 1825	BS 3158	EI 1529	Aviation fuelling hose and hose assemblies
VG 85 328			Hose couplings with clamps
VG 95 950			Hose couplings with Whitworth pipe threads (BSPP)
ECE/TRANS /110			European Agreement concerning the international carriage of dangerous goods by road (ADR)
BS EN 12312-5:2005			Aircraft Ground Support Equipment-refuellers, Dispensers etc.
		NFPA 30	Flammable and Combustible Liquids Code/vent requirements

		NFPA 385	Tank Vehicles for Flammable and Combustible Liquids.
		NFPA 407	Aircraft Fuel Servicing
	BS 476		Fire tests - pt. 7 flame spread classification pts. 12/13 ignitability
	BS 5958		Control of undesirable static electricity
	BS EN ISO 4126-2:2019	ASME.VIII UG131	Vapour flow calculations - BS EN ISO 4126-2:2019 specific to Bursting discs.
		Mil.F. 38363	US Mil. Spec- Aircraft fuel systems, general
		SAE.AS 1484A	Test procedure/limits of surge pressure - fuel dispensing system.
		Various SAE-AE-5C Documents In Preparation	Surge pressure generation and measurements
			Glossary of terms – Aircraft fuelling
			Commercial nozzle specification
			Guidelines for procurement of fuelling vehicles Adapter wear limits.
Int'l /Euro/ German	**British**	**USA**	**Subject** **(not necessary the full and proper title)**
DIN 28459		Similar in TTMA and NTT specs	Flanges for 'Tank wagon'- connecting flanges
DIN 28460			Flanges for 'Tank wagon' - welded, for aluminium pipe
DIN 28461			Flanges for 'Tank wagon'-welded, for steel pipe
DIN 28462			Flanges for 'Tank wagon'-threaded flanges for couplings
DIN 28463			Flanges for 'Tank wagon'- gaskets
		ANSI B.16.5	Steel pipe flanges and fittings

	BS 1560		Steel pipe flanges and flanged fittings
DIN ISO 228/1	BS 2779	JIS B0202 p'll	Pipe threads- tubes and fittings- fastening/non thread seal type
DIN 2999, ISO.7/1	BS.21	JIS.B0203 tpr	Pipe threads - tubes and fittings - thread seal type / tapered
	BS 4677		Arc welding of austenitic stainless steel pipe
BS EN 485/515/573	BS 1470/1/ 2/3/4/5		Aluminium and aluminium alloys, tube, forging, sheet, plate
	BS 6363		Welded cold formed steel structural hollow section
	BS EN 1570:1998+ A2:2009		Code of Practice for scissor lifts
ISO 18893:2014	BS EN 280:2001+A 2:2009		Mobile elevating work platform
	BS 5395		Stairs, ladders and walkways
	BS 4592 pt.1		Open bar/mesh gratings and panels
	BS.4592 pt.2		Expanded metal gratings and panels
BS EN ISO 8503 ISO 8502/4 ISO 11124/5/6/7	BS 7079		Preparation of steel substrates before application of paint -Blast cleaning etc.
	BS 308 series		Engineering drawing
IEC 617-4	BS 3939		Graphic symbols and diagrams for electrical power circuits
Int'l /Euro/ German	**British**	**USA**	**Subject (not necessary the full and proper title**
BS EN 60598 IEC 598	BS 4533		Luminaries
	BS 5308		Instrumentation cables

	BS 6862 Pt.1		Cables with copper conductors for vehicles
	BS 2950		Cartridge fuse links for telecom's and light electrical apparatus.
	IP/Electrical		Electrical Safety Code. pt.1 of the Model Code of Safe Practice
IEC 529	BS 5490(obs)		Classification of degrees of protection provided by enclosures
BS EN 60947 IEC 144			Degrees of protection of enclosures/low voltage switch gear and control gear
	BS 5435		Selection, installation and maintenance of electrical apparatus for use in potentially explosive atmospheres
DIN EN 50 0srs IEC 79 series VDE 0170series	BS 5501 Series	USA UL698	Electrical apparatus for potentially explosive atmospheres
IEC 79-15	BS 6941		Specification for electrical apparatus for explosive atmospheres with type of protection N (Zone 2)
IEC 34 Pt.5 EN 60 034 Pt5	BS 4999 BS 5000		Rotating electric machines
ISO 4148 ECE 65 / *		SAE J1318	Flashing beacons- *Also EEC Automotive Directive 72/245 for EMC (Electro-magnetic compatibility)
*		SAE J994	Audible alarms - *Also EEC Directive 91/368-supply of Machinery (safety) Regulations, clauses 3.2.1 and 3.6.1

1.2 Specification for Chassis of Aircraft Refueller

1.2.1. General requirements

1.2.1.1 The vehicle chassis must be capable of carrying, when fully laden, a full refueller tank a capacity of 10,000 litres of Jet A-1 and the Refuelling station with all the equipment.

1.2.1.2 Refuelling module frame shall be mounted on the vehicle chassis by using the nuts & bolts and shall not be welded enabling easily removal from the vehicle chassis. The frame of the refuelling module has to be composed of set of open frame elements structures; box steel elements are not allowed. Further, components in the refuelling module shall be installed with nut & Bolts as far as possible enabling easy replacement i.e. in case of accident repair.

1.2.1.3 The chassis shall be purchased by the aircraft refueller manufacturer and it shall be equipped with following typical requirements as appropriate.

TABLE 2: BASIC FEATURES

Model	4x2 (4 wheeled rear axles) day cab with rear windows, right hand drive, ADR compliance or double poled wired, air-conditioned.
GVW	Shall be capable of carrying the capacity of 10,000 Litres of JET A-1
Engine	4 strokes, direct injection, naturally aspirated/ turbocharged, water cooled, diesel engine.(refer fuel specification given below), minimum 320 hp at rated rpm
Turning circle diameter	21 meters - minimum possible.
Ground clearance	210 mm minimum
Gear box	Six speeds standard, with PTO, manual, fully synchronised.
Axle	Total axle loading capacity shall be more than the GVW.
Wheel base	Suitable wheel base shall be selected to install the tank and the refuelling module on the chassis to meet the specified government regulation clause 3.1.

Specification of Diesel Fuel available in Sri Lanka

LANKA SUPER DIESEL OIL (P – 016)

Property/Test	Test Method		Specifications
	IP	ASTM-D	
Appearance			Clear and visually free from water and impurities
Density @ 15˚ C kg/m^3	160	1298, 4052	820 - 860
Colour ASTM	196	1500	Report
Marketing Colour			Amber
DISTILLATION IBP, ˚ C	123	86	Report
10% Vol. Evaporated at ˚ C			Report
50% Vol. Evaporated at ˚ C			Report
90% Vol. Evaporated at ˚ C			Max. 370 (with effect from 01.01.2004)
Recovery at 315˚ C			Min 50%
Recovery at 350˚ C			Min 80%
Cetane Index		976	Min. 46 (see note-1 below)
Cetane No.	21	613	Min. 49
Cloud Point, ˚ C (˚ F)		2500	Max. 15.5 (Max. 60)
CFPP ˚ C (˚ F)	309		Max. 10 (Max. 50)
Sulphur Content % w/w		4294, 2622	Max. 0.25 (with effect from 01.07.2003) Max. 0.05 (with effect from 01.01.2004)
Flash Point PM CC, ˚ C (˚ F)	34	93	Min 60 (Min. 140)
Viscosity Kin @ 37.8˚ C, cSt	71	445	1.5 – 5.0
Water content % (v/v)	74	95	Max. 0.05
Cu Strip corrosion 3 hrs. @ 50˚ C	154	130	Max. 1
Ash % (w/w)	4	482	Max. 0.02

Carbon Residue, Ramsbottom On 10% residue % w/w	14	524	Max. 0.3
Water content % v/v	74	95	Max. 0.05%
Sediment by extraction % w/w	53	473	Max. 0.01
Total Acid No. KOH mg/g	1	974	Max 0.2
Strong Acid No. KOH mg/g	1	974	Nil
Calorific Value Gross, Kcal/kg.	12	240	Min 10,500

The bidder shall confirm that the engine of the Aircraft Refueller offered complies with the fuel specification aforesaid.

1.2.1.4 The confirmation shall be obtained by Aircraft Re-fueller manufacturer from Chassis manufacturer that all the required optional fitments have been included correctly before supplying the chassis. A repeat check shall be performed by the Aircraft re-fueller manufacturer when the Chassis is received at his works.

1.2.2 Weight, Distribution, Stability of the Chassis

1.2.2.1 The GCW of the vehicle shall be capable for the payload capacity of 10,000 Litres & dead stock of JET A-1and weight of re-fueller tank and there fuelling module.

1.2.2.2 The height of centre of gravity of the fully loaded vehicle shall not be greater than 95% of the distance between the outer ground contact/track widths of the tyres.

1.2.3 Performance - Speed, Power, Tractive Effort and vehicle movement

1.2.3.1 For normal Aircraft refuelling services, the refueller is intended to travel up to the maximum speed of 30 km/h within the airfield. However this Aircraft refueller is intended to be used at public highways (Movement between Airports) at the speed of 72 km/h. This will be comprised of many 'cold starts, very short journeys, mostly static engine operations and tight turns over level / coarse concrete surfaces.

1.2.3.2 When considering chassis selection, it must be ensured that the maximum torque applied by the PTO gear unit output drive shaft to the pump does not exceed the rated capacity of the fuel pump gear box. (Hydraulic pump gear box for hydraulically driven fuel pump)

1.3. Chassis – Features & requirements

1.3.1. Engine / Mechanical

Basic Chassis Features

1.3.1.1 The diesel engine is to be sized to meet performance requirements in marginal 1.2.1.3 and shall develop a minimum of 320 hp at rated rpm.

The engine exhaust manifold, radiator and thermostat shall be suitable for stationary engine operations in tropical climates, driving a P.T.O pump and auxiliary power unit. A standard electric starter and air compressor shall be fitted.

1.3.1.2 The transmission and any modifications must be suitable for the service specified via a manual gearbox.

1.3.1.3 Electrical current is to be supplied by a heavy duty alternator and rectifier to heavy duty/high capacity batteries, suitable for the tropical climate. Selection shall take into account that although the engine will be kept running during fuelling, overall journey times will be short.

1.3.1.4 The cab shall be full forward with forward tilting.

1.3.1.5 Leaf springs selected for the chassis must be suitable for the applied loads.

1.3.1.6 Power steering with a reasonable degree of 'feel' shall be fitted.

1.3.1.7 The wheel base of the chassis shall be selected so that the tank and equipment can be arranged without exceeding the permitted load for front and rear axles, so that the chassis frame remains substantially horizontal, and so that the tank minimum bottom is maintained whatever the load.

1.3.1.8 The vehicle shall be fitted with fully air operated pneumatic type brakes. The system shall be of failsafe dual circuit arrangement with independent lines for front and rear brakes where one line will continue to be operative in the event of the failure of other.

1.3.1.9 Electrical requirements are described separately in item 3.3.2. When possible, it is better that equipment normally fitted by the chassis manufacturer is suitable and retained for further use. However, the aircraft refueller manufacturer will need to carry out other modifications.

1.3.1.10 Dual large rectangular rear view mirrors are required (convex type) extended as necessary to provide a clear / unobstructed view along the side of the vehicle / tank, even in the maximum turning position. In addition, there shall be a mirror on the passenger side, positioned so that the driver can see to ground level beneath the door and front of the cab.

1.3.1.11 No cigar lighter or ash tray is to be fitted. However, if the is normally provided with a cigar lighter socket, then the electrical supply shall be disconnected and insulated.

1.3.1.12 adequate ventilation is required for use in hot climates. Cab heater and air conditioning is to be fitted.

1.3.1.13 Front and rear directional signals, normal hazard flasher warning, reverse and brake lighting are required.

1.3.1.14 In addition to normal panel / dashboard instruments, an engine revolution counter and low air pressure indicator are required.

