

K1A 0S5
Bid Fax: (819) 997-9776

Comments - Commentaires

Industrial Vehicles & Machinery Products Division
LEFTD - HS Division
140, O'Connor Street/
140, rue O'Connor,
East Tower, 4th Floor/
Tour Est, 4e étage
Ottawa
Ontario
K1A 0S5

Title - Sujet Forklift Trucks -Chariots élévateur Forklift Trucks -Chariots élévateur à fourches	
Solicitation No. - N° de l'invitation E60HS-21FRKL/A	Date 2021-03-18
Client Reference No. - N° de référence du client E60HS-21FRKL	GETS Ref. No. - N° de réf. de SEAG PW-\$\$HS-653-79868
File No. - N° de dossier hs653.E60HS-21FRKL	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Daylight Saving Time EDT on - le 2026-03-18 Heure Avancée de l'Est HAE	
Delivery Required - Livraison exigée See Herein – Voir ci-inclus	
Address Enquiries to: - Adresser toutes questions à: Martial, Daniel	Buyer Id - Id de l'acheteur hs653
Telephone No. - N° de téléphone (613)296-7559 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Specified Herein Précisé dans les présentes	
Security - Sécurité This request for a Supply Arrangement does not include provisions for security. Cette Demande pour un arrangement ne comprend pas des dispositions en matière de sécurité.	

Instructions: Voir aux présentes

Vendor/Firm Name and Address	
Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone	
Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print)	
Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

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6.1 GENERAL17

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Appendix "A1" - Technical Evaluation Matrix – Group 1A

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Annex "D" Purchase Description – Group 2B

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Annex "J" Purchase Description – Group 5

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Annex "K" Purchase Description – Group 6A

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Annex "N" Purchase Description – Group 7A

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Annex "O" Purchase Description – Group 7B

Appendix "O1" - Technical Evaluation Matrix – Group 7B

To be provided upon request:

Annex "P"

REQUEST FOR PROPOSAL (RFP) TEMPLATE

(For more information about the RFP template and Bid Solicitation Process, refer to "Bid Solicitation" Section detailed under Part 6B.)

PART 1 - GENERAL INFORMATION

1.1 Introduction

The Request for Supply Arrangements (RFSA) is divided into six parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Supplier Instructions: provides the instructions applicable to the clauses and conditions of the RFSA;
- Part 3 Arrangement Preparation Instructions: provides Suppliers with instructions on how to prepare the arrangement to address the evaluation criteria specified;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria which must be addressed in the arrangement and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided; and
- Part 6 6A, Supply Arrangement, 6B, Bid Solicitation, and 6C, Resulting Contract Clauses:
 - 6A, includes the Supply Arrangement (SA) with the applicable clauses and conditions;
 - 6B, includes the instructions for the bid solicitation process within the scope of the SA;
 - 6C, includes general information for the conditions which will apply to any contract entered into pursuant to the SA.

The Annexes include the Annex A - Purchase Description, Annex B - Technical Evaluation Matrix, and any other annexes.

1.2 Summary

1.2.1 Canada is seeking to establish Supply Arrangements (SAs) to procure:

GROUP 1A – Propane Engine Driven Forklift Truck, various configurations and ancillary items in accordance with Appendix A – CONFIGURATION GROUP 1A – Propane Engine Driven Forklift Truck

GROUP 1B – Diesel Engine Driven Forklift Truck, various configurations and ancillary items in accordance with Appendix B – CONFIGURATION GROUP 1B – Diesel Engine Driven Forklift Truck

GROUP 2A – Electric, 3-Wheels, Sit-down Rider Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 2A – Electric, 3-Wheels, Sit-down Rider Forklift Truck

GROUP 2B – Electric, 4-Wheels, Sit-down Rider Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 2B – Electric, Electric, 4-Wheels, Sit-down Rider Forklift Truck

GROUP 3A – Reach & Tiering, Stand Up Rider, Electric Motor Driven Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 3A – Reach & Tiering, Stand Up Rider, Electric Motor Driven Forklift Truck

GROUP 3B – Electric Stand-Up Rider, Counterbalance Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 3B – Electric Stand-Up Rider, Counterbalance Forklift Truck

GROUP 4A – Walkie Stacker, Straddle Type, Electric Motor Driven Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 4A – Walkie Stacker, Straddle Type, Electric Motor Driven Forklift Truck

GROUP 4B – Walkie Stacker, Straddle Type, Electric Motor Driven Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 4B – Walkie Stacker, Straddle Type, Electric Motor Driven Forklift Truck

GROUP 4C – Electric Walkie Stacker, Counterbalance Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 4C – Walkie Stacker, Electric Walkie Stacker, Counterbalance Forklift Truck.

GROUP 5 – Electric Motor Driven Stock-Picker Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 5 – Electric Motor Driven Stock-Picker Forklift Truck.

GROUP 6A – Electric Motor Driven, Swing Reach Forklift Truck With Elevating Operator Platform , various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 6A – Electric Motor Driven, Swing Reach Forklift Truck With Elevating Operator Platform.

GROUP 6B – Swing Mast, Operator-Down, Electric Motor Driven Forklift Truck, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 6B – Swing Mast, Operator-Down, Electric Motor Driven Forklift Truck.

GROUP 6C – Turret Mast, Operator-down, Electric Motor Driven Forklift Trucks, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 6C – Turret Mast, Operator-down, Electric Motor Driven Forklift Trucks.

GROUP 7A – Electric Walkie Pallet Jack, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 7A – Electric Walkie Pallet Jack.

GROUP 7B – Electric Pallet Jack with an Operator Platform, various configurations and ancillary items in accordance with Appendix C – CONFIGURATION GROUP 7B – Electric Pallet Jack with an Operator Platform.

Suppliers do not have to submit an arrangement for all groups. Suppliers do not have to submit an arrangement for all configurations in a group. Each configuration will be evaluated individually. Suppliers must however submit an arrangement for all options within the configuration for which an arrangement is submitted.

1.2.2 The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

1.2.3 The Request for Supply Arrangements (RFSA) is to establish supply arrangements for the delivery of the requirement detailed in the RFSA to the Identified Users across Canada, excluding locations within Yukon, Northwest Territories, Nunavut, Quebec, and Labrador that are subject to Comprehensive Land Claims Agreements (CLCAs). Any requirement for deliveries to locations within CLCAs areas within Yukon, Northwest Territories, Nunavut, Quebec, or Labrador will have to be treated as a separate procurement, outside of the resulting supply arrangements.

1.2.4 This RFSA allows suppliers to use the epost Connect service provided by Canada Post Corporation to transmit their arrangement electronically. Suppliers must refer to Part 2 of the RFSA entitled Supplier Instructions and Part 3 of the RFSA entitled Arrangement Preparation Instructions for further information on using this method.

1.3 Debriefings

Suppliers may request a debriefing on the results of the request for supply arrangements process. Suppliers should make the request to the Supply Arrangement Authority within 15 working days of receipt of the results of the request for supply arrangements process. The debriefing may be in writing, by telephone or in person.

1.4 Use of an e-Procurement Solution (EPS)

Canada is currently developing an online EPS for faster and more convenient ordering of goods and services. In support of the anticipated transition to this system and how it may impact any resulting Supply Arrangement that is issued under this solicitation, refer to 6.12 Transition to an e-Procurement Solution (EPS).

The Government of Canada's [press release](#) provides additional information.

PART 2 - SUPPLIER INSTRUCTIONS

2.1 Standard Instructions, Clauses and Conditions

All instructions, clauses and conditions identified in the Request for Supply Arrangements (RFSA) by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual> issued by Public Works and Government Services Canada.

Suppliers who submit an arrangement agree to be bound by the instructions, clauses and conditions of the RFSA and accept the clauses and conditions of the Supply Arrangement and resulting contract(s).

The [2008](#) (2020-05-28) Standard Instructions - Request for Supply Arrangements - Goods or Services, are incorporated by reference into and form part of the RFSA.

Subsection 5.4 of [2008](#), Standard Instructions - Request for Supply Arrangements - Goods or Services, is amended as follows:

Delete: 60 days

Insert: 90 days

2.2 Submission of Arrangements

Arrangements must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated in the RFSA.

Note: For suppliers choosing to submit using epost Connect for arrangements closing at the Bid Receiving Unit in the National Capital Region (NCR) the email address is:

tpsgc.dgareceptiondessoumissions-abbidreceiving.pwgsc@tpsgc-pwgsc.gc.ca

Note: Arrangements will not be accepted if emailed directly to this email address. This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions [2008](#), or to send arrangements through an epost Connect message if the bidder is using its own licensing agreement for epost Connect.

2.3 Evaluation Period

The evaluation of the arrangement submitted by suppliers will start upon their reception. Throughout the period of the RFSA, arrangement will be evaluated upon reception.

2.4 Federal Contractors Program for Employment Equity - Notification

The Federal Contractors Program (FCP) for employment equity requires that some contractors make a formal commitment to Employment and Social Development Canada (ESDC) - Labour to implement employment equity. In the event that this Supply Arrangement would lead to a contract subject to the Federal Contractors Program (FCP) for employment equity, the bid solicitation and resulting contract templates would include such specific requirements. Further information on the Federal Contractors Program (FCP) for employment equity can be found on [Employment and Social Development Canada \(ESDC\) - Labour's](#) website.

2.5 Enquiries - Request for Supply Arrangements

All enquiries must be submitted in writing to the Supply Arrangement Authority.

Suppliers should reference as accurately as possible the numbered item of the RFSA to which the enquiry relates. Care should be taken by Suppliers to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that Suppliers do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Suppliers. Enquiries not submitted in a form that can be distributed to all Suppliers may not be answered by Canada.

2.6 Applicable Laws

The Supply Arrangement (SA) and any contract awarded under the SA must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Suppliers may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of the arrangement, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Suppliers.

2.7 Bid Challenge and Recourse Mechanisms

- (a) Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- (b) Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's [Buy and Sell](#) website, under the heading "[Bid Challenge and Recourse Mechanisms](#)" contains information on potential complaint bodies such as:
 - Office of the Procurement Ombudsman (OPO)
 - Canadian International Trade Tribunal (CITT)
- (c) Suppliers should note that there are **strict deadlines** for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.

PART 3 - ARRANGEMENT PREPARATION INSTRUCTIONS

3.1 Arrangement Preparation Instructions

- If the Supplier chooses to submit its arrangement electronically, Canada requests that the Supplier submits its arrangement in accordance with section 08 of the 2008 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

The arrangement must be gathered per section and separated as follows:

Section I: Technical Arrangement
Section II: Certifications

- If the Supplier chooses to submit its arrangement in hard copies, Canada requests that the Supplier submits its arrangement in separately bound sections as follows:

Section I: Technical Arrangement (2 hard copies)
Section II: Certifications (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

If the Supplier is simultaneously providing copies of its arrangement using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy provided through epost Connect service, the wording of the electronic copy provided through epost Connect service will have priority over the wording of the other copies.

Canada requests that suppliers follow the format instructions described below in the preparation of hard copy of their arrangement:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the RFSA.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). To assist Canada in reaching its objectives, suppliers should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

Section I: Technical Arrangement

In the technical arrangement, Suppliers should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Suppliers do not have to submit an arrangement for all configurations. Each configuration will be evaluated individually.

Suppliers should submit, with their arrangement, the completed Annex B - Technical Evaluation Criteria for each configuration for which they are submitting an arrangement.

Appendix A1 – Technical Evaluation Matrix - Group 1A
Appendix B1 – Technical Evaluation Matrix - Group 1B
Appendix C1 – Technical Evaluation Matrix - Group 2A
Appendix D1 – Technical Evaluation Matrix - Group 2B
Appendix E1 – Technical Evaluation Matrix – Group 3A
Appendix F1 – Technical Evaluation Matrix - Group 3B
Appendix G1 – Technical Evaluation Matrix – Group 4A
Appendix H1 – Technical Evaluation Matrix – Group 4B
Appendix I1 – Technical Evaluation Matrix – Group 4C
Appendix J1 – Technical Evaluation Matrix – Group 5
Appendix K1 – Technical Evaluation Matrix – Group 6A
Appendix L1 – Technical Evaluation Matrix - Group 6B
Appendix M1 – Technical Evaluation Matrix – Group 6C
Appendix N1 – Technical Evaluation Matrix – Group 7A
Appendix O1 – Technical Evaluation Matrix – Group 7B

Suppliers may propose substitutes and alternatives where “or equivalent” is indicated in the technical requirement description (Purchase Description). Suppliers are encouraged to offer or suggest green solutions whenever possible.

1. Substitutes and alternatives that are equivalent in form, fit, function and performance will be considered for acceptance by the Technical Authority where the Supplier:
 - (a) Clearly identifies a substitute and/or an alternative;
 - (b) Designates the brand name, model and/or part number of the substitute and/or of the product, where applicable;
 - (c) States that the substitute product is fully interchangeable with the item specified in the technical requirement description;
 - (d) Provides complete specifications and brochures, where applicable;
 - (e) Provides compliance statements that include technical details showing the substitute and/or the alternative meet all technical requirements specified in the technical requirement description; and
 - (f) Clearly identifies those areas in the technical requirement description and in the brochures that support the substitute and/or the alternative compliance with the technical requirements.
2. Substitutes and alternatives offered as equivalent in form, fit, function and performance will not be considered for acceptance by the technical Authority if:
 - (a) The arrangement fails to provide all of the information requested to allow the Technical authority to fully evaluate the equivalency, or;
 - (b) The substitutes and/or the alternative fail to meet or fail to exceed the technical requirements specified in the technical requirement description.

Section II: Certifications

Suppliers must submit the certifications and additional information required under Part 5.

PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

4.1 Evaluation Procedures

- (a) Arrangements will be assessed in accordance with the entire requirement of the Request for Supply Arrangements including the technical.
- (b) An evaluation team composed of representatives of Canada will evaluate the arrangements.

4.1.1 Technical Evaluation

4.1.1.1 Mandatory Proof of Compliance

Suppliers must submit, with their arrangement, all proof of compliance required in the Purchase Description and the Technical Evaluation Matrix(s) for each configuration for which an arrangement is being submitted.

4.1.1.2 Substitutes and/or Alternatives

Suppliers proposing substitutes and/or alternatives must provide with their arrangement, all the information as detailed in Part 3, Section 1, - Substitutes and Alternatives to be considered for evaluation.

4.2 Basis of Selection

An arrangement must comply with the requirements of the Request for Supply Arrangements and meet all mandatory technical evaluation criteria to be declared responsive. All responsive arrangements will be recommended for issuance of a supply arrangement.

PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION

Suppliers must provide the required certifications and additional information to be issued a supply arrangement (SA).

The certifications provided by Suppliers to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare an arrangement non-responsive, or will declare a contractor in default if any certification made by the Supplier is found to be untrue whether made knowingly or unknowingly during the arrangement evaluation period, or during the period of any supply arrangement arising from this RFSA and any resulting contracts.

The Supply Arrangement Authority will have the right to ask for additional information to verify the Supplier's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Supply Arrangement Authority will render the arrangement non-responsive, or constitute a default under the Contract.

5.1 Certifications Required with the Arrangement

Suppliers must submit the following duly completed certifications as part of their arrangement.

5.1.1 Integrity Provisions - Declaration of Convicted Offences

In accordance with the Integrity Provisions of the Standard Instructions, all suppliers must provide with their arrangement, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

5.2 Certifications Precedent to the Issuance of a Supply Arrangement and Additional Information

The certifications and additional information listed below should be submitted with the arrangement, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Supply Arrangement Authority will inform the Supplier of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the arrangement non-responsive.

5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Supplier must provide the required documentation, as applicable, to be given further consideration in the procurement process.

5.2.2 Product Conformance

The Supplier certifies that all vehicles/equipment proposed conform, and will continue to conform throughout the duration of the SA and of any resulting contract, to all technical specifications of the purchase description(s).

This certification does not relieve the arrangement from meeting all mandatory technical evaluation criteria detailed in Part 4.

Supplier's authorized representative signature

Date

5.2.3 General Environmental Criteria Certification

The Supplier must select and complete one of the following two certification statements.

- A) The Supplier certifies that the Supplier is registered or meets ISO 14001.

Supplier's Authorized Representative Signature

Date

Or

- B) The Supplier certifies that the Supplier meets and will continue to meet throughout the duration of the contract, a minimum of four (4) out of six (6) criteria identified in the table below.