1.3.1.15 To prevent fuel or fuel vapour from contacting hot parts of the engine or exhaust , a metal fire screen is to be fitted, extending from the back of the cab, over most of its width, to the top of the chassis and below on each side to 400 mm above ground level. To allow the cab to tilt forward, the fire screen shall be in two parts. One section attached to the back of the cab extending almost the whole of its width, and this overlaps, by 50 mm minimum, measured as a vertical dimension, another section attached to the chassis frame.

The gap between the two parts shall be as small as practicable but in any case not more than $^1/_4$ of the vertical overlap.

As necessary additional screening shall be attached to the front wheel mud flaps or the side of the chassis / prime mover frame to the screen exhaust pipes.

1.3.1.16 If windows do exist in the rear cab wall, preferably they shall be removed and replaced with metal panels.

1.3.1.17 A robust channel bumper shall be fitted at the rear of the aircraft refueller.

1.3.1.18 A system must be provided to stop the engine from both the pumping control station and opposite side of the pumping control station (left side of the chassis) and the Controls shall be the push button/lock off type, requiring a special action to reset them.

1.3.1.19 Rear mudguards and mud flaps shall be provided.

1.3.2 Electrical requirements

Standards and specifications

1.3.2.1. All electrical requirements shall comply with particular BS, EN, IEC standards & ADR requirements.

Miscellaneous items

1.3.2.2. Lighting (with glass lenses) is required to illuminate the meter counters and all gauges and controls and VCFS at the operating station and access ladders to the tank top. These lamps may be controlled either locally, from the vehicle cab, or near the operating station by a separate switch.

1.3.2.3 Aircraft / obstruction / marker warning lights shall be fitted, 2 at the front of the cab, 2 at rear of tank. These shall be in amber colour. A large flashing beacon is required, centrally placed on top of the cab roof.

1.3.2.4 Where applicable, all electrical connections shall be fitted with heat shrink insulation sleeves, and well fitted boots as a minimum standard.

1.3.2.5 All cables and electrical connections to be labelled and colour coded

(With matching details in the operating / maintenance manual).

1.3.2.6 Any modifications or repairs to electrical circuits or equipment on vehicles shall be to recognised manufacturer's standards or equivalent.

1.3.2.7 As a reversing aid, buzzer or voice type to warn other personnel when reverse gear is selected shall be provided.

General Design

The electrical system shall be designed and installed to minimise the risk of sparking and electrical fires.

1.3.2.8 There shall be electrical continuity between the chassis, tanks and sub frames, fuelling cabinet and all fuelling components. Electrical resistance shall not exceed 10 ohms.

The tank shall be bonded to the chassis by means of a substantial braided copper strap.

1.3.2.9 The nominal system voltage on the circuit shall not exceed 24 volts and the equipment shall be suitable for the appropriate zone as defined in British Standard 5345 for a Class II (2) product.

Jet A-1 fuel is covered by the category of **Gas Group IIA,**

Temperature Classification T3

Zone 0	within the main tank or product recovery / sample Recovery tank.
Zone 1	Within an area between the ground and a point 300 mm above and on each side of any discharge opening or vent on top of the tank. .
Zone 2	Within an area between the ground and a point 1000 mm above and on each side of any discharge opening, vent or sealed (gasket / O ring) joint.

1.3.2.10 all wire conductors behind the rear of the driver's cab shall conform to BS.6862 or equivalent to ensure that they are adequately insulated and able to carry more than the designed circuit current without causing an unsafe rise in wire temperature.

The conductors shall also be adequately fixed and protected so as to minimise the risk of damage or deterioration. Plastic flexible conduit is acceptable providing it is resistant to degradation by UV light. Where metal conduit is used for added protection and durability in particular location, then it must be corrosion resistant.

Conduit must not be routed where it might provide a tempting hand hold or be easily stood upon. All terminals including battery terminals shall be effectively protected and insulated by a cover against inadvertent contact and spillage of flammable liquids. All electrical enclosures to be to IEC .144/BS.EN.60947(was BS.5420) / IP65 Standards.

1.3.2.11 Screw-in or cap-less bulbs shall not be used behind the driver's cab

Junction box, connectors and all electrical equipment behind the driver's cab shall be adequately protected and shielded as far as practicable from the ingress of moisture or dangerous substances under normal conditions of use.

1.3.2.12 An insulated return circuit must be used, and shall not have more than 300 milliamps leakage between either polarity circuit or the vehicle chassis. (Not applicable if the vehicle is ADR complied)

1.3.2.13 Master switch shall comply with Zone 2 requirements, as defined in BS.5345, to enable all electrical circuits to be isolated (including open circuiting of the generator field windings) shall be placed as near as possible to the battery and extra remote battery isolation switch shall be provided inside the cab. (Not applicable if the vehicle is ADR complied)

This shall not prevent intrinsically safe or flameproof circuits, as defined in BS.5345 requirements, from being taken from the battery side of the master switch. The master switch control shall be readily accessible to persons outside the vehicle and its location shall be indicated by a clearly visible notice with an indication to when it is in the "ON" position.

Circuit protection

The following steps shall also be taken to ensure protection of the electrical circuits -

1.3.2.14 all circuits, with the exception of the main battery supply and the starter and generator circuits shall be protected with fuses or circuit breakers in the feed side of each circuit.

1.3.2.15 Exposed fuse wire or links shall be avoided, but if used shall be

Fitted within a sealed unit.

1.3.2.16 All circuit protection devices with the exception of any barrier device

For a tachometer or other intrinsically safe device shall be mounted

Forward of the cab rear wall.

1.3.3 Brake interlocks: Electrical Switches acting over pneumatic operation

1.3.3.1 Any pneumatic circuit for control or ancillary operation must include an auxiliary air reservoir and circuit, quite separate from the vehicle braking system, and supplied through a pressure regulating valve from the main braking system.

1.3.3.2 A brake interlock system, with switches in series, is to be fitted, so that when any of the fuelling nozzles is not secure in its holder or the platform is not in the fully down position, or a hose is connected to the loading adapter, or a power take off is selected, then the vehicle brakes will be applied, (either main system or parking brake system).

1.3.3.3 A separate warning light shall be provided to clearly indicate when the PTO is engaged. It shall not be possible to drive the vehicle with the PTO engaged.

1.3.3.4 In the event that an interlock is inadvertently activated and the brakes applied while the vehicle is moving, the application shall be slow enough to bring the vehicle to a controlled halt without endangering the driver or passengers.

1.3.3.5 Whether the interlock switches are electrical reed switch / magnetic proximity type, the system shall be designed to exhaust air from the vehicle brake actuating pilot.

Systems which require a positive air pressure signal to cause the vehicle brakes to be applied shall not be used.

1.3.3.6 The use of shuttle, check or non-return valves shall be minimised.

1.3.3.7 All switches and related devices shall be designed, arranged and protected to withstand external fuel contact and environmental conditions - bright sunlight / high and low humidity / dust and wind blown sand / rain etc.

1.3.3.8 The brake interlock switch system fitted must respond to

(I) A Jet A-1 selective spout, and

(II) The presence of the nozzle body for over-wing fuelling system.

(III) In presence of non selective spout (Separate Holder for ZRS 32)

1.3.3.9 An emergency override pneumatic switch shall be fitted in the vehicle cab to allow the vehicle to be driven even if an interlock is operating to apply the brakes. This override switch is to be clearly marked and wire sealed in the position where it is non operative.

The override switch system shall be arranged to by-pass and isolate the interlock switches (and in the case of electrical switches, the solenoid operated pilot valve) and act directly to apply pressure to the pilot valve controlling air supply to the chassis.

1.3.3.10 Four large (50 mm min. dia.) warning lights, protruding 30 to 40 mm. shall be provided in the cab in a prominent position, with shielding as necessary from bright sunlight.

- One flashes red, to indicate that the override system is in operation.
- One flashing amber, to indicate if any interlock has been operated

  (Equipment not stowed)
- One continuous amber to indicate that pump drive is fully engaged.
- One continuous amber to indicate that road drive is fully engaged.

Small pneumatic 'blinking eye' type indicators shall not be used.

The colour green must not be used for indicating that the P.T.O pump is in the drive position since it might be understood to indicate that it is safe to drive the vehicle away from an aircraft, even though the interlock warning light is flashing.

1.3.3.11 Signals for indicating the pump gearbox engagement position can be taken from switches or sensors actuated by a device attached to the exposed selector shaft - monitoring selection by the presence or absence of air pressure to the gearbox is not sufficient to give clear indication of engagement / dis-engagement.

Chapter 2:- Functionality and Construction

2.1 Flow performance

The operating capacities noted below must be sustainable for periods long enough to enable the complete contents of the Refueller to be delivered or received (during defueling or self loading) without any components being over rated or overheated.

2.1.1 Fuelling

Under mentioned reel hose flow rates shall be achieved when the secondary pressure control valve is set to provide maximum 55 psi (air reference pressure shall be 55 psi + spring bias) meanwhile the pressure downstream of the nozzle/aircraft adapter is 2 bars:-

Also the same flow rates shall be achieved within the most economical engine RPM range (operation)

a) Reel hose - 1000 1/m via 30m x 2 1/2 inch

Pressure losses between the pump outlet and hose inlet (s) shall be minimised and shall take into account a potential pressure loss across the filter Water Separator of 1.5 bars at maximum rated flow.

Over-wing fuelling facility:

One over-wing hose reel must be Stainless steel hub self-lubricated without chain – 200 l/min minimum discharge rate via 20 meters of 1.5 inch diameter hose.

2.1.2 Defueling

In this mode, fuel will pass through the meter (counting in the reverse direction) and into the Refueller via the normal bottom loading system.

Required performance is: - 1 reel hose - 400 1/m,

The flow rate is to be achieved with the engine at idle speed, increased automatically above normal by pump engagement and, if necessary, by using RQV governor.

2.2 Dimensions – Aircraft Refueller

According to the maximum allowable dimensions and other requirements set forth by Motor Traffic Department, Sri Lanka (Motor Traffic Act chapter. 203), the Aircraft Refuellers offered shall comply with the following dimensional requirements.

Width: 2500mm Maximum

Length: 11000mm Maximum

Height of completed vehicle with dead stock

Chassis / cab height (with flash beacon):3500 mm maximum.

2.3 Transverse Weight Distribution

Aspects of longitudinal weight distribution are covered in items 1.2.2, 1.3.1.5, 1.3.1.7 and 3.1.1.4 Transverse weight distribution must be arranged such that the vehicle remains substantially horizontal under all loading conditions.

2.4 Equipment and functions

2.4.1 General information

2.4.1.1 Where a fuelling component is not specified by name, the constructor is required to propose a suitable item. Where a component is specified ‘typical’ or ‘equal’ is stated, the constructor shall submit details of an alternative item.

2.4.1.2 The meter, all pumping controls and the system instruments are to be located close together at an “operating station” on the driver’s side of the aircraft refueller.

2.4.1.3 The movement of only one control shall be required to convert from fuel to defuel operation or vice versa.

2.4.1.4 The fuelling equipment shall be laid out in a compact neat and tidy manner so as to give an overall streamlined appearance to the aircraft refueller.

2.4.1.5 All hose reels, meters and controls must be so arranged and shall be totally enclosed in a cabinet.

2.4.1.6 All hydraulic power for the hose reels is to be derived from engine driven components, not electrical batteries.

2.4.1.7 There shall be a minimum clearance of 600 mm, when loaded, between the ground and vulnerable fittings such as sample point and drain line outlets. This distance allows easy access for bucket, sample jar or small bore hose connection. However, sample points shall not be too high off the ground otherwise excessive splashing and spillage could occur.

2.4.1.8 Only open channel rectangular corrosion resistant structures is to be used for vertical or horizontal members of the panel and top deck. Finished appearance of the unit must be good and angled section bar supports are not acceptable if they are visible, except where used for securing fuelling components. All steel sub-assembly components must grit blasted and prime coated before attachment.