The Supplier must indicate which four (4) criteria, as a minimum, are met.

Green Practices within the Suppliers' organization	Insert a checkmark for each criterion that is met
Promotes a paperless environment through directives, procedures and/or programs	
All documents are printed double sided and in black and white for day to day business activity unless otherwise specified by your client	
Paper used for day to day business activity has a minimum of 30% recycled content and has a sustainable forestry management certification	
Utilizes environmentally preferable inks and purchase remanufactured ink cartridges or ink cartridges that can be returned to the manufacturer for reuse and recycling for day to day business activity.	
Recycling bins for paper, newsprint, plastic and aluminum containers available and emptied regularly in accordance with local recycling program.	
A minimum of 50% of office equipment has an energy efficient certification.	

Supplier's Authorized Representative Signature

Date

PART 6 - SUPPLY ARRANGEMENT AND RESULTING CONTRACT CLAUSES

A. SUPPLY ARRANGEMENT

6.1 Arrangement

The Supply Arrangement covers the Work described in the Purchase description at Annex A.

6.2 Security Requirements

There is no security requirement applicable to the Supply Arrangement.

6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Supply Arrangement and resulting contract(s) by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

6.3.1 General Conditions

2020 (2020-07-01) General Conditions - Supply Arrangement - Goods or Services, apply to and form part of the Supply Arrangement.

6.4 Term of Supply Arrangement

6.4.1 Period of the Supply Arrangement

The Supply Arrangement has no defined end-date and will remain valid until such time as Canada no longer considers it to be advantageous to use it.

The period for awarding contracts under the Supply Arrangement begins _____. *(To be inserted by PWGSC)*

6.4.2 Comprehensive Land Claims Agreements (CLCAs)

The Supply Arrangement (SA) is for the delivery of the requirement detailed in the SA to the Identified Users across Canada, excluding locations within Yukon, Northwest Territories, Nunavut, Quebec, and Labrador that are subject to Comprehensive Land Claims Agreements (CLCAs). Any requirement for deliveries to locations within CLCAs areas within Yukon, Northwest Territories, Nunavut, Quebec, or Labrador will have to be treated as a separate procurement, outside of the supply arrangement.

6.5 Authorities

6.5.1 Supply Arrangement Authority

The Supply Arrangement Authority is:

Daniel Martial
Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch – HS Division
140 O'Connor St
Ottawa, ON K1A 0R5

Telephone: 613-296-7559

E-mail address: Daniel.Martial@tpsgc-pwgsc.gc.ca

The Supply Arrangement Authority is responsible for the issuance of the Supply Arrangement, its administration and its revision, if applicable.

6.5.2 Technical Authority

The Technical Authority for the SA is:

Name: *(to be inserted by PWGSC)*

Title: _____

Organization: _____

Telephone: _____

E-mail: _____

The Technical Authority is responsible for all matters concerning the technical content of the Purchase Description(s) under the SA. Technical matters may be discussed with the Technical Authority, however the Technical Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a SA amendment issued by the Supply Arrangement Authority.

6.5.3 Supplier's Representative *(To be completed by supplier)*

Name: _____

Title: _____

Telephone No: _____

E-mail address: _____

6.6 Identified Users

The Identified Users include any government department, agency or Crown Corporation listed in Schedules I, I.1, II, III, of the [Financial Administration Act](#), R.S.C., 1985, c. F-11.

6.7 On-going Opportunity for Qualification

A Notice will be issued on the Government Electronic Tendering Service (GETS) for the duration of the RFSA to allow new Suppliers to become qualified. Existing qualified Suppliers, who have been issued a supply arrangement, will not be required to submit a new arrangement.

6.8 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the articles of the Supply Arrangement;
- (b) the general conditions 2020 (2020-07-01), General Conditions - Supply Arrangement - Goods or Services
- (c) Annex A, Purchase Description;
- (d) the Supplier's arrangement dated _____ *(to be inserted by PWGSC)*, as amended *(to be inserted by PWGSC)*_____.

6.9 Certifications and Additional Information

6.9.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Supplier in its arrangement or precedent to issuance of the Supply Arrangement (SA), and the ongoing cooperation in providing additional information are conditions of issuance of the SA and failure to comply will

constitute the Supplier in default. Certifications are subject to verification by Canada during the entire period of the SA and of any resulting contract that would continue beyond the period of the SA.

6.10 Applicable Laws

The Supply Arrangement (SA) and any contract resulting from the SA must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

6.11 Supply Arrangement Reporting

The Supplier must compile and maintain records on its provision of goods to the federal government under contracts resulting from the Supply Arrangement. This data must include all purchases, including those paid for by a Government of Canada Acquisition Card.

The Supplier must provide this data, in electronic format (Excel spreadsheet format), in accordance with the reporting requirements detailed below. If some data is not available, the reason must be indicated. If no goods are provided during a given period, the Supplier must still provide a "NIL" report.

The data must be submitted on a quarterly basis to the Supply Arrangement Authority.

The quarterly reporting periods are defined as follows:

- 1st quarter: April 1 to June 30;
- 2nd quarter: July 1 to September 30;
- 3rd quarter: October 1 to December 31;
- 4th quarter: January 1 to March 31.

The reporting requirements includes:

- 1a. Supply Arrangement Number;
- 1b. Supply Arrangement Title;
- 1c. Authorized Users
- 1d. Contract number
- 1e. Invoice date and number
- 1f. Delivery Location
- 1g. Reporting Period (Quarter and Per Fiscal Year);
- 1h. Total Number of Orders and associated value (Applicable taxes included) for the Reporting Period (Quarter);
- 1i. Total Number of Orders and associated value (Applicable taxes included) (Per Fiscal Year);
- 1j. Total Number of Orders and associated value (Applicable taxes included) (For the duration of the Supply Arrangement)

- 2a. Group and configuration number/letter;
- 2b. Total Number of group and configuration ordered (Per Quarter and Per Fiscal Year);
- 2c. Total Number of detailed ancillary items per group and configuration ordered (Per Quarter and Per Fiscal Year);
- 2d. Total Number of group and configuration ordered (Per Identified user);
- 2e. Total Number of detailed ancillary items per group and configuration ordered (Per Identified user);

The data must be submitted to the Supply Arrangement Authority no later than fifteen (15) calendar days after the end of the reporting period.

6.12 Technical Changes, Substitutes and Alternatives

Any technical changes, substitutes and alternatives proposed by the Supplier must be evaluated for acceptance by the Technical Authority. Any substitutes and alternatives must be equivalent in form, fit, function, quality and performance to what is being replaced and must be at no additional cost to Canada. Substitutes and alternatives that are offered as equivalent will only be acceptable once they are approved by the Technical Authority as an equivalent. A Supply Arrangement amendment will be issued.

Should the Technical Authority not accept the substitute or the alternative and the Supplier is unable to meet the technical requirement, Canada may terminate the Supply arrangement in accordance with the general conditions stated in the Request for Supply Arrangement.

6.13 Substitute Model

In the event that a model is discontinued, the Supplier must notify the Supply Arrangement Authority. The Supplier can offer, through the Supply Arrangement Authority, a substitute model for acceptance. The substitute model must meet all the technical requirements of the Purchase Description. An administrative revision will be done in the Supply Arrangement to reflect the change in model.

6.14 Meeting after issuance of Supply Arrangement

Within ten (10) calendar days from the effective date of the SA, the Supplier must contact the Supply Arrangement Authority to determine if a meeting is required. A meeting will be convened at Canada's discretion. The Supplier shall be responsible for the preparation and distribution of the minutes of meeting within five (5) calendar days after the meeting has been held. The meeting will be held at the Supplier's facilities or at the Supply Arrangement Authority's facility or via teleconference, at Canada's discretion at no additional cost to Canada.

6.15 Transition to an e-Procurement Solution (EPS)

During the period of the Supply Arrangement, Canada may transition to an EPS for more efficient processing and management of individual contracts for any or all of the SA's applicable goods and services. Canada reserves the right, at its sole discretion, to make the use of the new e-procurement solution mandatory.

Canada agrees to provide the Supplier with at least a three-month notice to allow for any measures necessary for the integration of the Supply Arrangement into the EPS. The notice will include a detailed information package indicating the requirements, as well as any applicable guidance and support.

If the Supplier chooses not to provide the supply arrangement of their goods or services through the e-procurement solution, the Supply Arrangement may be set aside by Canada.

B. BID SOLICITATION

6.1 Bid Solicitation Documents

Canada will use the bid solicitation template at Annex "P". The latest versions of the template and terms and conditions will be used at time of bid solicitation. A copy is available by contacting the Supply Arrangement Authority specified in Part 6A section 6.5 Authorities.

6.2 Bid Solicitation Process

6.2.1 Bids will be solicited for specific requirements within the scope of the Supply Arrangement (SA) from Suppliers who have been issued a SA.

6.2.2 The bid solicitation will be sent directly to Suppliers. The bid solicitation period will be for a minimum of five (5) calendar days.

6.2.3 The identified users of the SA will be responsible for the bid solicitation process and the award of individual contracts for requirements not exceeding \$400K (including applicable taxes). PWGSC will be responsible for the bid solicitation process and award of individual contracts exceeding \$400K (including applicable taxes).

- 6.2.4** The following forms must be used for the first page of the bid solicitation document and the first page of the resulting contract document. These forms are available on the Electronic Forms Catalogues (http://publiservice-app.tpsgc-pwgsc.gc.ca/forms/text/search_for_forms-e.html) website.

PWGSC-TPSGC 9400-3, Bid Solicitation
PWGSC-TPSGC 9400-4, Contract

C. RESULTING CONTRACT CLAUSES

6.1 General

The conditions of any contract awarded under the Supply Arrangement will be in accordance with the resulting contract clauses of the template used for the bid solicitation.

For any contract to be awarded using the template, general conditions 2010A will apply to the resulting contract.

The latest versions of the template and terms and conditions will be used at time of bid solicitation. A copy is available by contacting the Supply Arrangement Authority specified in Part 6A section 6.5 Authorities.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 1A

**Purchase Description for
Propane Engine Driven Forklift Truck**

Date: 06 October, 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense



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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for propane (LPG) engine powered, 4-wheel, counterbalance, sit down rider type forklift trucks with features and accessories.

1.2. **Instructions**

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification;
- b) Requirements that are identified by the word “**must**”, **must** be treated as mandatory. Deviations will not be permitted;
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part;
- d) Where “**must**” or “will” are not used, the information provided is for guidance only;
- e) Where a standard is specified and the Contractor has offered an **Equivalent**, that **Equivalent** standard **must** be supplied by the Contractor;
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an **Equivalent must** be supplied, when requested by the **Technical Authority**;
- g) While the International System of Units (SI) **must** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact; and
- h) Dimensions stated as nominal **must** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- (a) “**Provided**” means “provided and installed”;
- (b) “**Technical Authority**” means the official responsible for the technical content of this requirement;
- (c) “**Equivalent**” means a standard, means, or component type that the **Technical Authority** has approved for this requirement as meeting the specified requirements for fit, form, function and performance; and
- (d) “**Commercially Equipped**” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.

2. APPLICABLE DOCUMENTS

2.1 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.1.1 SAE Standards

SAE World Headquarters
400 Commonwealth Drive
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.1.2 CSA B335

Safety Standards for Lift Trucks
Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.3 UL 558

Standard for Industrial Trucks, Internal Combustion Engine-Powered
Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4 Canada Occupational Health and Safety Regulations

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/index.html>

2.1.5 CAN/CSA Z107.56-13

Measurement of Noise Exposure
Canadian Standards Association
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.6 Hazardous Products Act

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

2.1.7 ANSI B56.1

Safety Standards for Low Lift and High Lift Trucks
American National Standards Institute
1899 L Street, NW, 11th Floor
Washington, DC, 20036
<http://www.ansi.org/>

2.1.8 **ISO 5353**

Earth-moving machinery, and tractors and machinery for agriculture
and forestry – Seat index point

International Organisation for Standardisation

ISO Central Secrétariat

1, ch. de la Voie-Creuse

CP 56

CH 1211 Geneva 20

Switzerland

<http://www.iso.org/iso/home.htm>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle **must** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle **must** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle **must** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle **must** start and operate under weather conditions found in Canada in temperatures ranging from -40°C to 40°C (-40°F to 104°F).
- 3.2.2. **Terrain** - The vehicle **must** operate on use-roughened concrete floors, deteriorated outdoor paved surfaces and packed gravel with potholes while being used for stacking and un-stacking and moving general supplies in and around warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels **must** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects **must** be in accordance with the latest edition of ANSI/ITDSF B56.6.
- 3.3.3. **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"E" Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 558, or an ***Equivalent***.

3.3.5. **“LPS” Safety Rating Feature**

- (a) The vehicle **must** be manufactured to meet the requirements of an “LPS” safety rating in accordance with Standard UL 558, or an **Equivalent**, in lieu of the “LP” safety rating (paragraph 3.3.4); and
- (b) A certification label confirming the vehicle meets the “LPS” safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** – The vehicle **must** be a sit down rider type forklift.

3.4.1. **Forklift Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A) at the load centre of that given as “**LOAD CENTRE**” in the A1- Data Table (Appendix A);
- (b) The load capacity **must** not de-rate to below specified load capacity before reaching a load lift height of 3,810 mm(150 inches);
- (c) The vehicle **must** have a lift height of at least that given as “**STANDARD MAST - LIFT HEIGHT**” in A.1 - Data Table (Appendix A), measured from the floor to the top of the forks with the mast in an extended vertical position; and
- (d) The vehicle, with the mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**STANDARD MAST – VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

3.5. **Equipment**

- (a) **Standard Mast**
 - i. The vehicle **must** be provided with a see-through telescopic mast; and
 - ii. The standard mast **must** have full free lift.
- (b) **Forks**
 - i. The vehicle **must** be provided with standard forks having a nominal length of either 1,016 mm (40 inches) or 1,066 mm (42 inches); and
 - ii. Forks with nominal lengths of 914 mm (36 inches) or 1,219 mm (48 inches) **must** be provided, in lieu of the standard forks, when required.
- (c) **Load Backrest** - The load backrest **must** have a nominal height of 1,219 mm (48 inches);
- (d) **Mast Tilt** – The vehicle **must** be provided with a power mechanism that tilts the mast fore and aft of vertical; and
- (e) **Fire Extinguisher**
 - i. Internal combustion vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - ii. The fire extinguisher **must** be readily accessible to the operator; and

-
- iii. The fire extinguisher **must** not interfere with the operation of the vehicle or the view of the operator.

3.5.1. **Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:

(a) **Mast no. 2**

- i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in A.1 - Data Table (Appendix A);
- iii. The vehicle, with the mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in A.1 - Data Table (Appendix A); and
- iv. Mast no. 2 **must** have full free lift.

(b) **Mast no. 3**

- i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in A.1 - Data Table (Appendix A);
- iii. The vehicle, with the mast no.3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in A.1 - Data Table (Appendix A); and
- iv. Mast no. 3 **must** have full free lift.

(c) **Mast no. 4**

- i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 4 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A).
- iii. The vehicle, with the mast no.4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in A.1 - Data Table (Appendix A); and
- iv. Mast no. 4 **must** have full free lift.

(d) **Lift Accumulator** – The mast **must** be provided with a system to absorb impact loads from tracks, potholes and other obstacles;

(e) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side;

-
- (f) **Fork Positioning Side Shifter**
- i. The vehicle **must** be provided with an integrated fork-positioning side shifter;
 - ii. The fork-positioning attachment **must** increase/decrease the spacing between the unloaded forks; and
 - iii. The side shifter **must** be capable of side shifting fully loaded forks simultaneously to either side to that given described in section 3.5.1(e) above.
- (g) **54-inch Forks** – The vehicle **must** be provided with forks having a nominal length of 1,372 mm (54 inches), in lieu of standard forks (paragraph 3.5 (b));
- (h) **60-inch Forks** – The vehicle **must** be provided with forks having a nominal length of 1,524 mm (60 inches), in lieu of standard forks (paragraph 3.5 (b));
- (i) **Fork Tine Position Guide**
- i. The vehicle **must** be provided with a fork tine position guide;
 - ii. The fork tine position guide **must** be permanently attached to the backrest;
 - iii. The fork tine position guide **must** use a laser to create a line that shows the level of the top of the fork tines;
 - iv. The fork tine position guide **must** be connected to the vehicle electrical system;
 - v. The fork tine position guide **must** automatically turn off when the vehicle is turned off; and
 - vi. The fork tine position guide **must** automatically turn off when the forks are within 2,130 mm (84 inches) of ground level.
- (j) **Rotating Fork Attachment**
- i. The vehicle **must** be provided with a rotating fork attachment;
 - ii. The rotating fork attachment **must** have hydraulically controlled function to rotate the forks to full 360-degree on both sides of the fork assembly;
 - iii. The fork rotating fork attachment **must** have hydraulic side shifting function described in section 3.5.1(f) above;
 - iv. The rotating fork attachment **must** be provided with a cylinder and side-shifter protection mechanism; and
 - v. The fork rotating fork attachment **must** meet the load capacity and lift criteria specified in Appendix A – A.1: Data Table.

3.6. **Operator Station**

- (a) **Overhead Guard**
- i. The vehicle **must** be provided with a driver's overhead guard with wire mesh or **Equivalent** mounted to protect operator; and

-
- ii. The height from the seat point index to the underside of the overhead guard **must** be at least 890 mm (35 inches) in accordance with the recommendation in ANSI B56.1 when measured in accordance with ISO 5353.
 - (b) **Seat** – The vehicle **must** be provided with a padded operator's seat and backrest, provided with seat belts; and
 - (c) **Mirrors** – The vehicle **must** be provided with rear view mirrors providing a full view for safe reverse operations.
- 3.6.1. **Operator Station Features and Accessories** – When requested, The following accessories and features **must** be provided:
- (a) **Cab**
 - i. The vehicle **must** be provided with a fully enclosed weatherproof and insulated cab;
 - ii. The height from the seat point index to the underside of the cab roof **must** be at least 890 mm (35 inches) in accordance with the recommendation in ANSI B56.1 when measured in accordance with ISO 5353;
 - iii. The cab **must** be provided with a heating system with ventilation and defrosting systems capable of keeping windows free from frost and moisture;
 - iv. The cab **must** be provided with safety glass in the windows;
 - v. It is preferred the glass be tinted to reduce solar heating load;
 - vi. The cab **must** be provided with windshield wipers, including a windshield washer for each wiper; and
 - vii. The cab **must** offer overhead load visibility during storage and retrieval operations.
 - (b) **Suspension Seat**
 - i. The vehicle **must** be provided with a padded full suspension seat and backrest;
 - ii. It is preferred that the seat be cloth covered;
 - iii. The seat **must** be provided with seat belts conforming, as a minimum, to SAE J386; and
 - iv. The seat **must** be provided with fore/aft and vertical adjustment without the operator having to move from a seated position.
- 3.7. **Chassis** - The vehicle **must** be provided with a commercially equipped chassis system.
- 3.8. **Engine** - The vehicle **must** be provided with a LPG engine.
- 3.8.1. **Engine Components** – The vehicle **must** be provided with a catalytic converter and closed loop control system for reduction of emissions.

3.8.2. **LPG Fuel Tank**

- (a) The vehicle **must** be provided with a LPG fuel tank mounted on the vehicle. It is preferable to have the tank mounted horizontally;
- (b) The fuel tank **must** have a safety guard with quick release clamps and quick connect couplings; and
- (c) Each vehicle **must** be provided with one spare tank.

3.8.3. **Engine Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:

(a) **Tank Lift Device**

- i. The vehicle **must** be provided with a tank lift device that reduces the effort required to remove and replace the propane tank; and
- ii. The tank lift device **must** lower the tank into a convenient position for exchange.

3.9. **Transmission** - The transmission **must** be provided with a commercially equipped transmission system for a propane forklift of this type and size.

3.10. **Brake System** - The braking system **must** conform to CSA B335, or an ***Equivalent***.

3.11. **Steering** - The vehicle **must** be provided with a commercially equipped steering system.

3.12. **Tires and Wheels**

- (a) The vehicle **must** be provided with industrial high-pressure pneumatic tube type tires with non-directional treads; and
- (b) The vehicle **must** be provided with single load wheels.

3.12.1. **Tire Features and Accessories** - The following accessories and features **must** be provided, when requested:

(a) **Dual Load Wheels - Pneumatic**

- i. The vehicle **must** be provided with dual load wheels, in lieu of the wheels specified in paragraph 3.12; and
- ii. Tires **must** be industrial pneumatic tires having non-directional treads.

(b) **Single Load Wheels - Solid**

- i. The vehicle **must** be provided with single load wheels, in lieu of the wheels specified in paragraph 3.12; and
- ii. Tires **must** be soft ride solid pneumatic profile tires with non-directional treads.

(c) **Dual Load Wheels - Solid**

- i. The vehicle **must** be provided with dual load wheels, in lieu of the wheels specified in paragraph 3.12; and
- ii. Tires **must** be soft ride solid pneumatic profile tires with non-directional treads.

(d) **Single Load Wheels – Snow and Mud**

-
- i. The vehicle **must** be provided with single load wheels, in lieu of the wheels specified in paragraph 3.12; and
 - ii. Tires **must** have a snow and mud or aggressive tread pattern.
 - (e) **Dual Load Wheels – Snow and Mud**
 - i. The vehicle **must** be provided with dual load wheels, in lieu of the wheels specified in paragraph 3.12; and
 - ii. Tires **must** have a mud and snow or aggressive tread pattern.
 - 3.13. **Controls** - The vehicle **must** be provided with a safety device ensuring that the engine can only be started with the transmission in a neutral position.
 - 3.14. **Instruments** - The instruments **must** be provided with an hour-meter, which displays accumulated running time up to 9,999 hours.
 - 3.14.1. **Instruments Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
 - (a) **Weigh Scale**
 - i. The vehicle **must** be provided with a weigh scale with 2 percent accuracy at forklift capacity; and
 - ii. The weigh scale **must** be provided with a digital readout with zeroing capability.
 - 3.15. **Electrical System**
 - (a) The vehicle **must** be provided with a readily accessible driver-operated warning horn; and
 - (b) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in backup mode.
 - 3.16. **Lighting**
 - (a) **Floodlights**
 - i. The vehicle **must** be provided with floodlights that allow for forklift operations at night;
 - ii. The floodlights **must** provide sufficient lighting for the operator to see the load and fork tips in all positions; and
 - iii. The vehicle **must** be provided with at least one adjustable floodlight.
 - (b) **Flashing Beacon**
 - i. The vehicle **must** be provided with a red flashing beacon light mounted on the rear of the vehicle; and
 - ii. The beacon **must** be activated when the vehicle travels in reverse.
 - 3.16.1. **Lighting Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
 - (a) **Signal Lights** – The vehicle **must** be provided with headlights, adjustable work lights at the front and rear, stoplights and turn signals; and
 - (b) **Additional Working Lights** – The vehicle **must** be provided with at least 2 additional working lights on the front.
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- 3.17. **Hydraulic System** - The vehicle **must** be provided with a hydraulic system that supports the operation of all hydraulic components.
- 3.18. **Lubricants and Hydraulic Fluids**
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint** - The vehicle **must** be painted using commercial colour having a high-durability, corrosion-resistant type coating.
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note;
 - (e) Propane fuel tanks **must** be shipped empty; and
 - (f) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.
- ,

4. **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii The operator manuals **must** be supplied in a bilingual format as a package;
- iv Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v Digital copies **must** be supplied on a CD or DVD;
- vi Digital copies **must** be supplied in a searchable PDF format;
- vii The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii Manual approval or comments will be supplied within 15 working days of receipt;
- ix The Contractor must supply responses to the Technical Authority's (TA) comments.
- x Manuals will not be returned; and
- xi Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;

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- iii One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv Photographs **must** have a plain background;
 - v Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi Photographs **must** have a resolution of at least eight (8) Mega pixels.

(c) **Data Summary**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
- ii The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
- iii The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
- iv Data summary approval or comments will be supplied within 15 working days of receipt; and
- v The Contractor **must** supply responses to the **Technical Authority's** comments.

(d) **Safety Data Sheets**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
- ii If there are no hazardous materials used, this **must** be stated on the list; and
- iii The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list

(e) **Warranty Letter**

- i The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
- ii The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;

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- iii The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- (f) **Initial Parts Kit List**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii A complete change of all filters and filter elements **must** be included in the list; and
 - iii The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i The Contractor **must** supply a set of safety data sheets; and
 - ii The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i One (1) initial parts kit **must** be supplied; and
 - ii The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required

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- for the maintenance and repair of the vehicle, features and accessories; and
 - ii The Contractor may supply this deliverable as a bilingual package
 - (f) **Parts Manual**
 - i The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii The parts manual **must** be supplied in English in paper and digital format;
 - iii It is desirable to supply the parts manual in French in addition to the English version; and
 - iv Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
 - (g) **Keys** – The vehicle **must** be provided with two (2) sets of keys.

4.2 **Training**

- (a) **Training – Familiarization**
 - i The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
 - ii The instructor **must** be an OEM Factory Certified Training Provider;
 - iii The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
 - iv **Curriculum**
 1. The familiarization course **must** include operation and maintenance segments;
 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).

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- v The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
 - vi The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
 - vii The date for the familiarization course **must** be arranged with the **Technical Authority**;
 - viii After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
 - ix The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii The instructor **must** be an OEM Factory Certified Training Provider;
- iii The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training
- iv The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
- v The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
- vi The troubleshooting course **must** be supplied at the delivery destination;
- vii The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
- viii After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
- ix The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1. Data Table

The following table shows required performance and dimensions for each Configuration with paragraph references that ***must*** be provided.

			CONFIGURATION						
CHARACTERISTIC		PARAGRAPH	UNITS	A	B	C	D	E	F
LIFT CAPACITY		3.4.1 (a)	kg	1,805	2,260	2,715	3,170	3,625	4,536
			lbs	4,000	5,000	6,000	7,000	8,000	10,000
LOAD CENTRE			mm	610	610	610	610	610	610
			inches	24	24	24	24	24	24
STANDARD MAST – LIFT HEIGHT		3.4.1 (c)	mm	4,720	4,720	4,720	4,720	4,670	4,670
			inches	186	186	186	186	184	184
STANDARD MAST – VEHICLE HEIGHT		3.4.1 (d)	mm	2,290	2,290	2,290	2,340	2,365	2,365
			inches	90	90	90	92	93	93
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	3,810	3,810	3,810	3,810	3,695	3,695
			inches	150	150	150	150	145.5	145.5
	VEHICLE HEIGHT		mm	2,140	2,140	2,140	2,140	2,365	2,365
			inches	84	84	84	84	93	93
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	5,330	5,330	5,330	5,205	5,155	5,155
			inches	210	210	210	205	203	203
	VEHICLE HEIGHT		mm	2,795	2,795	2,795	2,795	2,495	2,495
			inches	110	110	110	110	98	98
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	5,940	5,940	5,940	5,660	5,500	5,500
			inches	234	234	234	223	216.5	216.5
	VEHICLE HEIGHT		mm	2,925	2,925	2,925	2,925	2,795	2,795
			inches	115	115	115	115	110	110

A.2. Feature and Accessory Table

The following table indicates, with "**X**", for each configuration the accessories, attachments and features that **must** be provided when specified in the solicitation, with a clause reference.

DESCRIPTION	PARAGRAPH	Configuration					
		A	B	C	D	E	F
"LPS" Safety Rating Feature	3.3.5	X	X	X	X	X	X
Fire Extinguisher	3.5 (e)	X	X	X	X	X	X
Mast no. 2	3.5.1 (a)	X	X	X	X	X	X
Mast no. 3	3.5.1 (b)	X	X	X	X	X	X
Mast no. 4	3.5.1 (c)	X	X	X	X	X	X
Lift Accumulator	3.5.1 (d)	X	X	X	X	X	X
Side Shifter	3.5.1 (e)	X	X	X	X	X	X
Fork Positioning Side Shifter	3.5.1 (f)	X	X	X	X	X	X
54-inch Forks	3.5.1 (g)	X	X	X	X	X	X
60-inch Forks	3.5.1 (h)	X	X	X	X	X	X
Fork Tine Position Guide	3.5.1 (i)	X	X	X	X	X	X
Rotating Fork Attachment	3.5.1 (j)	X	X	-	-	-	-
Cab	3.6.1 (a)	X	X	X	X	X	X
Suspension Seat	3.6.1 (b)	X	X	X	X	X	X
Tank Lift Device	3.8.3 (a)	X	X	X	X	X	X
Dual Load Wheels – Pneumatic	3.12.1 (a)	X	X	X	X	X	X
Single Load Wheels – Solid	3.12.1 (b)	X	X	X	X	X	X
Dual Load Wheels – Solid	3.12.1 (c)	X	X	X	X	X	X
Single Load Wheels – Snow and Mud	3.12.1 (d)	X	X	X	X	X	X
Dual Load Wheels – Snow and Mud	3.12.1 (e)	X	X	X	X	X	X
Weigh Scale	3.14.1 (a)	X	X	X	X	X	X
Signal Lights	3.16.1 (a)	X	X	X	X	X	X
Additional Working Lights	3.16.1 (b)	X	X	X	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X	X	X	X
Training – Familiarization	4.2 (a)	X	X	X	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA FOR GROUP 1A: PROPANE ENGINE DRIVEN FORKLIFT TRUCK

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?*** YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

NOTE: Substantial Information must be provided for all items offered as a substitute or alternative.

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model/Year Introduced	document	Config A: Config B: Config C: Config D: Config E: Config F:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.6	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C: Config D: Config E: Config F:
3.3.5 (a)	U The vehicle <i>must</i> be manufactured to meet the requirements of an “LPS” safety rating in accordance with Standard UL 558, or an <i>Equivalent</i> , in lieu of the	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C: Config D: Config E: Config F:



TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	"LP" safety rating (paragraph 3.3.4)			
3.4.1(a)	The vehicle, with the standard mast and no accessories, must have a load capacity of at least that given as " LIFT CAPACITY " in the A.1 - Data Table (Appendix A) at the load centre of that given as " LOAD CENTRE " in the A1- Data Table (Appendix A)	Capacity/load center	lbs/inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.4.1(c)	The vehicle must have a lift height of at least that given as " STANDARD MAST - LIFT HEIGHT " in A.1 - Data Table (Appendix A), measured from the floor to the top of the forks with the mast in an extended vertical position	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.4.1(d)	The vehicle, with the mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " STANDARD MAST – VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A)	vehicle height	inch	Config A: Config B: Config C: Config D: Config E: Config F:

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.5.1(a)-ii	Mast no. 2 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 2 ” – “ LIFT HEIGHT ” in A.1 - Data Table (Appendix A)	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1(a)-iii	The vehicle, with the mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 2 ” – “ VEHICLE HEIGHT ” in A.1 - Data Table (Appendix A)	vehicle height	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1(b)-ii	Mast no. 3 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 3 ” – “ LIFT HEIGHT ” in A.1 - Data Table (Appendix A)	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1(b)-iii	The vehicle, with the mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that	vehicle height	inch	Config A: Config B: Config C: Config D:

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	given as “ MAST 3 ” – “ VEHICLE HEIGHT ” in A.1 - Data Table (Appendix A)			Config E: Config F:
3.5.1(c)-ii	Mast no. 4 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 4 ” – “ LIFT HEIGHT ” in A.1 - Data Table (Appendix A) and in A.1 - Data Table (Appendix A)	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1(c)-iii	The vehicle, with the mast no. 4 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 4 ” – “ VEHICLE HEIGHT ”	vehicle height	inch	Config A: Config B: Config C: Config D: Config E: Config F:

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.5.1(e)	The vehicle must be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side	Side shift	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1(f)	The vehicle must be provided with an integrated fork-positioning side shifter. The fork-positioning attachment must increase/decrease the spacing between the unloaded forks	Side shift	document	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1(j)	The vehicle must be provided with a rotating fork attachment; The fork rotating fork attachment must meet the load capacity and lift criteria specified in Appendix A – A.1: Data Table.	attachment	document/ lbs	Config A: Config B:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria:

- (a) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 1B

**Purchase Description for
Diesel Engine Driven Forklift Truck**

Date: 24 November 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense

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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for diesel engine powered, 4-wheel, counterbalance, sit-down rider type forklift trucks with features and accessories.