2.4.1.9 The design and position of equipment shall minimise corrosion.

Surface preparation and coating shall be of the highest standard

With water traps avoided.

All small fastenings shall be of non corrosive materials.

2.4.1.10 all welding shall be continuous where practical. Where stitch welding on exterior components is used, epoxy sealant shall be applied to un-welded areas to prevent water entrapment. All welding must achieve full penetration and any weld splatter must be removed.

2.4.1.11 All pop rivets shall be stainless steel or aluminium with high magnesium alloy (5%) material composition to British Standard 1473 A1 Mg5 or similar.

2.4.1.12 The material or finish of fuel sense lines shall differ from that of pneumatic lines for ease of identification.

2.4.1.13 Tamper proof covers or locking devices are required on the following

Controls to prevent inadvertent alteration:-

- The hydraulic flow divider (if fitted)
- The air sense pressure regulator
- The hydraulic hose reel rewind speed controls
- Platform speed controls .

2.4.2. Functions

2.4.2.1 The design of the system ensures that when fuelling, product cannot by-pass the filter or be circulated or returned to storage from downstream of the meter. Interlocked systems, which are intended to achieve this, are not acceptable. - i.e.

the meter must be downstream of all other branches connected back to the tank or pump inlet.

No pressurised transfer or delivery pipe work is permitted inside the tank.

2.4.2.2 A combined bottom loading / outlet valve is not used. Use of a single valve does not permit re-circulation for purposes such as hose / system flushing or fuel drying. The short length of common line would also contain fuel, which had not been in the tank for settling or checking. For defueled product, all these aspects are particularly relevant.

2.4.2.3 All products entering the tank goes through the bottom loading system (The bottom loading valve shall be off-loading lever operated type or pneumatically operated type) and hence is subject to the high level shut off control system.

2.4.2.4. A none return / check valve is positioned downstream of the pump / filter to prevent reverse flow in the fuelling mode of operation.

2.4.2.5 When defuelling, no product can be recorded as being defueled which has not been removed from the aircraft. Potentially contaminated bacteria laden product does not pass through the filter Water Separator, which is additionally protected form possible contamination by a closed valve on the inlet side. The dead man valve may be used for this purpose depending on equipment arrangement.

2.4.2.6 During pressurised defueling, when the aircraft pumps are operating and if the fuel / defuel control is in the fuelling position, thus allowing the dead man valve to be opened, the non return valve also prevents product from being passed backwards through the filter, thus causing element damage, and into the tank via the foot valve, the tank being unprotected by the high level shut off system.

2.4.2.7 In the defuel mode, it shall not be possible for the operator to increase pump speed using the control lever. This can be achieved by arranging for air pressure to be applied to the air cylinder installed to automatically reduce engine speed to idle when the dead man valve handle is released.

2.4.2.8 There is an isolating valve in the return line between pump outlet and the tank, automatically open for defuel and closed for fuelling. This prevents high pump pressure from being imposed on the bottom loading couplings in the reverse direction and on the bottom loading valve.

2.4.2.9 There is a non return valve in the defuel line between the pump and connection to the bottom loading system. This ensures that all product entering the Refueller passes into the tank, even if the isolating valve is open (control lever in ‘defuel’) or has failed.

In addition, if the control lever is in the ‘defuel’ position, the non return valve prevents fuel being pumped from elsewhere into the bottom loading couplings, through the defuel return line, backwards through the pump, backwards through the line by-passing the filter and hence into aircraft.

2.4.2.10 The system provides an ability to draw from an outside fuel source so that the Refueller can normally be arranged via the dead man valve, filter Water Separator, delivery hose system to aircraft.

2.4.2.11 When Fuelling from the outside suction point using the on-board pump, the Refueller 'foot valve' lever controls will need to be closed, and the 'fuel / defuel' selector will be in the 'fuel' position.

Note:- In general, it is not recommended that a pressurised source of product be connected to the outside suction point of a Refueller (A), e.g. from a second Refueller (B), since there is a risk that the tanks of Refueller (A) could be reverse filled via their respective foot valves without the safety benefit offered by the high level automatic shut off system.

2.4.3. Instrument panel / control station

The following instruments and controls are required and are to be neatly located at the pumping control station. The control panel must be swivelling so that access behind is easy for maintenance purpose. Minimum length of the instrument control panel (instrument cabinet as mentioned in2.4.1.5) shall be 2000mm.

2.4.3.1

- Pump speed control lever (below panel, not illustrated).

  A movement limit stop shall be fitted and adjusted to prevent

  Over speeding the pump. Item 2.4.5 gives more information.

- Engine RPM indicator or pump RPM indicator (mechanical drive type). A red line is to be marked on the gauge face at the maximum speed recommended for pump operation (or affix an adjacent label).

- Hydraulic oil pressure gauge.

- Pump vacuum gauge, 100 mm, glycerine damped, calibrated

  In inches of mercury.

- Pump discharge pressure gauge, 100 mm, glycerine damped.

  Maximum range shall be approximately zero to 200 lbf/in^2/14 bar.

- Filter Water Separator differential pressure gauge, direct reading `piston type 0-30 lbf/in^2, with low pressure side drain test and isolating valves and drain line to be extended up to slope tank. Also see item 2.5.9. Concerning tubing and fittings.

- Fuel sense point (venturi) pressure gauge, 100 mm, glycerine damped, for the secondary pressure control. The range shall be approximately zero to 150 lbf/in^2/10 bar.

- Air reference pressure gauge for the SPCV, 100 mm, range zero to approximately 150 lbf/in^2 / 10 bars.

  Note:- Gauges are to be dual calibration (bar and lbf/in^2).

- Quick disconnect fittings (male and female halves) with

  Isolating valves to permit the pump discharge, sense point (Venturi), and air reference pressure gauges to be tested in situ.

- Air pressure regulator (on or easily accessible just behind the panel) for setting the secondary pressure control valve.

  The regulator must be stable and of the self relieving, rapid response type. It shall be capable of handling the volume of air displaced by the secondary pressure control valve when caused to close by increasing downstream fuel pressure.

- De-pressurising control. (Manual)

- Fuel / defuel selector lever control (or adjacent push / pull type

  with indicator).

- Outlet / foot valve control (with emergency trip on the other side of the aircraft refueller).

- Two (02) Push and lock type engine stop control (one at control panel side and one at other side of the refueller)

2.4.4 Labels and signs

2.4.4.1 All gauges, controls, switches and warning lights are to be labelled using engraved laminate or similar plastic UV light resistant material (Embossed Dymotape labelling is not acceptable.) - suitably inscribed to give white letters on a contrasting background, or vice versa.

Notwithstanding the above, items whose functions are very obvious do not need to be so identified. Excessive labelling / identification shall be avoided where it results in overcrowding or potential confusion.

2.4.4.2 Thin, self adhesive labelling or painting (except on the tank or cab) is not acceptable. Labels inside the cab may be bonded in position but those outside the cab shall be affixed using rivets. Care shall be taken to ensure that labels are aligned correctly / not askew and located adjacent to the item or control to which they apply.

2.4.4.3 The SPCV ‘fuel sense pressure’ gauge shall be labelled as such. If a venturi pressure control system is fitted, the gauge shall be labelled ‘venturi pressure’ - not ‘fuelling pressure’ or ‘nozzle pressure’.

2.4.4.4 A fuelling circuit and operating instruction plate shall be affixed near the control station.

2.4.4.5 Required warning labels shall be attached to the relevant points.

2.4.4.6 An instruction plate shall be attached near the pump selector on the dashboard giving clear instructions for:-

- Minimum air pressure requirement
- Engaging pump drive
- Disengaging pump drive

2.4.4.7 Labels for tyre inflation pressure shall be affixed to the wheel arches / mudguards.

2.4.4.8 Filter Water Separator sample points are to be clearly marked – Filter Sump, Filter Inlet, and Filter Outlet.

2.4.4.9 Jet A-1 grade stickers (API.1542) shall be fixed to sides, front and rear of vehicle. ”No smoking” signs are to be attached to the doors of the cab (International Symbol).

2.4.4.10 the language used for labels and signs shall be English.

2.4.5 Pump controls

2.4.5.1 Pump engagement and dis-engagement shall be controlled from the vehicle cab, the control lever and air pressure gauge being adjacent to the normal gear selector.

Selection of pump drive shall automatically increase engine idling speed to prevent gearbox chatter.

2.4.5.2 A manually adjustable, lever type engine speed control (non pneumatic) is required at the pumping control station, complete with quick release action. An automatic control linked to the dead man operation is also required to return the engine to the idle position when the dead man valve is closed. Subsequent operation of the dead man shall not cause the engine to automatically increase above idling speed.

2.4.5.3 Also see:

Items 1.3.3.10 and 1.3.3.11 concerning warning lights

Items 1.3.3.2 concerning interlocks

Item 2.4.2.7 concerning de-activation of the speed control during

Defueling

Item 2.4.4.6 concerning labelling / instructions

2.4.6 Outside suction / self loading

2.4.6.1 The outside suction point shall comprise a 3 inch ball valve and 2 ½ inch aircraft adapter type tank unit with ANSI 150 flange complete with dust / sealing cap. Outside suction point shall be upstream of isolation valve.

2.4.7 Pressure control / dead man

2.4.7.1 Pressure control is to be provided both by hose end (primary) pressure control valves (HEPCV's) and by a direct line mounted, non bypass, secondary pressure control valve (SPCV). The latter will also act as a deadman valve, it shall be remote sensed.

2.4.7.2 Sense line valve shall be sealed in the open position.

2.4.7.3 The system may include one or more venturis to compensate for downstream pressure loss. In this case, the venturi sense lines shall be connected together via 'leaky non return valve' for selection purposes. Solenoid or pilot operated selection shall not be used. In this case, the venturi system shall not allow the pressure downstream of a blocked open HEPCV to exceed 55 lbf/in^2 from maximum to low flow rate, with shut off pressure being 65 lbf/in^2 maximum.

2.4.7.4 The standard method of dead man control shall be an electric over air system using a Suzy (Suzie) cable connection rather than a reel. Single line air bleed systems shall be avoided since in general, they introduce reaction time delays and are difficult to adjust correctly.

Spring loaded push button type dead man override which requires constant pressure on the button to maintain fuel flow shall be provided.

2.4.7.5 The dead man handle is to be located at the operating station, is to be easily operated by one hand and designed so that when dropped onto the ground or stowed it is not normally possible for it to become operative. For stowage, a simple open box, with water drain hole, is adequate. Although difficult to achieve, every effort shall be made when designing the operating station area not to create nooks or crannies where an operator could place and leave the dead man handle in the operating / active state. A dead man timer system Green prompt lamp is required.

2.4.7.6 No dead man override shall be provided for over-wing fuelling applications. (Over wing refuelling shall be done by operating dead man.

2.4.7.7 The dead man operation, with minimal reaction time, shall shut-off flow evenly in not less than 2 to 5 seconds from the maximum rated flow of 1000 litres/minute, overshoot quantity after release of the handle being less than 100 litres.

When the dead man valve is signalled to open, initial response shall be with minimum delay and flow shall increase evenly from zero to maximum in not less than 3 seconds. There is no upper time limit from the viewpoint of safety, but for practical reasons 15 seconds shall be regarded as a maximum.

2.4.8 Meters

2.4.8.1 One positive displacement (PD) meters shall be provided. Meter will be for flow through the under wing hose reel and for the over wing delivery. The meter shall be designed as per the requirements set forth by API MPMS 6.4 manual of petroleum measurement standards chapter 6-metering assemblies, section 4-metering system for aviation fuelling facilities

Turbine type meters are not acceptable.

2.4.8.2 The meter shall be a suitable for the under wing and over wing flow rates.

2.4.8.3 The meter shall be accompanied, when purchased, by a calibration / test certificate using kerosene or a test fluid with a viscosity representative of Jet A-1

This meter is available with optional flow configurations - left to right or vice versa.

2.4.8.4 Meter characteristics are to be:-

- Accuracy to be:-

a) +/- 0.05% at 75% of meter rated maximum flow rate or the maximum achievable if less.

b) +/- 0.2% at 20% of meter rated capacity.

- Maximum linearity a) 0.18% for 4 inch and 6 inch triple-capsule size

  b) 0.15% for 3 inch and 4 inch double capsule Size

  c) 0.10% for $2^1/_2$ inch and 3 inch single capsule size

- Repeatability shall not exceed 0.02%.
- The indicated reading of the mechanical rate of flow indicator (ROF) shall be accurate to +/- 5% of the true value.

2.4.8.5 The meter register must be fitted with a non-resettable totaliser and a large numeral counter. The right hand wheel or drum must be subdivided. Measurement units shall be in litres.

2.4.8.6 The meter shall be capable of occasional over speeding by 25% without damage or losing set calibration.

2.4.8.7 Meters must be able to operate / **count under reverse flow** and shall

be fitted with a **rate of flow indicator(Direct readings in LPM))**.

2.4.9 Reels and hoses

2.4.9.1 Reel Hoses:- One delivery hoses 2 ½ inch in accordance with EN ISO 1825/ EI 1529 type C latest edition. 30 meter long 2 ½ inch Female coupling for vehicle end with BSPP thread and other end 2 ½ inch male coupling with BSPP thread.

Overwing Hose:- One delivery hoses 1 ½ inch in accordance with EN ISO 1825/ EI 1529 type C latest edition. 20 meter long 1 ½ inch Female coupling for vehicle end with BSPP tread and other end 1 ½ inch male coupling with BSPP tread .

Attachment screw threads shall be BSPP.

The couplings shall be of the bolted clamp type meeting VG.85 328 / VG.95 950 requirements.

Swaged couplings are not acceptable and shall not be used.

Hose coupling tails shall be stainless steel.

2.4.9.2 Under-wing hose reels shall be of the Catherine wheel type, single

width with a minimum core diameter of 600 mm, and be located close to the meters and controls. It must be Stainless steel hub self-lubricated without chain Catherine wheel type hose reel is required for over-wing hose.

2.4.9.3 Swivel joints, which need grease for lubrication, are not permitted.

In addition, the design of the swivels shall be such that seals are easily accessible and can be replaced without the need to either remove the reels or engage in major disassembly work.

2.4.9.4 The reels are to be free running out and hydraulic power rewind. The control levers (each with lock, reel out, rewind functions) are to be situated at the hose reels, on the pumping control station side only.

Rewind speed shall be adjustable by means of a valve or other device which can be locked / sealed in its set position.

2.4.9.5 Suitable rollers or trays below the reel and rollers at the pull off points are required to ensure proper hose handling, prevent drooping and tangling etc.

2.4.9.6 Hoses must be easy to pull off the reels under all conditions but adjustable devices to prevent excessive overrun, when pulling stops, shall be provided if necessary.

2.4.9.7 Male threaded connections are required on hose reel outlets. It shall not be necessary to remove the reel outlet elbow in order to facilitate hose removal. The female swivel nut connection on the hose at reel end shall be easily accessible using normal tools.

2.4.9.8 Hose reels must be suitable for testing hoses to 20 bar while still connected.

2.4.10 Filter Water Separator

2.4.10.1 Only EI approved stainless steel vessels shall be used with rod mounted six inch (6”) filter elements.

2.4.10.2 The filter water separator cover shall have a swing bolted cover (not flanged through bolts) and be installed to allow easy removal of the elements without the need to remove any other components or panels. It shall be situated to open on the opposite side of the Refueller from the 'operating station'.

2.4.10.3 It shall have $^{3}/_{4}$ inch sump drain lines with ball type isolating valves at the vessel end and Spring return valve at the drain point. Sampling lines shall be provided from Filter Water Separator outlet side with ball type isolating valves at the vessel end and Spring return valve at the drain point. The sample / drain lines shall be as short as possible and conveniently positioned for use with a bucket or jar.

2.4.10.4 The filter water separator is to be fitted with a piston type differential pressure gauge with readings in psi.. Isolating valves shall be fitted in the sense lines together with a valve to allow fuel from the underside of the piston to be bled to a collection jar for the purpose of verifying that the integral filter is not blocked and that the piston is free to move over the whole of its potential stroke. The low pressure side isolating and piston chamber bleed (drain) valves may be combined into one multiport valve if desired.

2.4.10.5 An automatic air eliminator is required on the highest point of the filter water separator. The air bleed line is to be taken back into the tank through a visible flow (ShoFlo) indicator, easily identifiable from the control station. The flow indicator shall not be a plain window type, but shall incorporate a ball or spinner to indicate that flow is occurring. The design shall be such that incoming air or vapour will easily displace accumulated liquid downstream - i.e. it shall be self draining. Air shall be able to pass freely into the tank vapour space, but liquid leakage shall pass via a tube to the bottom of the tank. A non return valve shall be installed in the air eliminator line to ensure that the filter cannot drain back into an empty tank (Refueller) via an open foot valve.

2.4.10.6 Re-settable system shall be provided to cut off the refuelling when the differential pressure reaches to 15 psi of filter water separator

2.4.11 Miscellaneous Equipment

The following miscellaneous equipment is to be fitted.

2.4.11.1 Weather proof **lockable stowage** for two 5 Litres containers and miscellaneous sampling equipment shall be provided. Typical dimensions shall be 600 mm long x 600 mm. high x 250 mm deep. Standard electrical enclosure boxes, fitted with a wooden internal base panel, have been found suitable for this application.

2.4.11.2 A **sample recovery tank** of approximately 150 Litres capacity, equipped with fill point, vent, dial or fire resistant window type level gauge and drain shall be fitted at operational station side.

The fill point shall be of an easy to use design incorporating a funnel, removable screen filter and down pipe. The fill point cover shall be operable by one hand and stay in the open position when so set. Large diameter fill covers / inspection hatches of the type used on vehicle cargo tanks shall not be used.

The funnel opening shall be of an adequate size and positioned high enough above surrounding surfaces or obstructions so that a full 5 Litres jar can be easily positioned and emptied without spillage.

2.4.11.3 Two manual rewind reels, each with 40 metres of bonding cable and a substantial clip (MIL-C-83413/7) are to be fitted for Refueller one near the pumping control station, the other on the opposite side of the vehicle in a convenient location.

These may be used both for fuelling and bottom loading purposes.

Characteristics of the reel and its operation are important. Materials shall be corrosion resistant. It must not over-run on reeling out when the cable is no longer being pulled. It must not be stiff to rewind. It must be possible for the operator to properly / evenly guide the cable onto the reel over its full width, thus avoiding localised coil build up and subsequent loosening / overlaying / tangling. It must not be possible for the reel / cable to unwind due to vibration when the vehicle is moving.

The **cable** is to be very flexible, corrosion resistant, and resistant to kink and have substantial tensile strength. Core material 16×14×0.15 single copper braided 3mm diameter, electrical resistant 0.007 Ohms per metre cable has been found to be very good and is recommended.

For protection against abrasion, it must be covered in a suitable, UV light resistant clear plastic coating.

The coating may be transparent (to aid location of faults or damage) or coloured bright yellow or have a reflective surface to aid visual identification of its presence on the ground.

An interlock switch is not required at the bonding clip securing point.

2.4.11.4 A bonding connection shall be installed at each bottom loading point, the tank drain, the product recovery (dump) tank and at the drain panel.

2.4.11.5 Two bucket or scabbard type fire extinguisher holders shall be provided, one at each side of the Refueller, suitable for both 9 kg. dry powder type units.

They must be easy to use, at a shallow slope, with water drain holes and of non corrosive material. To ease handling and help prevent the hose from being squashed or damaged, wooden slats either side of the lower centre line may be found useful.

Holders, which require clamps or latches, must not be used.

2.4.11.6 01 No. Two kg. CO_2 fire extinguisher shall be fixed in an accessible position in the cab.

2.5 Pipe work, flanges and isolating valves

2.5.1 All piping used shall be seamless Aluminium Alloy or Stainless Steel. Mild Steel is not permitted even if internal surfaces are completely coated by hot tin dip or epoxy lining.

For visual appearance, pipe sections shall normally be butt welded together.

For information, the following stainless steel material has been found to be generally suitable.

Pipe to ASTM A.312, grade TP. 304 L, and Schedule 5S (0.083" thick). Forged flanges to ASTM A.182, grade F.304L. Wrought fittings to ASTM A.403 grade WP .304L.

ASTM grades A.321 and A.316 are also acceptable.

2.5.2 Victaulic joints and flexible couplings are not permitted downstream of the pump

2.5.3 Flanges shall be to ANSI.B16.5 class 150 pattern dimensions

2.5.4 Swivel joints are to be self lubricating, without the need for grease. Ductile iron swivels are not acceptable even if they are internally coated.

2.5.6 All pipe work is to be fully drainable. There shall be a drain line with ball isolating valve and Kamlock coupling / sealing cap installed from a point where the bulk of the fuel can be drained.

Other piping low points are to be fitted with minimum $^{3}/_{4}$ inch BSPPF (mutter) drain points, fitted with screwed plugs (parallel thread with sealing washer).

2.5.7 Plugged, parallel threaded connection ports shall be provided on pipe work in accessible positions to permit hose testing to be carried out on the Refueller Provision shall also be made in the design of the piping layout to permit in situ routine testing of the riser hoses to the elevating platform.

2.5.8 All hoses shall be capable of being isolated for routine pressure testing to 20 bars, without the need of removing them from the vehicle. Accordingly, all pipework, fittings and isolating valves, which would be subject to this pressure, shall be suitably rated for 'hose test use, even though the normal system hydrostatic test pressure is 15 bars.

Isolating valves shall not leak in the reverse direction when subject to 20 bar applied from the downstream side.

2.5.9 All fuel sample, drain, sense and gauge lines shall be Stainless Steel except in sized of $^{1}/_{2}$ inch and above when Aluminium can also be used. Where there are individual sections as part of a whole, it shall be possible to dismantle them separately i.e. use compression ferrule type fittings and avoid multiple screwed joints.

Elbow fittings with tapered threads must never be used in parallel threaded ports such as on the differential pressure gauge and filter Water Separator vessel.

2.5.10 Valves on drain / sample lines are to be ball type, terminating in Kamlock type couplings with quick release sealing caps secured by retaining wires or chains.

2.5.11 Copper, Copper Alloys with more than 35% Copper, Zinc or Cadmium shall not be in contact with the fuel. All valves, couplings, and swivels etc. in contact with the fuel shall be non-ferrous. Valves may use Aluminium, Stainless Steel or chromium plated bronze components.

2.5.12 where valves are actuated by pneumatic cylinders, consideration shall be given to protecting shafts and seals, which could be damaged in a potentially dirty / wet environment, by use of a flexible rubber boot.

This may apply even if the shaft is made of stainless steel.

Advice on this aspect shall be sought from the cylinder manufacturer since in some cases, a rubber boot may accelerate rather than prevent wear by 'inhaling' and accumulating abrasive particles / moisture during the extension mode.

Chapter 3:- Tank and fittings

3.1 Tank design –Refueler

3.1.1 Basic structure

3.1.1.1 This specification gives some general design principles and particular requirements. For detail on material grades and thickness, or weld procedures refer NFPA.385, (pr) EN12312-5, ECE/TRANS/110 (ADR) and DOT 406

3.1.1.2 **The tank is to be made from Aluminium Alloy (EN AW 5182) with 5.2mm minimum thickness or 304L Stainless steel.**

Refueller tank is to be a single compartment with a usable liquid capacity of 10,000 litres for Refueller a sump giving minimum dead stock and a minimum of 3% liquid expansion / ullage space. A typical gross 'rate' would be 3.76 litres / mm length.

With due regard for the constraints of width and height, length shall be minimised. The man lids and vent valves do not protrude above the tank top, but instead are set below it.