1.2. **Instructions**

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- b) Requirements that are identified by the word “***must***”, ***must*** be treated as mandatory. Deviations will not be permitted.
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- d) Where “***must***” or “will” are not used, the information provided is for guidance only.
- e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***Equivalent*** standard ***must*** be supplied by the Contractor.
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an ***Equivalent must*** be supplied, when requested by the ***Technical Authority***.
- g) While the International System of Units (SI) ***must*** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- a) “***Provided***” ***must*** means “provided and installed”.
- b) “***Technical Authority***” - The government official responsible for technical content of this requirement.
- c) “***Equivalent***” - A standard, means, or component type, which has been accepted by the ***Technical Authority*** as meeting the specified requirements for form, function and performance.
- d) “***Commercially Equipped***” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.
- e) “***Bilingual***” means both official languages: English and French.

2. **APPLICABLE DOCUMENTS** –

- 2.1. **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.1.1. **SAE Standards**

SAE World Headquarters
400 Commonwealth Dr.,
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.1.2. **CSA B335**

Safety Standards for Lift Trucks
Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.3. **UL 558**

Standard for Industrial Trucks, Internal Combustion Engine-Powered
Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4. **Canada Occupational Health and Safety Regulations**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/index.html>

2.1.5. **CAN/CSA Z107.56-13**

Measurement of Noise Exposure
Canadian Standards Association
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.6. **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

2.1.7. **ANSI B56.1**

Safety Standards for Low Lift and High Lift Trucks
American National Standards Institute

1899 L Street, NW, 11th Floor
Washington, DC, 20036

<http://www.ansi.org/>

2.1.8. **ISO 5353**

Earth-moving machinery, and tractors and machinery for agriculture
and forestry – Seat index point

International Organisation for Standardisation

ISO Central Secrétariat

1, ch. de la Voie-Creuse

CP 56

CH 1211 Geneva 20

Switzerland

<http://www.iso.org/iso/home.htm>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle ***must*** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle ***must*** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle ***must*** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle ***must*** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle ***must*** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle ***must*** start and operate under weather conditions found in Canada in temperatures ranging from -40°C to 40°C (-40°F to 104°F).
- 3.2.2. **Terrain** - The vehicle ***must*** operate on use-roughened concrete floors, deteriorated outdoor paved surfaces and packed gravel with potholes while being used for stacking and un-stacking and moving general supplies in and around warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels ***must*** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects ***must*** be in accordance with the latest edition of ANSI/ITDSF B56.6.
- 3.3.3. **Hazardous Materials** – The Contractor ***must*** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"D" Safety Rating** - The vehicle ***must*** be manufactured to meet the requirements of an "D" safety rating in accordance with Standard UL 558, or an ***Equivalent***.

3.3.5. **“DS” Safety Rating Feature**

- (a) The vehicle **must** be manufactured to meet the requirements of an “DS” safety rating in accordance with Standard UL 558, or an **Equivalent**, in lieu of the “D” safety rating (paragraph 3.3.4); and
- (b) A certification label confirming the vehicle meets the “DS” safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** – The vehicle **must** be a sit down rider type forklift.

3.4.1. **Forklift Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A) at the load centre of that given as “**LOAD CENTRE**” in the A.1 - Data Table (Appendix A);
- (b) The load capacity **must** not de-rate to below specified load capacity before reaching a load lift height of 3,810 mm (150 inches);
- (c) The vehicle **must** have a lift height of at least that given as “**STANDARD MAST - LIFT HEIGHT**” in the A.1 - Data Table (Appendix A), measured from the floor to the top surface of the forks in the full-up position; and
- (d) The vehicle, with the mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**STANDARD MAST – VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

3.5. **Equipment**

- (a) **Standard Mast**
 - i. The vehicle **must** be provided with a see-through telescopic mast; and
 - ii. The standard mast **must** have full free lift.
- (b) **Forks**
 - i. The vehicle **must** be provided with standard forks having a nominal length of either 1,016 mm (40 inches) or 1,066 mm (42 inches); and
 - ii. Forks with nominal lengths of 914 mm (36 inches) or 1,219 mm (48 inches) **must** be provided, in lieu of the standard forks, when required.
- (c) **Load Backrest** - The backrest **must** have a nominal height of 1,219 mm (48 inches);
- (d) **Mast Tilt** – The vehicle **must** be provided with a power mechanism that tilts the mast fore and aft of vertical; and
- (e) **Fire Extinguisher**
 - i. Internal combustion vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - ii. The fire extinguisher **must** be readily accessible to the operator; and
 - iii. The fire extinguisher **must** not interfere with the operation of the vehicle or the view of the operator.

3.5.1. **Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:

(a) **Mast no. 2**

- i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in A.1 - Data Table (Appendix A);
- iii. The vehicle, with the mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in A.1 - Data Table (Appendix A); and
- iv. Mast no. 2 **must** have full free lift.

(b) **Mast no. 3**

- i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in A.1 - Data Table (Appendix A);
- iii. The vehicle, with the mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in A.1 - Data Table (Appendix A); and
- iv. Mast no. 3 **must** have full free lift.

(c) **Mast no. 4**

- i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 4 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in A.1 - Data Table (Appendix A);
- iii. The vehicle, with the mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in A.1 - Data Table (Appendix A); and
- iv. Mast no. 4 **must** have full free lift.

(d) **Lift Accumulator** – The mast **must** be provided with a system to absorb impact loads from tracks, potholes and other obstacles;

(e) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side;

(f) **Fork Positioning Side Shifter**

- i. The vehicle **must** be provided with a fork-positioning side shifter;

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- ii. The fork-positioning attachment **must** increase/decrease the spacing between the unloaded forks; and
 - iii. The side shifter **must** be capable of side shifting fully loaded forks simultaneously to either side.
 - (g) **54-inch Forks** – The vehicle **must** be provided with forks having a nominal length of 1,372 mm (54 inches), in lieu of standard forks (paragraph 3.5 (b));
 - (h) **60-inch Forks** – The vehicle **must** be provided with forks having a nominal length of 1,524 mm (60 inches), in lieu of standard forks (paragraph 3.5 (b));
 - (i) **Fork Tine Position Guide**
 - i. The vehicle **must** be provided with a tine position guide;
 - ii. The fork tine position guide **must** be permanently attached to the backrest;
 - iii. The fork tine position guide **must** use a laser to create a line that shows the level of the top of the fork tines;
 - iv. The fork tine position guide **must** be connected to the vehicle electrical system;
 - v. The fork tine position guide **must** automatically turn off when the vehicle is turned off; and
 - vi. The fork tine position guide **must** automatically turn off when the forks are within 2,130 mm (84 inches) of ground level.
 - (j) **Rotating Fork Attachment**
 - i. The vehicle **must** be provided with a rotating fork attachment;
 - ii. The rotating fork attachment **must** have hydraulically controlled function to rotate the forks to full 360-degree on both sides of the fork assembly;
 - iii. The fork rotating fork attachment **must** have hydraulic side shifting function described in section 3.5.1(f) above;
 - iv. The rotating fork attachment **must** be provided with a cylinder and side-shifter protection mechanism; and
 - v. The fork rotating fork attachment **must** meet the load capacity and lift criteria specified in Appendix A – A.1: Data Table.

3.6. **Operator Station**

- (a) **Overhead Guard**
 - i. The vehicle **must** be provided with a driver's overhead guard with wire mesh or **Equivalent** mounted to protect operator; and
 - ii. The height from the seat point index to the underside of the overhead guard **must** be at least 890 mm (35 inches) in accordance with the recommendation in ANSI B56.1 when measured in accordance with ISO 5353.

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- (b) **Seat** – The vehicle **must** be provided with a padded operator's seat and backrest, provided with seat belts; and
 - (c) **Mirrors** – The vehicle **must** be provided with rear view mirrors providing a full view for safe reverse operations.

3.6.1. **Operator Station Features and Accessories** - The following accessories, attachments and features must be provided, when requested:

- (a) **Cab**
 - i. The vehicle **must** be provided with a fully enclosed weatherproof and insulated cab;
 - ii. The height from the seat point index to the underside of the cab roof **must** be at least 890 mm (35 inches) in accordance with the recommendation in ANSI B56.1 when measured in accordance with ISO 5353;
 - iii. The cab **must** be provided with a heating system with ventilation and defrosting systems capable of keeping windows free from frost and moisture;
 - iv. The cab **must** be provided with safety glass in the windows. It is preferred the glass be tinted to reduce solar heating load;
 - v. The cab **must** be provided with windshield wipers, including a windshield washer for each wiper; and
 - vi. The cab **must** offer overhead load visibility during storage and retrieval operations.
- (b) **Suspension Seat**
 - i) The vehicle **must** be provided with a padded full suspension seat and backrest;
 - ii) It is preferred that the seat be cloth covered;
 - iii) The seat **must** be provided with seat belts conforming, as a minimum, to SAE J386; and
 - iv) The seat **must** be provided with fore/aft and vertical adjustment without the operator having to move from a seated position.
- (c) **Air Conditioner**
 - i. The vehicle cab must be provided with an air conditioning system; and
 - ii. The air conditioning system must not use an ozone-depleting refrigerant.

3.7. **Chassis** - The vehicle **must** be provided with a commercially equipped chassis system.

3.8. **Engine**

- (a) The vehicle **must** be provided with a diesel engine; and
- (b) The engine **must** meet Tier 4 emission standards.

3.8.1. **Engine Components** – ***Commercially Equipped***

3.8.2. **Fuel Tank(s)** - The fuel tank filler cap **must** be marked to identify the vehicle fuel.

3.8.3. **Engine Cold Weather Aids**

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- (a) The engine **must** be equipped with cold weather aids to enable the engine (operating with winter grade fuels/oils) to be started at temperatures down to -40° C;
 - (b) The engine **must** be equipped with a low temperature engine starting aid;
 - (c) The engine **must** have one of the following systems: glow plug(s), intake air preheat or **Equivalent**;
 - (d) The engine **must** be equipped with one or more 110-Volt engine heaters. The engine heaters **must** have a capacity as recommended by the engine manufacturer or conform to SAE J1310; and
 - (e) The engine heater plug **must** be accessible by an operator standing beside the vehicle.
- 3.9. **Transmission** - The transmission **must** be provided with an inching function.
- 3.10. **Brake System** - The braking system **must** conform to CSA B335, or an **Equivalent**.
- 3.11. **Steering** - The vehicle **must** be provided with a commercially equipped steering system.
- 3.12. **Tires and Wheels**
- (a) The vehicle **must** be provided with industrial high-pressure pneumatic tube type tires with non-directional treads; and
 - (b) The vehicle **must** be provided with single load wheels.
- 3.12.1. **Tire Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Dual Load Wheels - Pneumatic**
 - i. The vehicle **must** be provided with dual load wheels, in lieu of the wheels specified in paragraph 3.12; and
 - ii. Tires **must** be industrial pneumatic tires having non-directional treads.
 - (b) **Single Load Wheels - Solid**
 - i. The vehicle **must** be provided with single load wheels, in lieu of the wheels specified in paragraph 3.12; and
 - ii. Tires **must** be soft ride solid pneumatic profile tires with non-directional treads.
 - (c) **Dual Load Wheels - Solid**
 - i. The vehicle **must** be provided with dual load wheels, in lieu of the wheels specified in paragraph 3.12; and
 - ii. Tires **must** be soft ride solid pneumatic profile tires with non-directional treads.
 - (d) **Single Load Wheels – Snow and Mud**
 - i. The vehicle **must** be provided with single load wheels, in lieu of the wheels specified in paragraph 3.12; and
 - ii. Tires **must** have a snow and mud or aggressive tread pattern.
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- (e) **Dual Load Wheels – Snow and Mud**
- i. The vehicle **must** be provided with dual load wheels, in lieu of the wheels specified in paragraph 3.12; and
 - ii. Tires **must** have a mud and snow or aggressive tread pattern.
- 3.13. **Controls** - The vehicle **must** be provided with a safety device ensuring that the engine can only be started with the transmission in a neutral position.
- 3.14. **Instruments** - The instruments **must** be provided with an hour-meter, which displays accumulated running time up to 9,999 hours.
- 3.14.1. **Instruments Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Weigh Scale**
- i. The vehicle **must** be provided with a weigh scale with 2 percent accuracy at forklift capacity; and
 - ii. The weigh scale **must** be provided with a digital readout with zeroing capability.
- 3.15. **Electrical System**
- (a) The vehicle **must** be provided with a readily accessible driver-operated warning horn; and
 - (b) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in backup mode.
- 3.16. **Lighting**
- (a) **Floodlights**
- i. The vehicle **must** be provided with floodlights that allow for forklift operations at night;
 - ii. The floodlights **must** provide sufficient lighting for the operator to see the load and fork tips in all positions; and
 - iii. The vehicle **must** be provided with at least one adjustable floodlight.
- (b) **Flashing Beacon**
- i. The vehicle **must** be provided with a red flashing beacon light mounted on the rear of the vehicle; and
 - ii. The beacon **must** be activated when the vehicle travels in reverse.
- 3.16.1. **Lighting Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Signal Lights** – The vehicle **must** be provided with headlights, adjustable work lights at the front and rear, stoplights and turn signals; and
 - (b) **Additional Working Lights** – The vehicle **must** be provided with at least 2 additional working lights on the front.
- 3.17. **Hydraulic System** - The vehicle **must** be provided with a hydraulic system that supports the operation of all hydraulic components.
- 3.18. **Lubricants and Hydraulic Fluids**
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- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint** - The vehicle **must** be painted using commercial colour having a high-durability, corrosion-resistant type coating.
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note;
 - (e) Fuel tank(s) **must** be half to three quarters full on delivery; and
 - (f) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

4. **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii The operator manuals **must** be supplied in a bilingual format as a package;
- iv Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v Digital copies **must** be supplied on a CD or DVD;
- vi Digital copies **must** be supplied in a searchable PDF format;
- vii The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii Manual approval or comments will be supplied within 15 working days of receipt;
- ix The Contractor must supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve the manuals.
- x Manuals will not be returned; and
- xi Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two

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- (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
 - ii One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
 - iii One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv Photographs **must** have a plain background;
 - v Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi Photographs **must** have a resolution of at least eight (8) Mega pixels.
- (c) **Data Summary**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii If there are no hazardous materials used, this **must** be stated on the list; and
 - iii The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery
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- destination, a bilingual warranty letter template to the Contractor;
 - ii The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- (f) **Initial Parts Kit List**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii A complete change of all filters and filter elements **must** be included in the list; and
 - iii The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i The Contractor **must** supply a set of safety data sheets; and
 - ii The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i One (1) initial parts kit **must** be supplied; and

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- ii The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
 - (e) **Maintenance Manual**
 - i The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii The Contractor may supply this deliverable as a bilingual package
 - (f) **Parts Manual**
 - i The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii The parts manual **must** be supplied in English in paper and digital format;
 - iii It is desirable to supply the parts manual in French in addition to the English version; and
 - iv Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
 - (g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2

Training

(a) **Training – Familiarization**

- i The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii The instructor **must** be an OEM Factory Certified Training Provider;
- iii The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
- iv **Curriculum**
 - 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;

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- 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).
 - v The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
 - vi The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
 - vii The date for the familiarization course **must** be arranged with the **Technical Authority**;
 - viii After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
 - ix The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.
- (b) **Training – Troubleshooting**
- i When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
 - ii The instructor **must** be an OEM Factory Certified Training Provider;
 - iii The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training
 - iv The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
 - v The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
 - vi The troubleshooting course **must** be supplied at the delivery destination;
 - vii The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
 - viii After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
 - ix The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.
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4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1. Data Table

The following table indicates performance and features by configuration that ***must*** be provided:

			CONFIGURATION							
CHARACTERISTIC		PARAGRAPH	UNITS	A	B	C	D	E	F	G
LIFT CAPACITY		3.4.1 (a)	kg	1,805	2,260	2,715	3,170	3,625	4,535	5444
			lbs	4,000	5,000	6,000	7,000	8,000	10,000	12,000
LOAD CENTRE			mm	610	610	610	610	610	610	610
			inches	24	24	24	24	24	24	24
STANDARD MAST – LIFT HEIGHT		3.4.1 (c)	mm	4,720	4,720	4,720	4,720	4,670	4,695	4,695
			inches	186	186	186	186	184	185	180
STANDARD MAST – VEHICLE HEIGHT		3.4.1 (d)	mm	2,290	2,290	2,290	2,340	2,365	2,495	2,495
			inches	90	90	90	92	93	98	110
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	3,810	3,810	3,810	3,810	3,695	3,820	3,820
			inches	150	150	150	150	145.5	150	150
	VEHICLE HEIGHT		mm	2,140	2,140	2,140	2,140	2,365	2,315	2,315
			inches	84	84	84	84	93	91	91
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	5,330	5,330	5,330	5,205	5,155	5,255	5,255
			inches	210	210	210	205	203	207	207
	VEHICLE HEIGHT		mm	2,795	2,795	2,795	2,795	2,495	2,770	2,770
			inches	110	110	110	110	98	109	109
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	5,940	5,940	5,940	5,660	5,500	5,890	5,890
			inches	234	234	234	223	216.5	232	232
	VEHICLE HEIGHT		mm	2,925	2,925	2,925	2,925	2,795	3,000	3,000
			inches	115	115	115	115	110	118	118

A.2. Feature and Accessory Table

The following table indicates, with "X", for each configuration the accessories, attachments and features that ***must*** be provided when specified in the solicitation, with a clause reference.