3.1.1.3 The tanks must be able to withstand an internal pressure of at least 0.35 bar.

3.1.1.4 The tank sump / bottom, when mounted on the chassis in both the loaded and unloaded condition, shall have a bottom slope of not less than 2° (1:24 or 3.6%) from each end towards a single low point in a convenient central location.

3.1.1.5 The bottom interior surface must be smooth and free from pockets or depressions where water might collect. Welds around the sump and in the centre bottom area shall be ground flat / flush to prevent obstruction to water flow. Other welds, either of the baffles or tank plates, shall be positioned such that flow of water / water globules to the centre bottom and sump is not obstructed.

3.1.1.6 Refueller tank is to be fitted with one (01) baffle to form divisions, each division of about 5,000 Litres capacity, varying according to the design constraints of the tank. Baffles shall be dished to give increased strength and acute angles at the tank shell joint shall be avoided.

All baffles must be open at the top and the bottom for liquid levelling and be provided with substantially off-set (not overlapping) access holes, with smooth edges, approximately 600 mm. diameter at some intermediate height. it shall be possible for a person to clamber through these holes without undue difficulty. Internal piping must not pass through these access holes.

3.1.2 Miscellaneous

3.1.2.1 The outlet line from the filter air eliminator and any other fill lines into the Refueller tank must be taken to near the tank bottom to minimise splashing. However, air shall be able to pass directly into the tank vapour space to avoid it bubbling up through the fuel.

3.1.2.2. A spring-loaded soft seat non-return valve is to be fitted at any point where sense or return or control lines enter the tank. This is to prevent spillage in case of accident damage or if equipment is removed for maintenance.

3.1.2.3 A side mounted contents gauge, unaffected by tank pressure, is required - see item 3.4.3

3.1.2.4 Any appendages fixed to the tank (ladders, grips, braces, etc.) shall be suspended from pads or brackets welded to the tank shell.

3.1.2.5 Flat washers lock washers and self locking nuts / stiff-nuts are to be used on all bolted or studded fastenings.

3.1.2.6 Studs or captive nuts must not be welded to the tank shell, affixed pads or brackets.

3.1.2.7 An access ladder shall be fitted at rear of the tank and the tank top shall have an aluminium chequered walkway from the access point to the manholes.

3.1.2.8 Electric cables / conduit must not be positioned such that they provide a convenient hand hold or grip for someone climbing onto the tank top.

3.1.2.9 No pressurised fuel delivery pipes are permitted to pass through the tank.

3.1.2.10 One and half inch (1 ½") rapid drain line shall be installed from the tank sump, flush with the bottom and not surrounded by raised welds, to an accessible point. A ball valve shall be installed at the sump end and the outlet shall terminate in a 1 ½" inch ball valve and 1 ½ inch extended pipe with BSPP sealing dust cap.

A $^{3}/_{4}$ inch sample line and valve shall be connected into bottom of the 1 ½ inch line as close as possible to the outside valve.

3.2 Tank attachments and controls

3.2.1 Top fittings

3.2.1.1 Hinged manhole cover assemblies shall be provided to enable the tank to be inspected internally. They shall be of lightweight construction but sufficiently robust to withstand rough treatment. They shall be capable of being locked or sealed and shall be easily detachable from the tank for maintenance purposes.

3.2.1.2 When pressure / vacuum valves (or other equipment) are fitted to the manhole cover they shall be so positioned that they are protected from damage in case of any vehicle overturn.

3.2.1.3 The arrangement of vent valve and cover installation shall be such that there will be no liquid spillage when the Refueller is on an incline of 1:15 (6.7%), the most suitable position for this equipment are the centre two baffled sections as opposed to the end ones.

3.2.1.4 The manhole arrangement shall be positioned so that if the cover is inadvertently left open, the cover will fall to the closed / latched position when the vehicle moves forward.

3.2.1.5 In order to provide for adequate gas freeing prior to entry of personnel, and to provide for escape in case of emergency, at least 2 openings for the tank each of 600 mm diameter shall be available. These may form part of the manhole / inspection hatch installation, or may be separate.

3.2.1.6 Any recess on top of the tank, which could collect rain water, shall be provided with a drain tube, minimum diameter 25 mm.

3.2.1.7 Stainless steel studs / fasteners shall always be used for attaching manlids and cover plates to the top of the tank.

3.2.1.8 Collapsible handrail ((Height 3 ½ feet Stainless Steel/ Aluminium) shall be provided on top of the tank. A system shall be provided to raise the hand rail before climbing to the tank top.

3.2.2. Bottom loading

3.2.2.1 Two non selective bottom fill point flanged connections shall be fitted on each side of the Refueller, one of each pair being fitted with a $2\ ^1/_2$ inch aircraft type self-sealing adapter and metal sealing dust cap, the other being blanked with drain point assembly with spring return valve.

Flange type Isolating ball valves are required downstream of the bottom loading adapters and blanked pipe line connected to the loading with sealing provision for open position.

3.2.2.2 Required height for the centre line of bottom fill point flanged connections shall be in between 650 and 750 mm.

They shall be positioned so that they are not overly vulnerable to impact damage.

3.2.2.3 The tank filling systems must be arranged so that fuel flow is stopped automatically when the fuel level reaches a predetermined maximum. The bottom loading valve shall be positioned on the same side as the operating station. Two automatic high-level shut-off valves shall be provided (first to act as primary and second to act if first fails) One of the high level detectors shall be the jet sensing type, acting in conjunction with a wholly mechanical / hydraulically balanced bottom loading valve. Drain tubing shall be 'anti static', resistant to fuel, and be substantial enough not to kink easily.

Systems using floats, magnetic switches or air pressure shall not be fitted.

3.2.2.4 A pre-check system, removable and serviceable from outside the tank (i.e. normally mounted on a pad or block flange), is to be fitted adjacent to the bottom loading valve in order to simulate loss of the hold open pressure to the high level jet sensor, thus causing the valve to close.

The pre-check test device also acts as an emergency closure for the bottom loading valve before the Refueller is full but it will not otherwise act as an emergency stop if the loading valve itself is faulty and allows liquid over spill.

3.2.2.5 Inside the tank, the bottom loading valve shall be fitted with a deflector to minimise splashing and cause the product to flow laterally.

3.2.3 Outlet valve

3.2.3.1 The outlet / emergency / foot valve on the Refueller tank outlet is to be mechanically or pneumatically actuated from the operating station, located as close as possible to the pump inlet. Low level indication shall be provided before suction loss of the pump. If necessary, a suitable vortex breaker shall be fitted.

3.2.3.2 An emergency button or mechanical trip device is also to be located on the opposite side of the Refueller to close the foot valve. Emergency closure trips / stops shall not require a pull action actuate them - rather, a push action shall be necessary, the device remaining in the actuated / stop position until reset.

3.3 Tank venting and pressure relief

3.3.1 Normal service - loading, fuelling

3.3.1.1 With due allowance for safety factors, sufficient venting capacity shall be provided to cope with thermal breathing, fuel loading at up to 2,000 litres / minute and for delivery up to 2,000 litres / minute.

3.3.1.2 The valves used for these purposes shall be wholly mechanical, self contained and automatic in operation. Air operated vents connected to the loading or delivery system shall not be used.

3.3.1.3 General requirements and practice are that for outward vapour flow, the vent valve system shall begin to open at approximately 70 m. bar for thermal breathing, and 175 m. bar for loading with a sufficient number of small and large capacity devices provided so that the tank internal pressure does not exceed 175 m bar.

For inward flow, the vent valve system shall begin to open at a differential pressure of 4.5 m.bar with a sufficient number of small and large capacity devices provided so that the tank is not subject to a vacuum of more than 70 m.bar.

Vent valves of different types and sizes within the system may have different settings, provided the above overall requirements are met at the liquid loading and discharge flow rates specified.

3.3.1.4 For safety purposes, the valves shall restrict leakage of product 15 ml in 30 minutes in the event of vehicle overturn and when subject to a pressure equivalent to 110% of the maximum static head of liquid in the tank.

Valves shall be fitted with a fine mesh wire screen (wire 0.3 mm minimum diameter, maximum aperture 0.5 mm x 0.5 mm) or an acceptable multiplate / wound equivalent.

3.3.1.5 The valves may be all of one type or a combination of various capacities according to what can be provided by the manufacturer.

For example, small valves attached to the manhole covers may be used for thermal venting with larger ones fitted alongside or elsewhere on the tank.

Alternatively, if the manufacturer can provide high capacity valves for cover installations, additional vents elsewhere may not be necessary.

3.3.2 Emergency - fire engulfment, liquid overspill

3.3.2.1 To cope with fire engulfment, additional pressure relief / venting shall be provided by the manhole covers or other special purpose, high capacity vent valves lifting against a spring - they shall begin to open at not less than 210 m.bar, and be fully open at 350m. bar. The manlids / emergency devices shall not lift under normal operation for venting purposes.

3.3.2.2 The venting devices shall have a minimum flow capacity, at 350 m.bar tank pressure, of equivalent free air based on a log / log graph constructed using the following data points (general application).

Approximate Tank Capacity - m^3	Total Surface Area m^2	Capacity of Free Air m^3 / hour
1	6.2	1,817
8	24.8	7,269
57	124.0	18,070
150	347.0	25,602

The basis for calculation is NFPA.30, using 75% wetted area and n-Hexane plus 22%, included to allow for Jet A-1 molecular mass, enthalpy of evaporation, relieving temperature and the isentropic exponent of fuel vapour. These figures also cover the Avgas requirement, this being 19% greater than for n-hexane. When tanks are circular or elliptical in cross section, the above tabled capacities for Jet A-1 will need to be increased by up to 14.5% - e.g. for up to 86% wetted area.

3.3.2.3 The Refueller covered by this specification requires an emergency venting capacity of 15,500 m^3/hour of equivalent free air at 350 m.bar internal pressure.

3.3.2.4 The size of holes at the top of the baffles is critical and shall be determined by calculations similar to those used for bursting discs - e.g. B.S. 2915. These holes shall be large enough to allow vapour to flow easily, with minimal pressure drop, from baffled sections with no emergency venting device to those so provided, thus preventing changes in liquid level which could otherwise result in the vent being blocked / flooded with liquid in a situation which would otherwise be contained.

3.3.2.5 The equipment provided for emergency air venting shall also be capable of preventing the tank pressure from exceeding 350 m.bar in the event of liquid overspill at flow rates up to 2,000 litres/minute.

3.4 Tank calibration and contents

3.4.1 The tanks are to be calibrated in litres.

During calibration, the refueller is to be standing on level ground, with all tyres inflated to the correct pressures.

3.4.2 An aluminium dip tube shall be fitted in tank. The closure shall be such that any excess pressure in the tank will be released before the closure can be removed.

The tube shall have an opening in the wall above the maximum contents level to provide a pressure balance.

A captive black anodised aluminium or hardwood dip stick or equivalent is to be provided with each tank, calibrated and marked with suitably small increments according to actual measurements.

The marking must be directly in volume units. Those which require reference to calibration tables are not acceptable.

3.4.3 A 250 mm diameter tank contents gauge is to be fitted in Refueller tank to indicate either litres x 1000 (preferred) or as a minimum - empty, $^1/_4$, $^1/_2$, $^3/_4$ and full - based on actual measured volumes. The Refueller manufacturer will therefore need to make or obtain a new scale for the gauge. Operation must be unaffected by the pressure in the tank. The gauge is to be fitted on the same side of the tank as the fuelling control station.

Chapter 4:- Testing and records

4.1 Testing shall be performed after completion of painting.

4.2 On completion, hydrostatic pressure of 15 bar or 20 bar(as applicable) are to be applied to the fuelling circuits, followed by performance/functional tests to check that all items are in good working order.

These tests shall be repeated in the presence of the representative of Sri Lanka Air Force.

4.3 The tank shall be subjected to a hydrostatic test of 0.35 bar measured at the top surface.

4.4 A set of filter elements for flow testing shall be provided by the constructor.

4.5 Proof is to be furnished that the Filter Water separator has been hydrostatically tested to the design test pressure.

4.6 A calibration / test certificate for the meter shall be available.

4.7 A complete functional test on all items of equipment shall be undertaken prior to shipment of the refueller.

4.8 An Inspection test report and record shall be completed and forwarded with a copy also being included in the vehicle operating / maintenance manual.

4.9 Six weeks prior to inspection & testing, the contractor shall forward an inspection and performance test schedule for the approval of the client. The schedule shall cover all the major and important components of the equipment

/ vehicle offered. It shall also include equipment and gauges used for inspection and testing.

Chapter 5:- External painting

5.1 General

The vehicle is required for operation in a humid, tropical climate and may expose to conditions such as about 90% humidity, heavy rain, foggy weather, bright sunlight and a daily average air temperature range of 20 to 40°C.

Coatings shall not be affected or discoloured by the contamination with grease, oil hydraulic fluids, fuels or routine pressure/chemical washing.

It is therefore essential that surfaces to be painted are correctly prepared and properly coated, with particular attention to hidden surfaces to avoid early breakdown of paint film. The **final finish** must be smooth and free from specks and runs.

The mating faces of **bolted assemblies** must be sealed with a mastic type compound to prevent corrosion resulting from the ingress of water.

Any components or assemblies which **shall not to be painted**, such as nozzles, hoses, interlock switches, screw threads, adjusting devices, pressure/vacuum valves, data plates etc., shall be removed or suitably masked. **Open ports** shall be securely capped.

5.2 Surface Preparation, Priming and finish Painting

The following information shall be considered as a general guide the paint manufacturer's recommendations on the selection and application instructions should always be followed.

The **applicator must be experienced and equipped** with adequate facilities and all necessary equipment in safe and orderly manner.

5.2.1 Surface Preparation/Priming

5.2.1.1 **Bare steel** shall be de-greased/oiled and cleaned before painting. If de-rusting chemical solutions are used, all traces shall be removed by neutralizing/washing. Tanks and steelwork shall be grit-blasted to BS.4232:1967 2nd Quality or Swedish Standard Sa.2½. After blast cleaning, all the components shall be Hot Zinc Spray coated or Hot Dip Galvanized.

5.2.1.2 Upon completion of applicable surface preparation, **Hot Zinc Spray coating or Hot Dip Galvanizing** shall be performed on all the steel structures and the steel plates of the refuelling module.

5.2.1.3 **Aluminium** or aluminium-alloy sheet, shall be de-greased and be treated with a thin a coat of applicable primer before painting. It should not be abraded.

5.2.1.4 **Wood** surfaces shall be abraded smooth and dry before priming/painting.

5.2.1.5 **Glass fibre** reinforced surfaces shall be de-greased and lightly abraded before painting.

5.2.2 Preparation/Finish Painting

5.2.2.1 Further Preparation:-

Any indentations, welds or rough uneven surfaces shall be filled with stopping putty or brushing filler applied in thin layers at suitable intervals. When completely dry/cured, the surface shall be rubbed down wet with waterproof abrasive paper.

5.2.2.2 Finish coating:-

The cab (if necessary) and other components (as required) shall be under coated and top coated according to the paint manufacturer's instructions. Particular care must be taken to achieve the correct film thickness at each stage, taking into account the surface texture/finish of the item being painted. If necessary, additional coats shall be applied but excessive thickness shall be avoided as this can reduce the durability of the coating. Specks and runs, shall be avoided and in the case of panels, will not be accepted.

5.3. Colour scheme / visual identity

5.3.1 Final colours of the upper half of the cab, refueller shall be white (RAL 9010) and the lower half in "Signal" red (RAL 3000). The chassis and frame shall be Grey (RAL 7000).Chassis, recovery tank, mudguards, wheels, fuelling components and Panelling of the refueller shall be painted in Grey. For the vehicle exterior, a high gloss finish is necessary.

5.3.2 Emblems and lettering will be done locally.

Instruction Manual (IM)

Supplier shall provide following Manuals/Catalogues on delivery of the Aircraft Refueller and shall cover the entire units. All such manuals shall be in English.

1. **Workshop Manual for the Chassis -** Two Copy
2. **Spare Part Catalogue for the Chassis -** Two Copy
3. **Operations & Maintenance Manual for the Refueller Module** – Two Copy
4. **Spare Part Catalogue for the Refueller Module** – Two Copy
5. **Calibration chart of the tank** – Two Copy

IM 1 Contents and format

The manual shall provide clear and comprehensive guidance on vehicle operation and maintenance, so that it can be kept in good working order. All due allowance shall be made for lack of user familiarity with a completely new vehicle.

A typical content / arrangement would be as described in IM2 to IM6.

IM 2 Miscellaneous sections

IM 2.1. A title page showing manufacturer's name / address / telecommunication details, customer, purchase order number, works order / serial number. This shall be followed with 4 colour photographs showing the vehicle right and left views, the rear, and tank top (to include fittings / manholes / vents).

IM 2.2 An index / contents list showing the various sections and list of illustrations.

IM 2.3 A list of applicable specifications and standards - e.g. BS. ISO, EN etc.

IM 2.4 General safety precautions relations relating to workshop practices, fire prevention/precautions, toxic vapours/fumes, the battery, main electrical equipment, asbestos packing (if any).Also list sources of potential danger when loading, driving, fuelling etc. and stress that the equipment shall only be operated by personnel qualified to do so by the user company.

IM 2.5 A list of threaded fastener sizes used - metric/UNC/UNF/BSW/BSF etc., with spanner/ hexagon sizes and recommended torque values.

IM 2.6. Basic vehicle data - chassis / prime mover details (make/model/VIN/engine model/power output/serial no/wheel-base etc.) - actual measured weights per axle when loaded-tyres/pressures-actual dimensions (heights of cab, tank, platform, overall length, width)- tank fabrication number - scissor lift fabrication number.

IM 2.7 General description

This shall be written to aid understanding of the more complex details later in the manual. Content can be short or long according to the other information provided. A simple diagram shall be included.

IM 2.8 Tank and fittings

This detailed information is necessary as preparation for the operating instruction and commissioning procedure sections.

To cover topics such as - description including attachments and their controls-bottom loading valve-high level shut off and test cock - manlids and vents - contents gauge - dip stick - sampling and rapid draining.

IM 2.9 Operating instructions

To be read only at first, in preparation for carrying out the commissioning procedure.

To cover such topics as - loading from the depot - self loading - platform operation - engaging/ disengaging the pump - reeling out and rewind the hose reels - starting flow(to recirculate or fuel aircraft) - fuelling operations with a trailer/tank - stopping flow - depressurising the hoses - defuelling aircraft - use of emergency engine stops - use of the sampling cabinet and dump/recovery tank - use of the interlock override - etc.

IM 2.10 Commissioning procedure

To cover topics such as - packing removal - installing (as applicable) nozzles, filter elements, fire extinguishers bonding reels or anything else such as lights, fuses and relays which may have been removed for safe keeping during shipment/transportation - loading - purging air from the fuelling pipework - purging air from the SPCV/ deadman valve- recirculating via each hose - checking /cleaning nozzle strainers - purging air from the defuel pipework - clearing of tank and filter sample / drain lines etc. Also it shall be cover in detail with block diagrams the procedure for re-commissioning after a major overhaul of the vehicle.

IM 3 **System detail sections**

These sections are needed to describe very clearly, details of the various systems as follows. For clarify, it is suggested that numbered items on circuit drawings also be given a letter prefix.

Where the systems interface, the diagrams shall so indicate and thus, the related or linked item will be easier to identify.

It is suggested that the following letter prefixes be used:-

A - Fuelling system - e.g. A5 Meter, A17 Fuel sense pressure gauge.

B - Pneumatic system - e.g. B17 Foot valve control, B9 Interlock

Override switch

C - Hydraulic system - e.g. C23 Cylinder, C4 Flow control valve, reel

D - Electrical system - e.g. D35 Pump tachometer, D12 1/S relay unit

E - Miscellaneous - e.g. E17 Drawbar coupling, E6 Pump speed control cable

Each of these sections shall include a clear circuit diagram, on large size paper (A3 folded) for clarity if necessary, with all components given a discreet item number such as C5, D23 etc. with any interfaces to other systems shown.

For example, the electrical circuit diagram will have most items marked with the prefix D but when electric interlock switches are used, there will also be a B item shown representing the solenoid actuated pilot valve for the brake system.

Where components can fall into two categories, it is suggested that the code letter to apply is that for the first diagram in which it appears.

For example, the pneumatic operator of a foot valve, code A, would also have a code A. When the same pneumatic operator was illustrated with other pneumatic B components, it would still be code A.

Similarly, a pneumatically operated pressure switch to activate a warning light would appear as code B in both pneumatic and electrical systems. Each section shall also include a table showing, for example, the following information:-

Item	Part No.	Description	Qty.	Location	Supplier
A20	N2005060010	Non return valve	01	Tank rear, right hand side defuel line	Northvale Korting

Where it is not feasible to describe the item location such that it could be easily found, then simple sketches or photographs shall be provided.

For wholly bought out/unmodified items, the **original manufacturer's part numbers** must be used. Where items have been purchased and modified or

added to by the Refueller manufacturer to form a distinguishable separate assembly, then preferably, the separate part numbers shall be given. Where this is really not feasible, a new unique part number may be given and the Refueller manufacturer may be given and the Refueller manufacturer may be mentioned as the supplier.

IM 3.1 Fuelling system A

Comprising - Diagrams of the fuelling circuit and operating panel. parts list, operating/functional descriptions of fuelling/defuelling, secondary pressure control system, depressurising etc.

Reference shall be made to the item numbers on the circuit and what occurs when each control is selected.

IM 3.2 Pneumatic System B

Comprising - A diagram of the pneumatic circuit including inter-connections with other systems, parts list, operating/ functional descriptions of pump selection, fuel/defuel selection, dead man control system (if pneumatic), air reference supply to the SPCV, brake interlock system, engine stop control system, trailer interlock and foot valve controls etc.

Reference shall be made to the item numbers on the circuit and what occurs in what sequence to what component, where air can go and does go under various circumstances.

IM 3.3 Hydraulic System C

Comprising - A diagram of the hydraulic circuit including, parts list, descriptive information on safety, cleanliness, the reservoir, pump, pressure relief and flow control system, hose rewind and elevating platform operations/controls. Reference shall be made to item numbers on the circuit and where the oil travels in each situation. There shall also be a section here, or under 'Trouble Shooting' per item IM 4.2 describing how to remedy a 'stuck up' platform and re-set the various flow controls. This may be necessary following injudicious opening of the platform cylinder outward flow control, allowing excess flow rate and triggering of the cylinder emergency fuses/ restrictors. In turn, this would cause the platform to stick in the up position or only descend exceptionally slowly.

IM 3.4 Electrical system D

Comprising - A diagram of the electrical circuit including wire colours and interconnections with other systems, parts lists, operating/functional descriptions of operations lights, obstruction lamps, deadman system (if electrical), pump speed tachometer, pump/road drive warning lights, platform alarm, brake interlocks (if electrical switches), brake override warning light, battery isolator, alternator protection circuit etc.

IM 3.5 Miscellaneous items E

Comprising - Itemised parts list/location description etc. Components to be included with diagrams if necessary can include such things as pump speed controls, sampling cabinet, chain tensioners, hose reels guide rollers, trailer drawbar coupling, bonding reel, nozzle stowage assemblies/shrouds, scissors

lift assembly, cab fire extinguisher, drive shaft modifications (gearbox to pump, pump to rear axle), recovery tank contents gauge, earthling/bonding lugs, tamper proof covers for adjusters, hydraulic drive coupling on the product pump extension, latch on bottom loading coupling interlock lever etc.

IM 4 Maintenance sections

IM 4.1 Routine inspection and lubrication.