DESCRIPTION	PARAGRAPH	Configuration						
		A	B	C	D	E	F	G
"DS" Safety Rating Feature	3.3.5	X	X	X	X	X	X	X
Fire Extinguisher	3.5 (e)	X	X	X	X	X	X	X
Mast no. 2	3.5.1 (a)	X	X	X	X	X	X	X
Mast no. 3	3.5.1 (b)	X	X	X	X	X	X	X
Mast no. 4	3.5.1 (c)	X	X	X	X	X	X	X
Lift Accumulator	3.5.1 (d)	X	X	X	X	X	X	X
Side Shifter	3.5.1 (e)	X	X	X	X	X	X	X
Fork Positioning Side Shifter	3.5.1 (f)	X	X	X	X	X	X	X
54-inch Forks	3.5.1 (g)	X	X	X	X	X	X	X
60-inch Forks	3.5.1 (h)	X	X	X	X	X	X	X
Fork Tine Position Guide	3.5.1 (i)	X	X	X	X	X	X	X
Rotating Fork Attachment	3.5.1 (j)	X	X	-	-	-	-	-
Cab	3.6.1 (a)	X	X	X	X	X	X	X
Suspension Seat	3.6.1 (b)	X	X	X	X	X	X	X
Air Conditioner	3.6.1 (c)	X	X	X	X	X	X	X
Tank Lift Device	3.8.3 (a)	X	X	X	X	X	X	X
Dual Load Wheels – Pneumatic	3.12.1 (a)	X	X	X	X	X	X	X
Single Load Wheels – Solid	3.12.1 (b)	X	X	X	X	X	X	X
Dual Load Wheels – Solid	3.12.1 (c)	X	X	X	X	X	X	X
Single Load Wheels – Snow and Mud	3.12.1 (d)	X	X	X	X	X	X	X
Dual Load Wheels – Snow and Mud	3.12.1 (e)	X	X	X	X	X	X	X
Weigh Scale	3.14.1 (a)	X	X	X	X	X	X	X
Signal Lights	3.16.1 (a)	X	X	X	X	X	X	X
Additional Working Lights	3.16.1 (b)	X	X	X	X	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X	X	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X	X	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X	X	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X	X	X	X	X
Training – Familiarization	4.2 (a)	X	X	X	X	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X	X	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA FOR GROUP 1B: DIESEL ENGINE DRIVEN FORKLIFT TRUCK

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as **Equivalent**? YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as **Equivalents** below:

NOTE: Substantial Information must be provided for all items offered as a substitute or alternative.

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model/Year Introduced	document	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.6	design standard	certificate or OEM brochure	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.3.5 (a)	The vehicle must be manufactured to meet the requirements of an “DS” safety rating	design standard	certificate or OEM brochure	Config A: Config B: Config C:

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	in accordance with Standard UL 558, or an Equivalent , in lieu of the “D” safety rating (paragraph 3.3.4)			Config D: Config E: Config F: Config G:
3.4.1(a)	The vehicle, with the standard mast and no accessories, must have a load capacity of at least that given as “ LIFT CAPACITY ” in the A.1 - Data Table (Appendix A) at the load centre of that given as “ LOAD CENTRE ” in the A.1 - Data Table (Appendix A)	Capacity/load center	lbs/inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.4.1(c)	The vehicle must have a lift height of at least that given as “ STANDARD MAST - LIFT HEIGHT ” in the A.1 - Data Table (Appendix A), measured from the floor to the top surface of the forks in the full-up position	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.4.1(d)	The vehicle, with the mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ STANDARD MAST ”	vehicle height	inch	Config A: Config B: Config C: Config D: Config E: Config F:

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	– VEHICLE HEIGHT in the A.1 - Data Table (Appendix A)			Config G:
3.5.1(a)-ii	Mast no. 2 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 2 ” – “ LIFT HEIGHT ” in A.1 - Data Table (Appendix A)	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.5.1(a)-iii	The vehicle, with the mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 2 ” – “ VEHICLE HEIGHT ” in A.1 - Data Table (Appendix A)	vehicle height	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.5.1(b)-ii	Mast no. 3 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 3 ” – “ LIFT HEIGHT ” in A.1 -	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:



TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	Data Table (Appendix A)			
3.5.1(b)-iii	The vehicle, with the mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 3 ” – “ VEHICLE HEIGHT ” in A.1 - Data Table (Appendix A)	vehicle height	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.5.1(c)-ii	Mast no. 4 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 4 ” – “ LIFT HEIGHT ” in A.1 - Data Table (Appendix A)	lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.5.1(c)-iii	The vehicle, with the mast no. 4 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 4 ” – “ VEHICLE HEIGHT ”	vehicle height	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:



TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	in A.1 - Data Table (Appendix A)			
3.5.1(e)	The vehicle must be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side	Side shift	inch	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.5.1(f)	The vehicle must be provided with a fork-positioning side shifter. The fork-positioning attachment must increase/decrease the spacing between the unloaded forks.	Side shift	document	Config A: Config B: Config C: Config D: Config E: Config F: Config G:
3.5.1(j)	The vehicle must be provided with a rotating fork attachment; The fork rotating fork attachment must meet the load capacity and lift criteria specified in Appendix A – A.1: Data Table.	attachment	document/lbs	Config A: Config B:

TABLE OF TECHNICAL EVALUATION CRITERIA				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.8	The vehicle must be provided with a diesel engine and the engine must meet Tier 4 emission standards.	Emission standard	document	Config A: Config B: Config C: Config D: Config E: Config F: Config G:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria:

- (a) “**Equivalent**” **must** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in writing, as meeting the



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 2A

Purchase Description (TD)

For

Electric, 3-Wheels, Sit-down Rider Forklift Truck

Date: 06 October 2020

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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for electric 3-wheel sit-down rider counterbalance forklifts with features and attachments.

1.2. **Instructions**

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- b) Requirements that are identified by the word “***must***”, ***must*** be treated as mandatory. Deviations will not be permitted.
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- d) Where “***must***” or “will” are not used, the information provided is for guidance only.
- e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***Equivalent*** standard ***must*** be supplied by the Contractor.
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an ***Equivalent must*** be supplied, when requested by the ***Technical Authority***.
- g) While the International System of Units (SI) ***must*** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- a) “***Technical Authority***” means the official responsible for the technical content of this requirement.
- b) “***Provided***” means “provided and installed”.
- c) “***Equivalent***” means a standard, means, or component type that the ***Technical Authority*** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.

2. **APPLICABLE DOCUMENTS**

2.1 **Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.1.1 **SAE Standards**

SAE World Headquarters
400 Commonwealth Dr
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.1.2 **CSA B335 Safety Standards for Lift Trucks**

Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.3 **UL 583 Standard for Electric-Battery-Powered Industrial Trucks**

Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4 **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/fra/lois/H-3/>

2.1.5 **ANSI B56.1 Safety Standard for Low Lift and High Lift Trucks**

American National Standards Institute
1899 L Street, NW, 11th Floor
Washington, DC, 20036
<http://www.ansi.org/>

2.1.6 **ISO 5353**

Earth-moving machinery, and tractors and machinery for agriculture
and forestry – Seat index point

International Organisation for Standardisation

ISO Central Secrétariat

1, ch. de la Voie-Creuse

CP 56

CH 1211 Geneva 20

Switzerland

<http://www.iso.org/iso/home.htm>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle ***must*** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle ***must*** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle ***must*** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle ***must*** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle ***must*** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle ***must*** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (32°F to 104°F).
- 3.2.2. **Terrain** - The vehicle ***must*** operate on use-roughened concrete floors while being used for stacking, un-stacking pallets and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels ***must*** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects ***must*** be in accordance with the latest edition of ANSI/ITDSF B56.1.
- 3.3.3. **Hazardous Materials** – The Contractor ***must*** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"E" Safety Rating** - The vehicle ***must*** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 583, or an ***Equivalent***.

3.3.5. **“EE” Safety Rating Feature**

- (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.4); and
- (b) A certification label confirming the vehicle meets the “EE” safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** – The vehicle **must** be a battery-powered sit down rider type forklift.

3.4.1. **Forklift Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A) at the load centre of that given as “**LOAD CENTRE**” in the A1- Data Table (Appendix A);
- (b) The load capacity **must** not de-rate to below specified load capacity before reaching a load lift height of 3,810 mm (150 inches);
- (c) The vehicle **must** have a lift height of at least that given as “**STANDARD MAST - LIFT HEIGHT**” in the A.1 - Data Table (Appendix A), measured from the floor to the top surface of the forks in the full-up position; and
- (d) The vehicle, with the mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**STANDARD MAST – VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

3.4.2. **Forklift Configuration** - The vehicle **must** be a 3-wheel vehicle having a single steer wheel or a pair of wheels, which are pivoted together.

3.5. **Equipment**

- (a) **Standard Mast**
 - i. The vehicle **must** be provided with a see-through telescopic mast; and
 - ii. The standard mast **must** have full free lift.
- (b) **Forks**
 - i. The vehicle **must** be provided with standard forks having a nominal length of either 1,016 mm (40 inches) or 1,066 mm (42 inches); and
 - ii. Forks with nominal lengths of 914 mm (36 inches) or 1,219 mm (48 inches) **must** be provided, in lieu of the standard forks, when requested.
- (c) **Load Backrest** - The load backrest **must** have a nominal height of 1,219 mm (48 inches);
- (d) **Mast Tilt** - The vehicle **must** be provided with a power mechanism that tilts the mast fore and aft of vertical; and
- (e) **Fire Extinguisher**

-
- i. Electric vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - i. The fire extinguisher **must** be readily accessible to the operator; and
 - ii. The fire extinguisher **must** not interfere with the operation of the vehicle or the view of the operator.
- 3.5.1. **Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Mast no. 2**
 - i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in A.1 - Data Table (Appendix A);
 - iii. ; and
 - iv. Mast no. 2 **must** have full free lift.
 - (b) **Mast no. 3**
 - i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A).
 - iii. The vehicle, with the mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. Mast no. 3 **must** have full free lift.
 - (c) **Mast no. 4**
 - i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 4 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A).
 - iii. The vehicle, with the mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. Mast no. 4 **must** have full free lift.
 - (d) **Lift Accumulator** – The mast **must** be provided with a system to absorb impact loads from tracks, potholes and other obstacles;

-
- (e) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side;
 - (f) **Fork Positioning Side Shifter**
 - i. The vehicle **must** be provided with an integrated fork-positioning side shifter;
 - ii. The fork-positioning attachment **must** increase/decrease the spacing between the unloaded forks; and
 - iii. The side shifter **must** be capable of side shifting fully loaded forks simultaneously to either side.
 - (g) **Fork Tine Position Guide**
 - i. The vehicle **must** be provided with a fork tine position guide;
 - ii. The fork tine position guide **must** be permanently attached to the forklift carriage;
 - iii. The fork tine position guide **must** use a laser to create a line that shows the level of the top of the fork tines;
 - iv. The fork tine position guide **must** be connected to the vehicle electrical system;
 - v. The fork tine position guide **must** automatically turn off when the vehicle is turned off; and
 - vi. The fork tine position guide **must** automatically turn off when the forks are within 2,130 mm (84 inches) of ground level.

3.6. **Operator Station**

- (a) **Overhead Guard**
 - i. The vehicle **must** be provided with a driver's overhead guard with wire mesh or **Equivalent** mounted to protect operator; and
 - ii. The height from the seat point index to the underside of the overhead guard **must** be at least 890 mm (35 inches) in accordance with the recommendation in ANSI B56.1 when measured in accordance with ISO 5353.
- (b) **Seat** – The vehicle **must** be provided with a padded operator's seat and backrest, equipped with seat belts; and
- (c) **Mirrors** – The vehicle **must** be provided with rear view mirrors providing a full view for safe reverse operations.

3.6.1. **Operator Station Features and Accessories** - When requested, the following accessories and features **must** be provided:

- (a) **Removable Cab**
 - i. The vehicle **must** be supplied with a removable cab with removable doors;
 - ii. The cab **must** fit over the overhead guard; and

-
- iii. The cab **must** be easily installed/removed without the use of tools.
 - (b) **Suspension Seat**
 - i. The vehicle **must** be provided with a padded full suspension seat and backrest;
 - ii. It is preferred that the seat be cloth covered;
 - iii. The seat **must** be provided with seat belts conforming, as a minimum, to SAE J386; and
 - iv. The seat **must** be provided with fore/aft and vertical adjustment without the operator having to move from a seated position.
 - 3.7. **Chassis - Commercially Equipped**
 - 3.8. **Motors - Commercially Equipped**
 - 3.9. **Transmission - Commercially Equipped**
 - 3.10. **Brake System** - The braking system **must** conform to CSA B335, or an **Equivalent**.
 - 3.11. **Steering - Commercially Equipped**
 - 3.12. **Tires**
 - (a) The vehicle **must** be provided with manufacturer's standard smooth face press-on tires; and
 - (b) The tread material **must** be optimized for use on an electric forklift.
 - 3.12.1. **Tire Features and Accessories** - When requested, the following accessories and features must be provided:
 - (a) **Lug Tread Tires** – The vehicle **must** be provided with lug tread tires, in lieu of the standard tires (paragraph 3.12).
 - 3.13. **Controls** - The vehicle **must** be provided with controls readily accessible to the operator including an infinitely variable speed controller with convenient right foot operation.
 - 3.14. **Instruments** - The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.
 - 3.14.1. **Instruments Features and Accessories**
 - (a) **Weigh Scale**
 - i. The vehicle **must** be provided with a weigh scale with 2 percent accuracy at forklift capacity; and
 - ii. The weigh scale **must** be provided with a digital readout with zeroing capability.
 - 3.15. **Electrical System**
 - (a) The vehicle **must** be provided with an electrical system operating at no less than twenty four (24) volts;
-

-
- (b) Batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in the A.1 - Data Table (Appendix A);
 - (c) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in back-up mode;
 - (d) **Battery Watering System**
 - i. The vehicle **must** be provided with a battery watering system;
 - ii. The battery watering system **must** be supplied with a removable hose; and
 - iii. The removable hose **must** be provided with a quick connect coupler.
 - (e) **Battery Rollers** – The vehicle **must** be provided with battery compartment rollers to allow the rapid changing of the batteries.
- 3.15.1. **Electrical Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **220 V, Single Phase Charger** – A charger **must** be supplied for connection to a 220-volt, single phase, 60 Hz power source;
 - (b) **220 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 220-volt, three phase, 60Hz power source;
 - (c) **440 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 440-volt, three phase, 60Hz power source; and
 - (d) **550 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 550-volt, three phase, 60Hz power source.
- 3.16. **Lighting**
- (a) **Work Lights**
 - i. The vehicle **must** be provided with two adjustable forward facing LED lamps and one adjustable rear-facing LED lamp; and
 - ii. The work lights **must** provide sufficient illumination for forward and reverse operations of vehicle.
 - (b) **Flashing Beacon**
 - i. The vehicle **must** be provided with a red flashing beacon light mounted on the rear of the vehicle; and
 - ii. The beacon **must** be activated when the vehicle travels in reverse.
- 3.17. **Hydraulic System – Commercially Equipped**
- 3.18. **Lubricants and Hydraulic Fluids**
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint - Commercially Equipped**
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
-