This part of the manual applies to the items and equipment installed by the Refueller manufacturer as opposed to the chassis / prime mover itself. Aspects covered shall include recommended **lubricants** and **schedules -** daily, weekly, monthly, 3 monthly, 6 monthly etc. as appropriate.

Typical details might be:-

Daily - check air reservoir drain

Weekly - check/top up hydraulic oil reservoir level , grease drawbar coupling pin, top up the pneumatic system lubricator and drain water, operate fuel/defuel selector and trailer foot valve switches to prevent seal stiction.

Monthly - Apply a few drops of oil to the drawbar actuating lever, platform gate hinges, air cylinder pivots pins, deck nozzle stowage cover hinges, bottom loading interference bar pivots. Apply grease to spring loaded catches. Check/top up oil level in the fuelling pump gearbox.

3 monthly - check /top up oil level in the bulk meter gearbox. Check/replace oil filter in hydraulic system Clean the pneumatic system filter elements. Lubricate the hose reel rewind chains.

6 monthly - change the oil in the fuelling pump gearbox.

IM 4.2 Trouble shooting

Clearly it is not possible to cover every eventuality and difficulty which might be encountered in a complex system. Sections covering the fuelling, pneumatic, hydraulic, and electrical systems shall be good enough for users to educate themselves and decide what may be causing trouble. Nevertheless, the following major difficulties shall be addressed and suggestions made to investigate and remedy the situation.

- Brakes cannot be released.
- Interlock action to apply brakes slowly or not working.
- No fuel flow when in the fuelling mode.
- Flow rate unusually low in the fuelling mode.
- Release of the dead man handle does not stop flow or flow Stops too slowly.

- Release of dead man does not return pump speed to idle.
- No fuel flow when in the defuelling mode.
- No fuel flow when bottom loading.
- Elevating platform will not rise, stop rising or lower.
- Fuel pump will not engage or disengage or gears baulk.
- Reels will not rewind, lock or free-wheel out.

IM 4.3 Recommended spare parts

The bidder shall submit the following priced spare parts lists along with the bid.

(1). To cover **normal requirements** for approximately 2 years operation, on a per unit basis.

(2). To cover anticipated **major maintenance requirements** over a 5 year period, on a per unit basis.

IM 4.4 Component servicing and repair

In this section, it will not be sufficient only to enclose manufacturers' general leaflets and information sheets.

In some cases, for the more simple assemblies, it will be sufficient to provide only the drawings covered by item IM 6 below.

In other cases, complete and current information will be required for such items as:-

Bulk meter - Fuel pump - Hose reel swivels

Fuelling nozzles and regulators - Secondary pressure control/deadman valve

Tank foot valve - Bottom loading valve and high level sensor – Filter Water Separator element changing - Fuel/defuel valve - Differential pressure gauge - Hydraulic pump and motors

IM 5 Test certificates

Certificates shall be provided for the tank pressure test, bulk meter calibration, the 5 bar general circuit pressure test, the 20 bar system test downstream of the closed line isolating valves.

In addition, the manufacturer shall enclose a copy of his own test schedule/results.

A copy of a check list for verifying all the chassis / prime mover options and type variants specified on the purchase order shall be provided for easy reference.

IM 6 Illustrated parts list and drawings

General arrangement, sub-assembly and any useful detail drawings or descriptive sketches, which are not included elsewhere, shall be placed here, together with an index. The aim shall be to provide as much information as possible in the form of an "illustrated catalogue" of components, with readily available (not necessarily specially created) exploded views and parts lists so that locally, equipment can be dismantled/repaired if necessary without specialised overhaul instructions to hand.

As necessary, the drawings shall be marked with the item number from the detailed parts list and placed in sections A, B, C and E. Full size drawings shall be carefully folded and kept in plastic pockets, together with any other booklets and leaflets and leaflets covering complete units, such as pressure control equipment, meters, etc

IM 7. TRAINING OF PERSONNEL

The successful tender will be responsible for meeting the cost and arranging the following training, including course notes. The training will have to take place at the manufacture premises. The total cost related to same should be born by the tender.

Operational and Routine Maintenance Training

a. **Instructor/Operator**

A total number of **four (04) AFQC** personnel (Bowser Operator) tradesmen are to be trained as instructor / Operator, to the level where they competent to instruct other other AFQC personnel (Bowser Operator) tradesmen in the safe and efficient operation , inspection and daily maintenance.

b. **Maintenance Training**

A total number of **two (02) MT engineering Staff** to be trained to the level where they are competent to carry out standard routine preventive maintenance, fault finding, operation and testing of vehicle tasks.

c. **Specialized Training**

The successful bidder will be responsible for training of **04 personnel (02 AFQC operators and 02 MT Technicians)** to be fully competent to handle major repairs and servicing tasks related to the vehicle chassis and fuelling equipment & accessories fitted to this specialist vehicle.

IM 8. **INTERIM INSPECTION**

The successful bidder will be responsible to arrange an interim inspection on Chassis and all the components prior to the assembling of fuelling equipment to the main chassis at manufactures premise for **two officers** (one logistics and one engineering) and **four airmen** (Three AFQC and One MTM) nominated by the Commander of the Air Force. All the expenses, including return air tickets inland transport, food and accommodation to be borne by the bidder.

FINAL INSPECTION

The successful bidder will be responsible to arrange final inspection on total function after assembling fuelling equipment to the main chassis, before painting at manufactures premise for **three Officers** (Two logistics and one engineering) and **four airmen (** Three AFQC and One MTM) nominated by the Commander of the Air Force. All the expenses, including return air tickets inland transport, food and accommodation to be borne by the bidder.

IM9. **WARRANTY**

a. Period of warranty for vehicle and fuelling pump and accessories should be minimum warranty of 04 years from the date of acceptance by SLAF with at least 60,000Km mileage warranty .

b. Components that come under warranty to be stated.

c. Indicate the number of free servicing provided by the local agent.

d.

IM 9.1 **DELIVERY**

a. Delivery period to be indicated.

b. Bidder is responsible for register the Aircraft at the department of motor traffic in Sri Lanka under the name of **"The Commander of the Air Force"** and to delivered with the civil number plates, Registration Cerificate at RMV with all other necessary documents.

c. Vehicles to be delivered to the supply and maintenance depot at SLAF Base Katunayake on FOC basis.

IM10. BIDDER IS TO BE FURNISHED THE FOLLOWING DOCUMENTS

a. Name of Aircraft Refueller Manufacturer and Country of Origin and country of manufacture.

b. Company profile of the Aircraft Refueller Manufacturer & Audited financial statements for the last three (03) years.

c. Detailed technical specification of the Aircraft Refueller model offered iv.covering chassis with the relevant detailed technical catalogue for the offered chassis model and detailed technical catalogue for all major components refuelling module.

d. Certificate from the Manufacturer that the Aircraft Refueller model offered is of currently in manufacture and availability of spares for a minimum period of 10 years.

e. Name and address of the Accredited Local Agent for the Aircraft Refueller.

f. Registration certificate of Accredited Local Agent issued by Registrar of Public Contract in terms of the Public Contract Act No. 3 of 1987 on submission of Form PCA3.

g. Name and address of the Accredited Local Agent of the Chassis manufacturer along with copy of letter of Authorization issued by the Chassis Manufacturer and valid copy of Certificate of Registration issued by the Registrar of Companies in Sri Lanka.

h. The Chassis brand offered shall be essentially represented by an Accredited Local Agent in Sri Lanka who is capable of providing warranty services/repairs as well as after sales services & spare part requirements. A Commitment Letter from the Accredited Local Agent of the Chassis Manufacturer declaring the agreement for providing after sales services aforesaid & supply of spares for the next 10 years period, shall be forwarded along with the offer.

j. The Chassis offered shall comply with ADR regulation (European Agreement Concerning the International Carriage of Dangerous Good by Road). A copy of the certificate of approval shall be submitted along with the Bid.

k. Inspection / Performance Testing criteria of the Aircraft Refueller and agreement to furnish test certificates on delivery of the Aircraft Refueller.

l. Past performance – Past supply records of Aircraft Refuellers on commercial use in the International Market for the last 10 years,

m. Specify the conditions of warranty offered on time/distance basis for the Chassis and Aircraft Refueller module separately.

n. Indicate all the breakdowns and / or repairs within the warranty period can be undertaken on urgent basis through his Local Agent. Therefore, the Local Agent shall be well equipped, capable of handling repairs of Chassis Engine and Aircraft Refueller module and such details shall be attached to the offer.

p. Supplier has to provide a list of recommended spare parts with prices separately, for Chassis & Aircraft Refueller module for 02 years operations.

q. A dimensional drawing showing key dimensions of the layout of the entire Aircraft Refueller. It shall include dimensions of the operational panel, height & width of the Aircraft Refueller and load distribution for the axels of the aircraft refueller with the calculations.

r. Flow Schematic Diagrams of Fuelling system, Hydraulic system, Pneumatic systems and Electrical Wiring.

s. The bidder is required to submit and independent audit report from a reputed institute (Third Party) with confirms standards and specifications given in 1.1.1 table are fulfilled /achieved

V. Inspections, Training and Tests

The following inspections and tests shall be performed,

Inspection

a. Inspection authority - Sri Lanka Air Force

b. Place of Inspection - At Manufacture's premises

c. Training of personnel - At Manufacture's premises

d. The Supplier will provide all administrative facilities and all financial requirements (Air tickets, food and accommodation etc.) to the trainees and inspectors at the time of inspection at its premises.

e. Scope of Inspection,
   (1) Confirmation of the test specification laid down in the contract.
   (2) Road Test for the vehicle and 100% functional test for refuelling system.
   (3) 100% completeness of equipment in all respect.
   (4) It shall be accepted by the buyer that the vehicles inspected would be from the order placed by the buyer and inspected vehicle/s would be shipped to Sri Lanka with the mileage it incurs during the said inspection and no separate vehicle would be offered for inspection and/or road test.

Section VI
Conditions of Contract

SECTION	CLAUSE	TEXT
DEFINITIONS	1. Definitions	1.1 The following words and expressions shall have the meanings hereby assigned to them: (a) "Contract" means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein. (b) "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto. (c) "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract. (d) "Day" means calendar day. (e) "Completion" means the fulfillment of the supply of Goods to the destination specified and completion of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract. (f) "CC" means the Conditions of Contract. (g) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract. (h) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the Contract Data. (i) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other such obligations of the Supplier under the Contract. (j) "Subcontractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier. (k) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

		(l) "The Project Site," where applicable, means the place named in the Contract Data.
Contract Documents	2. Contract Documents	2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.
Fraud and Corruption	3. Fraud and Corruption	3.1 The Government of Sri Lanka requires the Purchaser as well as bidders, suppliers, contractors, and consultants to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy: (i) "corrupt practice" means offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution; (ii) "fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract; (iii) "collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Purchaser to establish bid prices at artificial, non-competitive levels; and (iv) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.
Interpretation	4. Interpretation	4.1 If the context so requires it, singular means plural and vice versa. 4.2 Entire Agreement: The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract. 4.3 Amendment: No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto. 4.4 Severability: If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or

		enforceability of any other provisions and conditions of the Contract.
Language	5. Language	5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in English language. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified, in which case, for purposes of interpretation of the Contract, this translation shall govern. 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.
Joint Venture, Consortium or Association	6. Joint Venture, Consortium or Association	6.1 If the Supplier is a joint venture, consortium, or association, all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the joint venture, consortium, or association. The composition or the constitution of the joint venture, consortium, or association shall not be altered without the prior consent of the Purchaser.
Eligibility	7. Eligibility	7.1 All goods supplied under this contract shall be complied with applicable standards stipulated by the Sri Lanka Standards Institute. In the absence of such standards, the Goods supplied shall be complied to other internationally accepted standards, such as British Standards.
Notices	8. Notices	8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the Contract Data. The term "in writing" means communicated in written form with proof of receipt. 8.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.
Governing Law	9. Governing Law	9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Democratic Socialist Republic of Sri Lanka.
Settlement of Disputes	10. Settlement of Disputes	10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract. 10.2 If, after twenty-eight (28) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the

		Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the Arbitration Act No:11 of 1995. 10.3 Notwithstanding any reference to arbitration herein, (a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and (b) the Purchaser shall pay the Supplier any monies due the Supplier.
Scope of Supply	11. Scope of Supply	11.1 The Goods and Related Services to be supplied shall be as specified in the Schedule of Requirements.
Delivery and Documents	12. Delivery and Documents	12.1 Subject to CC Sub-Clause 32.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Schedule of Requirements. Where applicable the details of shipping and other documents to be furnished by the Supplier are specified in the Contract Data.
Supplier's Responsibilities	13. Supplier's Responsibilities	13.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with CC Clause 11, and the Delivery and Completion Schedule, as per CC Clause 12.
Contract Price	14. Contract Price	14.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not exceed the Contract Price.
Terms of Payment	15. Terms of Payment	15.1 The Contract Price, shall be paid as specified in the **Contract Data**. 15.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to CC Clause 12 and upon fulfillment of all other obligations stipulated in the Contract.