4. **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii The operator manuals **must** be supplied in a bilingual format as a package;
- iv Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v Digital copies **must** be supplied on a CD or DVD;
- vi Digital copies **must** be supplied in a searchable PDF format;
- vii The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii Manual approval or comments will be supplied within 15 working days of receipt;
- ix The Contractor must supply responses to the Technical Authority's (TA) comments.
- x Manuals will not be returned; and
- xi Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;

-
- ii One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
 - iii One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv Photographs **must** have a plain background;
 - v Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi Photographs **must** have a resolution of at least eight (8) Mega pixels.
- (c) **Data Summary**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii If there are no hazardous materials used, this **must** be stated on the list; and
 - iii The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
-

-
- ii The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- (f) **Initial Parts Kit List**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii A complete change of all filters and filter elements **must** be included in the list; and
 - iii The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i The Contractor **must** supply a set of safety data sheets; and
 - ii The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i One (1) initial parts kit **must** be supplied; and

-
- ii The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
 - (e) **Maintenance Manual**
 - i The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii The Contractor may supply this deliverable as a bilingual package
 - (f) **Parts Manual**
 - i The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii The parts manual **must** be supplied in English in paper and digital format;
 - iii It is desirable to supply the parts manual in French in addition to the English version; and
 - iv Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
 - (g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2 **Training**

- (a) **Training – Familiarization**
 - i The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
 - ii The instructor **must** be an OEM Factory Certified Training Provider;
 - iii The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
 - iv **Curriculum**
 - 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;

-
- 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).
 - v The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
 - vi The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
 - vii The date for the familiarization course **must** be arranged with the **Technical Authority**;
 - viii After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
 - ix The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.
- (b) **Training – Troubleshooting**
- i When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
 - ii The instructor **must** be an OEM Factory Certified Training Provider;
 - iii The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training
 - iv The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
 - v The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
 - vi The troubleshooting course **must** be supplied at the delivery destination;
 - vii The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
 - viii After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and

-
- ix The *Technical Authority* will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

- 4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

5. Vehicle Delivery Condition

- 5.1 The vehicle must be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior must be cleaned;
- 5.2 If the vehicle requires assembly at destination, the Contractor must be responsible for all manpower and equipment to perform assembly;
- 5.3 The space for assembly at destination will be provided, if required;
- 5.4 For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, must be listed on the shipping certificate or to an attached packing note; and
- 5.5 Lubricants installed in the vehicle at time of delivery must be suitable for the destination and the season of delivery.

APPENDIX A

A.1. Data Table

The following table shows required performance and dimensions for each Configuration with paragraph references.

			CONFIGURATION						
CHARACTERISTIC		PARAGRAP H	UNITS	A	B	C	D	E	F
LIFT CAPACITY		3.4.1 (a)	kg	905	905	1,355	1,355	1,580	1,805
			lb	2,000	2,000	3,000	3,000	3,500	4,000
LOAD CENTRE			mm	610	610	610	610	610	610
			in	24	24	24	24	24	24
STANDARD MAST – LIFT HEIGHT		3.4.1 (c)	mm	4,720	3,805	4,720	3,805	4,720	4,720
			in	186	150	186	150	186	186
STANDARD MAST – VEHICLE HEIGHT		3.4.1 (d)	mm	2,290	2,035	2,290	2,035	2,290	2,290
			in	90	80	90	80	90	90
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	3,805		3,805		3,805	3,805
			in	150		150		150	150
	VEHICLE HEIGHT		mm	2,135		2,135		2,135	2,135
			in	84		84		84	84
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	5,330		5,330		5,330	5,330
			in	210		210		210	210
	VEHICLE HEIGHT		mm	2,795		2,795		2,795	2,795
			in	110		110		110	110
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	5,940		5,940		5,940	5,940
			in	234		234		234	234
	VEHICLE HEIGHT		mm	2,925		2,925		2,925	2,925
			in	115		115		115	115
BATTERY CAPACITY		3.15 (b)	kWh	17	17	24	24	24	24

A.2. Feature and Accessory Table

The following table indicates, with "X", for each configuration the accessories, attachments and features that ***must*** be provided when specified in the solicitation, with a clause reference.

DESCRIPTION	PARAGRAPH	CONFIGURATION					
		A	B	C	D	E	F
"EE" Safety Rating Feature	3.3.5	X	X	X	X	X	X
Fire Extinguisher	3.5 (e)	X	X	X	X	X	X
Mast no. 2	3.5.1 (a)	X	-	X	-	X	X
Mast no. 3	3.5.1 (b)	X	-	X	-	X	X
Mast no. 4	3.5.1 (c)	X	-	X	-	X	X
Lift Accumulator	3.5.1 (d)	X	X	X	X	X	X
Side Shifter	3.5.1 (e)	X	X	X	X	X	X
Fork Positioning Side Shifter	3.5.1 (f)	X	X	X	X	X	X
Fork Tine Position Guide	3.5.1 (i)	X	X	X	X	X	X
Cab	3.6.1 (a)	X	X	X	X	X	X
Suspension Seat	3.6.1 (b)	X	X	X	X	X	X
Weigh Scale	3.14.1 (a)	X	X	X	X	X	X
220 V single phase charger	3.15.1 (a)	X	X	X	X	X	X
220 V 3 phase charger	3.15.1 (b)	X	X	X	X	X	X
440 V 3 phase charger	3.15.1 (c)	X	X	X	X	X	X
550 V 3 phase charger	3.15.1 (d)	X	X	X	X	X	X
Battery watering system	3.15.1 (e)	X	X	X	X	X	X
Battery rollers	3.15.1 (f)	X	X	X	X	X	X
Signal Lights	3.16.1 (a)	X	X	X	X	X	X
Additional Working Lights	3.16.1 (b)	X	X	X	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X	X	X	X
Training – Familiarization	4.2 (a)	X	X	X	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA FOR GROUP 2A: ELECTRIC, 3-WHEELS, SIT-DOWN RIDER FORKLIFT TRUCK

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

NOTE: *Substantial Information must* be provided for all items offered as a substitute or alternative.

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle <i>must</i> be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C: Config D: Config E: Config F:
3.3.2	All vehicle design, construction and safety aspects <i>must</i> be in accordance with the latest edition of ANSI/ITDSF B56.1	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C: Config D: Config E: Config F:
3.3.5 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.4)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C: Config D: Config E: Config F:



Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.4.1 (a)	The vehicle, with the standard mast and no accessories, must have a load capacity of at least that given as “ LIFT CAPACITY ” in the A.1 - Data Table (Appendix A) at the load centre of that given as “ LOAD CENTRE ” in the A1- Data Table (Appendix A)	Capacity/load center	lbs/inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.4.1 (c)	The vehicle must have a lift height of at least that given as “ STANDARD MAST - LIFT HEIGHT ” in the A.1 - Data Table (Appendix A), measured from the floor to the top surface of the forks in the full-up position	Lift height	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.4.1 (d)	The vehicle, with the mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ STANDARD MAST – VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)	Vehicle Height	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1 (a)-ii	Mast no. 2 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 2 ” – “ LIFT	Lift Height	inch	Config A: Config C: Config E: Config F:



Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	HEIGHT in A.1 - Data Table (Appendix A)			
3.5.1 (a)-iii	The vehicle, with the mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " MAST 2 " – " VEHICLE HEIGHT " in A.1 - Data Table (Appendix A)	Vehicle Height	inch	Config A: Config C: Config E: Config F:
3.5.1 (b)-ii	Mast no. 3 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as " MAST 3 " – " LIFT HEIGHT " in the A.1 - Data Table (Appendix A)	Lift Height	degree	Config A: Config C: Config E: Config F:
3.5.1 (b)-iii	The vehicle, with the mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " MAST 3 " – " VEHICLE HEIGHT " in A.1 - Data Table (Appendix A)	Vehicle Height	inch	Config A: Config C: Config E: Config F:
3.5.1 (c)-ii	Mast no. 4 must have a lift height, measured from the floor to the top surface of the forks in	Lift Height	inch	Config A: Config C: Config E:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	the full-up position, of at least that given as “ MAST 4 ” – “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A)			Config F:
3.5.1 (c)-iii	The vehicle, with the mast no. 4 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 4 ” – “ VEHICLE HEIGHT ” in A.1 - Data Table (Appendix A)	Vehicle Height	inch	Config A: Config C: Config E: Config F:
3.5.1 (e)	The vehicle must be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side	Side Shift	inch	Config A: Config B: Config C: Config D: Config E: Config F:
3.5.1 (f)	The vehicle must be provided with an integrated fork-positioning side shifter; The fork-positioning attachment must increase/decrease the spacing between the unloaded forks; and The side shifter must be capable of side shifting fully loaded forks	Fork positioner	document	Config A: Config B: Config C: Config D: Config E: Config F:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	simultaneously to either side.			
3.15 (b)	Batteries must have a capacity of at least "BATTERY CAPACITY" as given in the A.1 - Data Table (Appendix A)	Battery Capacity	kWh	Config A: Config B: Config C: Config D: Config E: Config F:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) **"Equivalent" must** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 2B

Purchase Description (PD)

For

Electric, 4-Wheels, Sit-down Rider Forklift Truck

Date: 06 October 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense



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1.0 **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for electric 4-wheel sit-down rider counterbalance forklifts with features and attachments.

1.2. **Instructions**

- (a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- (b) Requirements, which are identified by the word “***must***”, are mandatory. Deviations will not be permitted;
- (c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part;
- (d) Where “***must***”, or “will” are not used, the information provided is for guidance only;
- (e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***Equivalent*** standard ***must*** be supplied by the Contractor, at no cost to Canada when requested by the ***Technical Authority***;
- (f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an ***Equivalent must*** be supplied, when requested by the ***Technical Authority***.
- (g) While the International System of Units (SI) ***must*** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- (h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.

1.3. **Definitions**

- a) “***Technical Authority***” means the official responsible for the technical content of this requirement.
- b) “***Provided***” means “provided and installed”.
- c) “***Equivalent***” means a standard, means, or component type that the ***Technical Authority*** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.

2. **APPLICABLE DOCUMENTS**

- 2.1 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.1.1 **SAE Standards**

SAE World Headquarters
400 Commonwealth Dr.
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.1.2 **CSA B335**

Safety Standards for Lift Trucks
Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.3 **UL 583**

Standard for Electric-Battery-Powered Industrial Trucks
Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4 **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

2.1.5 **ANSI B56.1**

Standard for Electric-Battery-Powered Industrial Trucks
American National Standards Institute
1899 L Street, NW, 11th Floor
Washington, DC, 20036
<http://www.ansi.org/>

2.1.6 **ISO 5353**

Earth-moving machinery, and tractors and machinery for agriculture and forestry – Seat index point
International Organisation for Standardisation
ISO Central Secrétariat
1, ch. de la Voie-Creuse
CP 56
CH 1211 Geneva 20
Switzerland

<http://www.iso.org/iso/home.htm>

2.2.8 **CAN/CSA Z107.56-13**

Measurement of Noise Exposure

Canadian Standards Association

5060 Spectrum Way, Suite 100

Mississauga, Ontario, L4W 5N6

<http://www.csa.ca/cm/ca/en/home>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle ***must*** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle ***must*** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;

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- 3.1.3. The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle **must** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle **must** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.
- 3.2. **Operating Conditions**
- 3.2.1. **Weather** – The vehicle **must** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (0°F to 104°F).
- 3.2.2. **Terrain** - The vehicle **must** operate on use-roughened concrete floors while being used for stacking and un-stacking pallets and moving general supplies in and around warehouses.
- 3.3. **Safety Standards**
- 3.3.1. **Noise Level** – The vehicle noise levels **must** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects **must** be in accordance with the latest edition of ANSI/ITDSF B56.1.
- 3.3.3. **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery
- 3.3.4. **"E" Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 583, or an ***Equivalent***.
- 3.3.5. **"EE" Safety Rating Feature**
- (a) The vehicle **must** be manufactured to meet the requirements of an "EE" safety rating in accordance with Standard UL 583, or an ***Equivalent***, in lieu of the "E" safety rating (paragraph 3.3.4); and
- (b) A certification label confirming the vehicle meets the "EE" safety rating **must** be permanently affixed to the vehicle before delivery.
- 3.4. **Vehicle** – The vehicle **must** be a battery-powered sit down rider type forklift.
- 3.4.1. **Forklift Performance**
- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity of at least that given as "**LIFT CAPACITY**" in the A.1 - Data Table

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- (Appendix A) at the load centre of that given as “**LOAD CENTRE**” in the A.1 - Data Table (Appendix A);
- (b) The load capacity **must** not de-rate to below specified load capacity before reaching a load lift height of 3,810 mm (150 inches);
 - (c) The vehicle **must** have a lift height of at least that given as “**STANDARD MAST - LIFT HEIGHT**” in the A.1 - Data Table (Appendix A), measured from the floor to the top surface of the forks in the full-up position; and
 - (d) The vehicle, with the mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**STANDARD MAST – VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- 3.4.2. **Forklift Configuration** - The vehicle **must** have 4 wheels. 4-wheel vehicles **must** have two separate steer wheels, one on either side of the vehicle.
- 3.5. **Equipment**
- (a) **Standard Mast**
 - i. The vehicle **must** be provided with a see-through telescopic mast; and
 - ii. The standard mast **must** have full free lift.
 - (b) **Forks**
 - i. The vehicle **must** be provided with standard forks having a nominal length of either 1,016 mm (40 inches) or 1,066 mm (42 inches); and
 - ii. Forks with nominal lengths of 914 mm (36 inches) or 1,219 mm (48 inches) **must** be provided, in lieu of the standard forks, when requested.
 - (c) **Backrest** - The backrest **must** have a nominal height of 1,219 mm (48 inches);
 - (d) **Mast Tilt** - The vehicle **must** be provided with a power mechanism that tilts the mast fore and aft of vertical; and
 - (e) **Fire Extinguisher**
 - i. Electric vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - ii. The fire extinguisher **must** be installed to be readily accessible to the operator; and
 - iii. The fire extinguisher **must** not interfere with operation of the vehicle or the view of the operator.
- 3.5.1. **Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Mast no. 2**
 - i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));

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- ii. Mast no. 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A).
 - iii. The vehicle, with the mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. Mast no. 2 **must** have full free lift.
- (b) **Mast no. 3**
- i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A);
 - iii. The vehicle, with the mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. Mast no. 3 **must** have full free lift.
- (c) **Mast no. 4**
- i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 4 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A);
 - iii. The vehicle, with the mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. Mast no. 4 **must** have full free lift.
- (d) **Lift Accumulator** – The mast **must** be provided with a system to absorb impact loads from tracks, potholes and other obstacles;
- (e) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side;
- (f) **Fork Positioning Side Shifter**
- i. The vehicle **must** be provided with an integrated fork-positioning side shifter;
 - ii. The fork-positioning attachment **must** increase/decrease the spacing between the unloaded forks; and
 - iii. The side shifter **must** be capable of side shifting fully loaded forks simultaneously to either side.

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- (g) **54-inch Forks** – The vehicle **must** be provided with forks having a nominal length of 1,372 mm (54 inches), in lieu of standard forks (paragraph 3.5 (b));
 - (h) **60-inch Forks** – The vehicle **must** be provided with forks having a nominal length of 1,524 mm (60 inches), in lieu of standard forks (paragraph 3.5 (b)); and
 - (i) **Fork Tine Position Guide**
 - i. The vehicle **must** be provided with a fork tine position guide;
 - ii. The fork tine position guide **must** be permanently attached to the forklift carriage;
 - iii. The fork tine position guide **must** use a laser to create a line that shows the level of the top of the fork tines;
 - iv. The fork tine position guide **must** be connected to the vehicle electrical system;
 - v. The fork tine position guide **must** automatically turn off when the vehicle is turned off; and
 - vi. The fork tine position guide **must** automatically turn off when the forks are within 2,130 mm (84 inches) of ground level.

3.6. **Operator Station**

- (a) **Overhead Guard**
 - i. The vehicle **must** be provided with a driver's overhead guard with wire mesh or **Equivalent** mounted to protect operator; and
 - ii. The height from the seat point index to the underside of the overhead guard **must** be at least 890 mm (35 inches) in accordance with the recommendation in ANSI B56.1 when measured in accordance with ISO 5353.
- (b) **Seat** – The vehicle **must** be provided with a padded operator's seat and backrest, provided with seat belts; and
- (c) **Mirrors** – The vehicle **must** be provided with rear view mirrors providing a full view for safe reverse operations.

3.6.1. **Operator Station Features and Accessories** - When requested, the following accessories and features **must** be provided:

- (a) **Removable Cab**
 - i. The vehicle **must** be supplied with a removable cab with removable doors;
 - ii. The cab **must** fit over the overhead guard; and
 - iii. The cab **must** be easily installed/removed without the use of tools.
- (b) **Suspension Seat**
 - i. The vehicle **must** be provided with a padded full suspension seat and backrest;
 - ii. It is preferred that the seat be cloth covered;

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- iii. The seat **must** be provided with seat belts conforming, as a minimum, to SAE J386; and
 - iv. The seat **must** be provided with fore/aft and vertical adjustment without the operator having to move from a seated position.
- 3.7. **Chassis - Commercially Equipped**
- 3.8. **Motors - Commercially Equipped**
- 3.9. **Transmission - Commercially Equipped**
- 3.10. **Brake System** - The braking system **must** conform to CSA B335, or an **Equivalent**.
- 3.11. **Steering - Commercially Equipped**
- 3.12. **Tires**
- (a) The vehicle **must** be provided with manufacturer's standard smooth face press-on tires;
 - (b) The tread material **must** be optimized for use on an electric forklift.
- 3.12.1. **Tire Features and Accessories** - When requested, the following accessories and features **must** be provided:
- (a) **Lug Tread Tires** – The vehicle **must** be provided with lug tread tires, in lieu of the standard tires (paragraph 3.12).
- 3.13. **Controls** - The vehicle **must** be provided with controls readily accessible to the operator including an infinitely variable speed controller with convenient right foot operation.
- 3.14. **Instruments** - The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.
- 3.14.1. **Instruments Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Weigh Scale**
 - i. The vehicle **must** be provided with a weigh scale with 2 percent accuracy at forklift capacity; and
 - ii. The weigh scale **must** be provided with a digital readout with zeroing capability.
- 3.15. **Electrical System**
- (a) The vehicle **must** be provided with an electrical system operating at no less than twenty four (24) volts;
 - (b) Batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in A.1 - Data Table (Appendix A);
 - (c) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in back-up mode;
 - (d) **Battery Watering System**
 - i. The vehicle must be provided with a battery watering system;
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- ii. The battery watering system must be supplied with a removable hose; and
 - iii. The removable hose must be provided with a quick connect coupler.
 - (e) **Battery Rollers** - The vehicle must be provided with battery compartment rollers to allow the rapid changing of the batteries.
- 3.15.1. **Electrical Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **220 V, Single Phase Charger** – A charger **must** be supplied for connection to a 220-volt, single phase, 60 Hz power source;
 - (b) **220 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 220-volt, three phase, 60Hz power source;
 - (c) **440 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 440-volt, three phase, 60Hz power source; and
 - (d) **550 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 550-volt, three phase, 60Hz power source.
- 3.16. **Lighting**
- (a) **Work Lights**
 - i. The vehicle **must** be provided with two adjustable forward facing LED lamps and one adjustable rear-facing LED lamp; and
 - ii. The work lights **must** provide sufficient illumination for forward and reverse operations of vehicle.
 - (b) **Flashing Beacon**
 - i. The vehicle **must** be provided with a red flashing beacon light mounted on the rear of the vehicle; and
 - ii. The beacon **must** be activated when the vehicle travels in reverse.
- 3.16.1 **Lighting Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Signal Lights** – The vehicle must be provided with headlights, adjustable work lights at the front and rear, stoplights and turn signals; and
 - (b) **Additional Working Lights** – The vehicle must be provided with at least 2 additional working lights on the front.
- 3.17. **Hydraulic System - Commercially Equipped**
- 3.18. **Lubricants and Hydraulic Fluids**
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint - Commercially Equipped**
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
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4.0. INTEGRATED LOGISTICS SYSTEM (ILS)

4.1. Documentation and Support Items

4.1.1. Items supplied to the *Technical Authority*

(a) Manuals for Approval

- i. The Contractor **must** supply a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. It is acceptable that manuals include more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- iv. Digital copies **must** be supplied on a CD or DVD;
- v. Digital copies **must** be supplied in a searchable PDF format;
- vi. The operator manuals **must** be supplied in a bilingual format as a package;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manuals will not be returned; and
- ix. Manual approval or comments will be supplied within 30 working days of receipt;
- x. The Contractor **must** supply responses to the *Technical Authority's* comments;

(b) Photographs and Line Drawings

- i. The Contractor **must** supply two (2) digital colour photographs, one (1) left-front three-quarter view, and one (1) right-rear three-quarter view of each configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
- iii. One (1) front-view and one (1) side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
- iv. Photographs **must** have a plain background;
- v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
- vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.

(c) **Data Summary**

- i. The Contractor **must** supply a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
- ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
- iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
- iv. Data summary approval or comments will be supplied within 30 working days of receipt; and
- v. The Contractor **must** implement the changes requested by the **Technical Authority**.

(d) **Safety Data Sheets**

- i. The Contractor **must** supply a list, in digital format, of all hazardous materials used on the vehicle/equipment;
- ii. If there are no hazardous materials used, this **must** be stated on the listing; and
- iii. The Contractor **must** supply, in digital PDF format, in French and in English, safety data sheets for all hazardous materials in the list.

(e) **Warranty Letter**

- i. The **Technical Authority** will supply a bilingual warranty letter template to the Contractor;
- ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
- iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
- iv. The Contractor **must** supply the original warranty letter in PDF digital format, for each vehicle delivered, to the **Technical Authority**.

(f) **Initial Parts Kit List**

- i. The contractor **must** supply a list of parts needed to perform preventive maintenance on one (1) vehicle/equipment for a period of one (1) year in accordance with the maintenance manual for each configuration/model;
- ii. A complete change of all filters and filter elements **must** be included in the list; and
- iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.

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- g) **Training Plan(s)** - The Contractor must supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the Technical Authority. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2. **Items with Each Vehicle**

- (a) **Operator's Manual(s)** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter(s)** - The Contractor **must** supply a paper copy of the warranty letter(s) with each vehicle delivered;
- (c) **Safety Data Sheets**
- i. The Contractor **must** supply a paper set of material safety data sheets; and
 - ii. The safety data sheets must be the same as those supplied to the Technical Authority as described in the purchase description.
- (d) **Initial Parts Kit**
- i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit must include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
- i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package.
- (f) **Parts Manual**
- i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;
 - iii. It is desirable to supply the parts manual in French in addition to the English version; and
 - iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
- (g) **Keys** – The vehicle **must** be provided with two (2) sets of keys.

4.2. **Training**

(a) **Training - Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;

iv. **Curriculum**

- 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
 - 3. The operation segment **must** include sub-systems including automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training;
- iv. The troubleshooting course **must** have a minimum duration of twenty four

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- (24) hours but not exceeding eight (8) hours a day;
- v. The troubleshooting course ***must*** accommodate up to eight (8) maintenance personnel;
 - vi. The troubleshooting course ***must*** be supplied at the delivery destination;
 - vii. The date for the troubleshooting course ***must*** be arranged with the ***Technical Authority***;
 - viii. After completion of the troubleshooting course, the Contractor ***must*** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
 - ix. The ***Technical Authority*** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3. **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

5. **Vehicle Delivery Condition**

- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
- (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
- (c) The space for assembly at destination will be provided, if required;
- (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
- (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

APPENDIX A

A.1. Data Table

(a) The following table indicates performance and features by Configuration.

			CONFIGURATION				
CHARACTERISTIC		PARAG-RAPH	UNIT S	A	B	C	D
LIFT CAPACITY		3.4.1 (a)	kg	1,805	2,260	2,715	3,170
			lb	4,000	5,000	6,000	7,000
LOAD CENTRE			mm	610	610	610	610
			in	24	24	24	24
STANDARD MAST – LIFT HEIGHT		3.4.1 (c)	mm	4,720	4,720	4,720	4,695
			in	186	186	186	185
STANDARD MAST – VEHICLE HEIGHT		3.4.1 (d)	mm	2,290	2,290	2,290	2,290
			in	90	90	90	90
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	3,805	3,805	3,805	3,805
			in	150	150	150	150
	VEHICLE HEIGHT		mm	2,135	2,135	2,135	2,135
			in	84	84	84	84
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	5,330	5,330	5,330	5,330
			in	210	210	210	210
	VEHICLE HEIGHT		mm	2,795	2,795	2,795	2,795
			in	110	110	110	110
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	5,940	5,940	5,940	5,560
			in	234	234	234	219
	VEHICLE HEIGHT		mm	2,925	2,925	2,925	2,925
			in	115	115	115	115
BATTERY CAPACITY		3.15 (b)	kWh	29.5	40.5	47.5	47.5

A.2. Feature and Accessory Table

The following table indicates, with "X", for each configuration the accessories, attachments and features that ***must*** be provided when specified in the solicitation, with a clause reference.

		CONFIGURATION			
DESCRIPTION	PARAGRAPH	A	B	C	D
"EE" Safety Rating Feature	3.3.5	X	X	X	X
Fire Extinguisher	3.5 (e)	X	X	X	X
Mast no. 2	3.5.1 (a)	X	X	X	X
Mast no. 3	3.5.1 (b)	X	X	X	X
Mast no. 4	3.5.1 (c)	X	X	X	X
Lift Accumulator	3.5.1 (d)	X	X	X	X
Side Shifter	3.5.1 (e)	X	X	X	X
Fork Positioning Side Shifter	3.5.1 (f)	X	X	X	X
54-inch Forks	3.5.1 (g)	X	X	X	X
60-inch Forks	3.5.1 (h)	X	X	X	X
Fork Tine Position Guide	3.5.1 (i)	X	X	X	X
Removable Cab	3.6.1 (a)	X	X	X	X
Suspension Seat	3.6.1 (b)	X	X	X	X
Lug Tread Tires	3.12.1 (a)	X	X	X	X
Weigh Scale	3.14.1 (a)	X	X	X	X
220 V, Single Phase Charger	3.15.1 (a)	X	X	X	X
220 V, 3 Phase Charger	3.15.1 (b)	X	X	X	X
440 V, 3 Phase Charger	3.15.1 (c)	X	X	X	X
550 V, 3 Phase Charger	3.15.1 (d)	X	X	X	X
Battery Watering System	3.15. (d)	X	X	X	X
Battery Rollers	3.15. (e)	X	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X	X
Training – Familiarization	4.2 (a)	X	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA FOR GROUP 2B: ELECTRIC, 4-WHEELS SIT-DOWN RIDER FORKLIFT TRUCK

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as **Equivalent**?

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as **Equivalents** below:

NOTE: Substantial Information must be provided for all items offered as a substitute or alternative.

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C: Config D:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.1	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C: Config D:
3.3.5 (a)	The vehicle must be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an Equivalent , in lieu of the “E” safety rating (paragraph 3.3.4)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C: Config D:
3.4.1(a)	The vehicle, with the standard mast and no accessories, must have	Capacity/load center	lbs/inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	a load capacity of at least that given as “ LIFT CAPACITY ” in the A.1 - Data Table (Appendix A) at the load centre of that given as “ LOAD CENTRE ” in the A.1 - Data Table (Appendix A)			Config D:
3.4.1(c)	The vehicle must have a lift height of at least that given as “ STANDARD MAST - LIFT HEIGHT ” in the A.1 - Data Table (Appendix A), measured from the floor to the top surface of the forks in the full-up position	Lift height	inch	Config A: Config B: Config C: Config D:
3.4.1(d)	The vehicle, with the mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ STANDARD MAST – VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)	Overall vehicle height	inch	Config A: Config B: Config C: Config D:
3.5.1(a)-ii	Mast no. 2 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 2 ” – “ LIFT	lift height	Inch	Config A: Config B: Config C: Config D:



Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	HEIGHT in the A.1 - Data Table (Appendix A)			
3.5.1(a)-iii	The vehicle, with the mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " MAST 2 " – " VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A)	vehicle height	Inch	Config A: Config B: Config C: Config D:
3.5.1(b)-ii	Mast no. 3 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as " MAST 3 " – " LIFT HEIGHT " in the A.1 - Data Table (Appendix A)	lift height	Inch	Config A: Config B: Config C: Config D:
3.5.1(b)-iii	The vehicle, with the mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " MAST 3 " – " VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A)	vehicle height	Inch	Config A: Config B: Config C: Config D
3.5.1(c)-ii	Mast no. 4 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as	lift height	Inch	Config A: Config B: Config C: Config D:



Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	"MAST 4" – "LIFT HEIGHT" in the A.1 - Data Table (Appendix A)			
3.5.1(c)-iii	The vehicle, with the mast no. 4 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as "MAST 4" – "VEHICLE HEIGHT" in the A.1 - Data Table (Appendix A)	vehicle height	Inch	Config A: Config B: Config C: Config D:
3.5.1(e)	The vehicle must be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 100 mm (4 inches) to either side	Side-shift	Inch	Config A: Config B: Config C: Config D:
3.5.1(f)	The vehicle must be provided with an integrated fork-positioning side shifter. The fork-positioning attachment must increase/decrease the spacing between the unloaded forks.	Fork positioner	Inch	Config A: Config B: Config C: Config D:
3.15 (b)	Batteries must have a capacity of at least "BATTERY CAPACITY" as given in A.1 - Data Table (Appendix A)	Battery Capacity	kWh	Config A: Config B: Config C: Config D:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 3A

PURCHASE DESCRIPTION (PD)

FOR

**REACH & TIERING, STAND UP RIDER, ELECTRIC MOTOR DRIVEN FORKLIFT
TRUCK**

Date: 09 September 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense



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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for straddle leg, reach and tiering, stand-up rider, electric motor driven forklift truck with features and accessories.

1.2. **Instructions** - The following instructions apply to this Purchase Description:

- (a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- (b) Requirements that are identified by the word “***must***”, ***must*** be treated as mandatory. Deviations will not be permitted.
- (c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- (d) Where “***must***” or “will” are not used, the information provided is for guidance only.
- (e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***Equivalent*** standard ***must*** be supplied by the Contractor.
- (f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an ***Equivalent must*** be supplied, when requested by the ***Technical Authority***.
- (g) While the International System of Units (SI) ***must*** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- (h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- (a) “***Provided***” means “provided and installed”.
- (b) “***Technical Authority***” means the official responsible for the technical content of this requirement.
- (c) “***Equivalent***” means a standard, means, or component type that the ***Technical Authority*** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.
- (d) “***Commercially Equipped***” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.

2. APPLICABLE DOCUMENTS

2.1. Government Furnished Documents - NOT APPLICABLE

2.2.0 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.2.1 ANSI Standards

ANSI/ITSDF B56.1 Safety Standard for Low Lift and High Lift Trucks

Industrial Truck Standards Development Foundation
1750 K Street NW, Suite 460, Washington DC 20009, USA
<http://www.itsdf.org/>

2.2.2 CSA B335

Safety Standards for Lift Trucks

Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.2.3 UL 583

Standard for Electric-Battery-Powered Industrial Trucks

Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.2.4 Hazardous Products Act

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle ***must*** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle ***must*** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle ***must*** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle ***must*** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle ***must*** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle ***must*** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (32°F to 104°F).
- 3.2.2. **Terrain** - The vehicle ***must*** operate on use-roughened concrete floors while being used for stacking, un-stacking and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels ***must*** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects ***must*** be in accordance with the latest edition of ANSI/ITDSF B56.1.
- 3.3.3. **Hazardous Materials** – The Contractor ***must*** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"E" Safety Rating** - The vehicle ***must*** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 583, or an ***Equivalent***.

3.3.5. **“EE” Safety Rating Feature**

- (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.4); and
- (b) A certification label confirming the vehicle meets the “EE” safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** - The vehicle **must** be a straddle-type stand-up rider forklift with a reach mechanism.