		15.3 Payments shall be made promptly by the Purchaser, but in no case later than twenty eight (28) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.
Taxes and Duties	16. Taxes and Duties	16.1 The Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
Performance Security	17. Performance Security	17.1 If required as specified in the **Contract Data**, the Supplier shall, within fourteen (14) days of the notification of contract award, provide a performance security of Ten percent (10%) of the Contract Price for the performance of the Contract. 17.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract. 17.3 As specified in the **Contract Data**, the Performance Security, if required, shall be in Sri Lanka Rupees and shall be in the format stipulated by the Purchaser in the **Contract Data**, or in another format acceptable to the Purchaser. 17.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations.
Copyright	18. Copyright	18.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
Confidential Information	19. Confidential Information	19.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may

		furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under CC Clause 19. 19.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract. 19.3 The above provisions of CC Clause 19 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof. 19.4 The provisions of CC Clause 19 shall survive completion or termination, for whatever reason, of the Contract.
Subcontracting	20. Subcontracting	20.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract. 20.2 Subcontracts shall comply with the provisions of CC Clauses 3 and 7.
Specifications and Standards	21. Specifications and Standards	21.1 Technical Specifications and Drawings: (a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section V, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin. (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser. (c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or

		the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with CC Clause 32.
Packing and Documents	22. Packing and Documents	22.1 The Supplier shall pack the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract.
Insurance	23. Insurance	23.1 Unless otherwise specified in the **Contract Data**, the Goods supplied under the Contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery.
Transportation	24. Transportation	24.1 Unless otherwise specified in the **Contract Data**, responsibility for arranging transportation of the Goods shall be a responsibility of the supplier.
Inspections and Tests	25. Inspections and Tests	25.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the **Contract Data**. 25.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place as specified in the Contract Data. Subject to CC Sub-Clause 25.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser. 25.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in CC Sub-Clause 25.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses. 25.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.

		25.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected. 25.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection. 25.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to CC Sub-Clause 25.4. 25.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to CC Sub-Clause 25.6, shall release the Supplier from any warranties or other obligations under the Contract.
Liquidated Damages	26. Liquidated Damages	26.1 Except as provided under CC Clause 31, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the Contract Data of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those **Contract Data**. Once the maximum is reached, the Purchaser

		may terminate the Contract pursuant to CC Clause 34.
Warranty	27. Warranty	27.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract. 27.2 Subject to CC Sub-Clause 21.1(b), the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination. 27.3 Unless otherwise specified in the **Contract Data**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract Data. 27.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects. 27.5 Upon receipt of such notice, the Supplier shall, within the period specified in the Contract Data, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser. 27.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **Contract Data**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.
Patent Indemnity	28. Patent Indemnity	28.1 The Supplier shall, subject to the Purchaser's compliance with CC Sub-Clause 28.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual

		property right registered or otherwise existing at the date of the Contract by reason of: (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and (b) the sale in any country of the products produced by the Goods. Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract. 28.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in CC Sub-Clause 28.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. 28.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf. 28.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing. 28.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

Limitation of Liability	29. Limitation of Liability	29.1 Except in cases of criminal negligence or wilful misconduct, (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent infringement.
Change in Laws and Regulations	30. Change in Laws and Regulations	30.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in Sri Lanka that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with CC Clause 14.
Force Majeure	31. Force Majeure	31.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure. 31.2 For purposes of this Clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires,

		floods, epidemics, quarantine restrictions, and freight embargoes. 31.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
Change Orders and Contract Amendments	32. Change Orders and Contract Amendments	32.1 The Purchaser may at any time order the Supplier through notice in accordance CC Clause 8, to make changes within the general scope of the Contract in any one or more of the following: (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser; (b) the method of shipment or packing; (c) the place of delivery; and (d) the Related Services to be provided by the Supplier. 32.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order. 32.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services. 32.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.
Extensions of Time	33. Extensions of Time	33.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to CC Clause 12, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As

		soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract. 33.2 Except in case of Force Majeure, as provided under CC Clause 31, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to CC Clause 26, unless an extension of time is agreed upon, pursuant to CC Sub-Clause 33.1.
Termination	34. Termination	34.1 Termination for Default: (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part: (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to CC Clause 33; (ii) if the Supplier fails to perform any other obligation under the Contract; or (iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in CC Clause 3, in competing for or in executing the Contract. (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to CC Clause 34.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated. 34.2 Termination for Insolvency: (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser. 34.3 Termination for Convenience:

		(a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective. (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect: (i) to have any portion completed and delivered at the Contract terms and prices; and/or (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.
Assignment	35. Assignment	35.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their

SECTION VII

CONTRACT DATA

The following Contract Data shall supplement and/or amend the Conditions of Contract (CC). Whenever there is a conflict, the provisions herein shall prevail over those in the CC.

CLAUSE	GENERAL
CC 1.1(i)	The Purchaser is Sri Lanka Air Force.
CC 1.1(m)	The Project Site(s)/Final Destination(s) is/are Sri Lanka Air Force Base Katunayake.
CC 8.1	For notices, the Purchaser's address shall be: Chief Procurement Officer Air Force Headquarters P.O Box 594, Defence Headquarters Complex Sri Jayewardenepura, Kotte Sri Lanka. **Tel**: +94 112 328850/ 2441553 **E-mail**: lquote@slaf.gov.lk
CC 12.1	Details of Shipping and other Documents to be furnished by the Supplier are For Local Contract i. Original Invoice (This should be prepared in accordance with the details given in the SLAF Order Form – Any disparity between the order form and your invoice may cause rejection of your invoice and delays in the payment process) ii. A copy of the SLAF Order Form iii. Duly Completed and signed F 666 s (F 666 is an SLAF document that must be submitted along with your invoice) iv. SLAF Convoy Note (this should be collected from Collection and Clearance Section Sri Lanka Air Force Station Colombo on Tel. 0112-441044). v. Any other document such as Warranty Cards, Manuals, Registration Certificates etc which are required for acceptance of the goods.
CC 15.1	The method and conditions of payment to be made to the Supplier under this Contract shall be as follows: Payments shall be made not later than Forty (45) working days after submission of the invoice along with duly completed F 666s and copy of the SLAF Order Form and after the SLAF has accepted it, whichever occurs later. As stated above, the following documents are required for the payment: i. Original Invoice (This should be prepared in accordance with the details given in the SLAF Order Form) ii. A copy of SLAF Order Form iii. Duly Completed and signed F 666 s (F 666 is an SLAF document that must be submitted along with your invoice) iv. Warranty Certificate (if applicable) No advance payment will be paid by the SLAF.

CC 17.1	A Performance Security shall be (10%) of the contract value.
CC 25.1	The inspections and tests shall be *General Clause -* ***"For products meeting the specified criteria, bidders may submit valid and current certifications or third-party test reports in lieu of physical samples. SLAF reserves the right to independently verify any submitted certifications or test reports and may request physical samples at any stage of the evaluation process. If certifications are not provided, bidders must submit relevant compliance documentation, such as product brochures, for review with the bid. Upon receipt of the confirmed order, the bidder must deliver the goods with certifications that remain valid at the time of delivery, along with warranty certificates, if applicable. Additionally, SLAF reserves the right to request further verification or retesting of the goods upon receipt at the bidder's cost, prior to final acceptance, if deemed necessary. If the sample fails laboratory testing, testing fees borne by the bidder will be reimbursed by the SLAF."*** ***Note:*** *In cases where the nature of the goods renders the General Clause inapplicable or insufficient, inspections, verifications, and tests shall be conducted in accordance with the procedures and requirements specified in the Technical Specifications*
CC 25.2	The inspections and tests shall be conducted upon receipt of Goods at Sri Lanka Air Force Base Katunayake.
CC 26.1	In the event that the Supplier/Service Provider fails to deliver the goods within the agreed delivery schedule, the Supplier/Service Provider shall be liable to pay liquidated damages to the Sri Lanka Air Force (SLAF) at a rate of **1% of the total contract value per week (or part thereof)** for each week of delay. The total liquidated damages payable under this clause shall not exceed **10% of the total contract value**. Should the accumulated liquidated damages reach the maximum limit of **10%**, SLAF reserves the right to terminate the contract and seek alternative suppliers without further notice.
CC 26.1	The maximum amount of liquidated damages shall be 10%.

SECTION IX

CONTRACT FORMS

1. Contract Agreement

THIS CONTRACT AGREEMENT is made the [insert: number] day of [insert: month], [insert: year].

BETWEEN
(1) [insert complete name of Purchaser], a [insert description of type of legal entity, for example, an agency of the Ministry of ..... or corporation and having its principal place of business at [insert address of Purchaser] (hereinafter called "the Purchaser"), and

(2) [insert name of Supplier], a corporation incorporated under the laws of [insert: country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called "the Supplier").

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., [insert brief description of Goods and Services] and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of [insert Contract Price in words and figures, expressed in the Contract currency(ies)] (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:

   (a) This Contract Agreement
   (b) Contract Data
   (c) Conditions of Contract
   (d) Technical Requirements (including Schedule of Requirements and Technical Specifications)
   (e) The Supplier's Bid and original Price Schedules
   (f) The Purchaser's Notification of Award
   (g) [Add here any other document(s)]
3. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.

4. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of the Democratic Socialist Republic of Sri Lanka on the day, month, and year indicated above.

For and on behalf of the Purchaser
Signed: [insert signature] in the capacity of [insert title or other appropriate designation] in the presence of [insert identification of official witness]

For and on behalf of the Supplier
Signed: [insert signature of authorized representative(s) of the Supplier] in the capacity of [insert title or other appropriate designation] in the presence of [insert identification of official witness]

2. PERFORMANCE SECURITY

[Note: the purchaser is required to fill the information marked as "*" and delete this note prior to selling of the bidding document]

[The issuing agency, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

--- [Issuing Agency's Name, and Address of Issuing Branch or Office] ---

Beneficiary: **Commander of the Sri Lanka Air Force, Air Force Headquarters, P.O Box 594, Defence Headquarters Complex, Sri Jayewardenepura, Kotte, Sri Lanka**

Date: ---

PERFORMANCE GUARANTEE No.: ---

We have been informed that --- [name of Supplier] (hereinafter called "the Supplier") has entered into Contract No. --- [reference number of the contract] dated --- with you, for the Supply of Qty 01 Brand new Aviation Re- fuel Bowser (10,000Ltrs Capacity)
for SLAF requirement (hereinafter called "the Contract"). Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Supplier, we --- [name of Agency] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of --- [amount in figures] (----) [amount in words], such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the … day of ……, 2025. [insert date, 28 days beyond the scheduled completion date including the warranty period], and any demand for payment under it must be received by us at this office on or before that date.

[signature(s)]