3.4.1. **Forklift Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity, at a 610 mm load centre, of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A);
- (b) The vehicle **must** have a lift height of at least that given as “**STANDARD MAST - LIFT HEIGHT**” in the A.1 - Data Table (Appendix A), when measured from the floor to the top surface of the forks in the full-up position;
- (c) The vehicle, with the standard mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**STANDARD MAST - VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
- (d) The vehicle **must** have a reach depth of at least that given as “**REACH**” in the A.1 - Data Table (Appendix A).

3.5. **Equipment**

- (a) **Standard Mast**
 - i. The vehicle **must** be provided with a telescopic mast; and
 - ii. The standard mast **must** have full free lift.
- (b) **Forks** - The vehicle **must** be provided with forks having a nominal fork length of “**FORK LENGTH**” as given in the A.1 - Data Table (Appendix A); and
- (c) **Load Backrest** - The load backrest **must** have a nominal height of 1,219 mm (48 inches);
- (d) **Straddle Legs**
 - i. The vehicle **must** be provided with straddle legs with a separation, in increments, covering a range of at least that given as “**MINIMUM SEPARATION**” and “**MAXIMUM SEPARATION**” in the A.1 - Data Table (Appendix A);
 - ii. The straddle separation is defined as the distance between straddle legs inside edges, preferably in increments of 50 mm (2 inches); and

-
- iii. The straddle separation, which **must** be provided to a destination will be stated in the call-up, if no separation is stated in the call-up then the maximum separation **must** be provided.
 - (e) **Reach Mechanism**
 - i. The vehicle **must** be provided with a mechanism capable of moving the load forward, with the forklift stationary; and
 - ii. The mechanism **must** move the forks forward a distance of at least that given as “**REACH**” in the A.1 - Data Table (Appendix A).
 - (f) **Fork Tine Position Guide**
 - i. The vehicle **must** be provided with a fork tine position guide;
 - ii. The fork tine position guide **must** be permanently attached to the backrest;
 - iii. The fork tine position guide **must** use a laser to create a line that shows the level of the top of the fork tines;
 - iv. The fork tine position guide **must** be connected to the vehicle electrical system;
 - v. The fork tine position guide **must** automatically turn off when the vehicle is turned off; and
 - vi. The fork tine position guide **must** automatically turn off when the forks are within 2,130 mm (84 inches) of ground level.
- 3.5.1. **Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Mast no. 2**
 - i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 2 **must** have full free lift;
 - iii. Mast no. 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
 - (b) **Mast no. 3**
 - i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 3 **must** have full free lift;
 - iii. Mast no. 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and

-
- iv. The vehicle, with mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
 - (c) **Mast no. 4**
 - i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 4 **must** have full free lift;
 - iii. Mast no. 4 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
 - (d) **Mast no. 5**
 - i. The vehicle **must** be provided with mast no. 5, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 5 **must** have full free lift;
 - iii. Mast no. 5 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 5**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 5 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 5**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
 - (e) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 50 mm (2 inches) to either side of the centreline; and
 - (f) **Fire Extinguisher**
 - i. Electric vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - ii. The fire extinguisher **must** be readily accessible to the operator; and
 - iii. The fire extinguisher **must** not interfere with the operation of the vehicle or the view of the operator.

3.6. **Operator Station**

- (a) The vehicle **must** be provided with an operator station with an overhead guard that allows full load visibility;
- (b) The overhead guard **must** be provided with steel bars or **Equivalent** mounted to protect the operator from falling objects;
- (c) The vehicle **must** have a clearance of at least 1,994 mm (78.5 inches) between the floor and the underside of the overhead guard;

-
- (d) The operator station **must** be provided with an anti-fatigue floor mat and an operator's backrest. It is preferred that the operator is facing across the direction of travel; and
 - (e) The operator station **must** be provided with two rear vertical posts that are installed on both sides of the operator's compartment extending to the overhead guard in order to provide additional protection against incidental intrusions in the operator compartment.
- 3.7. **Chassis - Commercially Equipped**
- 3.8. **Motors - Commercially Equipped**
- 3.9. **Transmission - Commercially Equipped**
- 3.10. **Brake System**
- (a) The brake system **must** conform to CSA B335; and
 - (b) The brakes **must** be provided with a dead-man type service brake, automatically applied upon removal of operator's foot from the pedal.
- 3.11. **Steering - Commercially Equipped**
- 3.12. **Tires - Commercially Equipped**
- 3.13. **Controls - Commercially Equipped**
- 3.14. **Instruments** - The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.
- 3.14.1. **Instruments Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **Weigh Scale**
 - i. The vehicle **must** be provided with a weigh scale with 2 percent accuracy at forklift capacity; and
 - ii. The weigh scale **must** be provided with a digital readout with zeroing capability.
- 3.15. **Electrical System**
- (a) The vehicle **must** be provided with an electrical system operating at no less than twenty four (24) volts;
 - (b) Batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in the A.1 - Data Table (Appendix A);
 - (c) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in backup mode; and
 - (d) The vehicle **must** be provided with battery compartment rollers to allow the rapid changing of the batteries.
- 3.15.1. **Electrical Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:
- (a) **220 V, Single Phase Charger** - A charger **must** be supplied for connection to a 220-volt, single phase, 60Hz power source;
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- (b) **220 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 220-volt, three phase, 60Hz power source;
 - (c) **440 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 440-volt, three phase, 60Hz power source;
 - (d) **550 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 550-volt, three phase, 60Hz power source; and
 - (e) **Battery Watering System**
 - i. The vehicle **must** be provided with a battery watering system;
 - ii. The battery watering system **must** be supplied with a removable hose; and
 - iii. The removable hose **must** be provided with a quick connect coupler.
- 3.16. **Lighting**
- (a) **Flashing Beacon**
 - i. The vehicle **must** be provided with a red flashing beacon light mounted on the rear of the vehicle; and
 - ii. The beacon **must** be activated when the vehicle travels in reverse.
 - (b) **Working Lights** - The vehicle **must** be provided with the manufacturer's working light package.
- 3.17. **Hydraulic System - Commercially Equipped**
- 3.18. **Lubricants and Hydraulic Fluids**
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint - Commercially Equipped**
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
 - (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

4. **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii The operator manuals **must** be supplied in a bilingual format as a package;
- iv Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v Digital copies **must** be supplied on a CD or DVD;
- vi Digital copies **must** be supplied in a searchable PDF format;
- vii The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii Manual approval or comments will be supplied within 15 working days of receipt;
- ix The Contractor must supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve the manuals;
- x Manuals will not be returned; and
- xi Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;

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- ii One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
 - iii One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv Photographs **must** have a plain background;
 - v Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi Photographs **must** have a resolution of at least eight (8) Mega pixels.

(c) **Data Summary**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
- ii The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
- iii The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
- iv Data summary approval or comments will be supplied within 15 working days of receipt; and
- v The Contractor **must** supply responses to the **Technical Authority's** comments.

(d) **Safety Data Sheets**

- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
- ii If there are no hazardous materials used, this **must** be stated on the list; and
- iii The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list

(e) **Warranty Letter**

- i The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;

-
- ii The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- (f) **Initial Parts Kit List**
- i The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii A complete change of all filters and filter elements **must** be included in the list; and
 - iii The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i The Contractor **must** supply a set of safety data sheets; and
 - ii The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i One (1) initial parts kit **must** be supplied; and
 - ii The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.

(e) **Maintenance Manual**

- i The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
- ii The Contractor may supply this deliverable as a bilingual package

(f) **Parts Manual**

- i The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
- ii The parts manual **must** be supplied in English in paper and digital format;
- iii It is desirable to supply the parts manual in French in addition to the English version; and
- iv Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.

(g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2

Training

(a) **Training – Familiarization**

- i The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii The instructor **must** be an OEM Factory Certified Training Provider;
- iii The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;

iv **Curriculum**

1. The familiarization course **must** include operation and maintenance segments;
2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and

-
4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).
- v The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.
- (b) **Training – Troubleshooting**
- i When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii The instructor **must** be an OEM Factory Certified Training Provider;
- iii The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training
- iv The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
- v The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
- vi The troubleshooting course **must** be supplied at the delivery destination;
- vii The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
- viii After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
- ix The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 ILS Data Deliverables Summary - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1. Data Table - The following table indicates performance and features by Configuration.

			CONFIGURATION			
CHARACTERISTIC		PARAGRAPH	UNITS	A	B	C
LIFT CAPACITY		3.4.1 (a)	kg	1 355	1 580	2 265
			lbs	3 000	3 500	4 500
STANDARD MAST	LIFT HEIGHT	3.4.1 (b)	mm	4 875	4 875	4 875
			in	192	192	192
	VEHICLE HEIGHT	3.4.1 (c)	mm	2 275	2 275	2 275
			in	89.5	89.5	89.5
REACH		3.4.1 (e)	mm	1 067	505	505
			in	42	20	20
FORK LENGTH		3.5 (b)	mm	1 015	1 015	1 015
			in	40	40	40
MINIMUM SEPARATION		3.5 (d)	mm	865	865	865
			in	34	34	34
MAXIMUM SEPARATION			mm	1 240	1 240	1 240
			in	49	49	49
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	6 095	6 095	6 095
			in	240	240	240
	VEHICLE HEIGHT		mm	2 745	2 745	2 745
			in	108	108	108
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	6 855	6 855	6 855
			in	270	270	270
	VEHICLE HEIGHT		mm	3 050	3 050	3 050
			in	120	120	120
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	7 620	7 620	7 620
			in	300	300	300
	VEHICLE HEIGHT		mm	3 355	3 355	3 355
			in	132	132	132
MAST 5	LIFT HEIGHT	3.5.1 (d)	mm	9 295	9 295	9 295
			in	366	366	366
	VEHICLE HEIGHT		mm	4 115	4 115	4 115
			in	162	162	162
BATTERY CAPACITY		3.15 (b)	kWh	26	26	26

A.2. Feature and Accessory Table - The following table indicates, with "X", for each configuration the accessories, attachments and features with a clause reference that **must** be provided when specified in the solicitation.

DESCRIPTION	PARAGRAPH	CONFIGURATION		
		A	B	C
"EE" Safety Rating Feature	3.3.5	X	X	X
Mast no. 2	3.5.1 (a)	X	X	X
Mast no. 3	3.5.1 (b)	X	X	X
Mast no. 4	3.5.1 (c)	X	X	X
Mast no. 5	3.5.1 (d)	X	X	X
Side Shifter	3.5.1 (e)	X	X	X
Fire Extinguisher	3.5.1 (f)	X	X	X
Weigh Scale	3.14.1 (a)	X	X	X
220 V, Single Phase Charger	3.15.1 (a)	X	X	X
220 V, 3 Phase Charger	3.15.1 (b)	X	X	X
440 V, 3 Phase Charger	3.15.1 (c)	X	X	X
550 V, 3 Phase Charger	3.15.1 (d)	X	X	X
Battery Watering System	3.15.1 (e)	X	X	X
Working Lights	3.16. (b)	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X
Maintenance Manuals	4.1.2 (e)	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X
Training – Familiarization	4.2 (a)	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA

For

Group 3B: Electric Stand-Up Rider, Counterbalance Forklift Truck

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.1	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C:
3.3.5 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.4)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C:
3.4.1(a)	The vehicle, with the standard mast and no accessories, <i>must</i> have a load capacity at a 610 mm load centre of at least that given as “LIFT	Capacity/load center	lbs/inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	CAPACITY " in the A.1 - Data Table (Appendix A)			
3.4.1(b)	The vehicle must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as "STANDARD MAST" - "LIFT HEIGHT" in the A.1 - Data Table (Appendix A)	Lift height	inch	Config A: Config B: Config C:
3.4.1(c)	The vehicle, with the standard mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as "STANDARD MAST" - "VEHICLE HEIGHT" in the A.1 - Data Table (Appendix A)	vehicle height	inch	Config A: Config B: Config C:
3.5.1(a)-iii	Mast no. 2 must have a lift height, measured from them floor to the top surface of the forks in the full-up position, of at least that given as "MAST 2" – "LIFT HEIGHT" in the A.1 - Data Table (Appendix A)	lift height	Inch	Config A: Config B: Config C:
3.5.1(a)-iv	The vehicle, with mast no. 2 in its lowest position, must pass	vehicle height	Inch	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	under a horizontal beam with a height above ground level of that given as “ MAST 2 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)			Config C:
3.5.1(b)-iii	Mast no. 3 must have a lift height, measured from them floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 3 ” – “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A)	lift height	Inch	Config A: Config B: Config C:
3.5.1(b)-iv	The vehicle, with mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 3 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)	vehicle height	Inch	Config A: Config B: Config C:
3.5.1(c)-iii	Mast no. 4 must have a lift height, measured from them floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 4 ” – “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A)	lift height	Inch	Config A: Config B: Config C:
3.5.1(c)-iv	The vehicle, with mast no. 4 in its lowest position, must pass	vehicle height	Inch	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	under a horizontal beam with a height above ground level of that given as " MAST 4 " – " VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A)			Config C:
3.5.1(d)-iii	Mast no. 5 must have a lift height, measured from them floor to the top surface of the forks in the full-up position, of at least that given as " MAST 5 " – " LIFT HEIGHT " in the A.1 - Data Table (Appendix A)	lift height	Inch	Config A: Config B: Config C:
3.5.1(d)-iv	The vehicle, with mast no. 5 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " MAST 5 " – " VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A)	vehicle height	Inch	Config A: Config B: Config C:
3.5.1(e)	The vehicle must be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 50 (2 inches) mm to either side of the centreline	Side-shift	Inch	Config A: Config B: Config C:
3.15 (b)	Batteries must have a capacity of at least " BATTERY CAPACITY " as given in the A.1 - Data Table (Appendix A)	Battery capacity	kWh	Config A: Config B: Config C:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 4A

PURCHASE DESCRIPTION (PD)

FOR

WALKIE STACKER, STRADDLE TYPE, ELECTRIC MOTOR DRIVEN FORKLIFT TRUCK

Date: 09 September 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense

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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for electric straddle walkie stackers with features and accessories.

1.2. **Instructions**

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- b) Requirements that are identified by the word “**must**”, **must** be treated as mandatory. Deviations will not be permitted.
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- d) Where “**must**” or “will” are not used, the information provided is for guidance only.
- e) Where a standard is specified and the Contractor has offered an **Equivalent**, that **Equivalent** standard **must** be supplied by the Contractor.
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an **Equivalent must** be supplied, when requested by the **Technical Authority**.
- g) While the International System of Units (SI) **must** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- h) Dimensions stated as nominal **must** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- a) “**Provided**” means “provided and installed”.
- b) “**Technical Authority**” means the official responsible for the technical content of this requirement.
- c) “**Equivalent**” means a standard, means, or component type that the **Technical Authority** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.
- d) “**Commercially Equipped**” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.

2. **APPLICABLE DOCUMENTS**

2.1 **Government Furnished Documents** - NOT APPLICABLE

2.2.0 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.2.1 **SAE Standards**

SAE World Headquarters
400 Commonwealth Dr.,
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.2.2 **CSA B335**

Safety Standards for Lift Trucks

Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.2.3 **UL 583**

Standard for Electric-Battery-Powered Industrial Trucks

Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.2.4 **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

2.2.5 **ANSI Standards**

ANSI/ITSDF B56.1 Safety Standard for Low Lift and High Lift Trucks
Industrial Truck Standards Development Foundation
1750 K Street NW, Suite 460, Washington DC 20009, USA
<http://www.itsdf.org/>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle ***must*** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle ***must*** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle ***must*** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle ***must*** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle ***must*** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle ***must*** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (32°F to 104°F).
- 3.2.2. **Terrain** - The vehicle ***must*** operate on use-roughened concrete floors while being used for stacking and un-stacking pallets and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels ***must*** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects ***must*** be in accordance with the latest edition of ANSI/ITDSF B56.1.
- 3.3.3. **Hazardous Materials** – The Contractor ***must*** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"E" Safety Rating** - The vehicle ***must*** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 583, or an ***Equivalent***.
- 3.3.5. **"EE" Safety Rating Feature**

-
- (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.4); and
 - (b) A certification label confirming the vehicle meets the “EE” safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** – The vehicle **must** be a straddle-type walkie stacker.

3.4.1. **Forklift Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity at a 610 mm load centre of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A);
- (b) The vehicle **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**STANDARD MAST – LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
- (c) The vehicle, with the standard mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

3.5. **Equipment**

(a) **Standard Mast**

- i. The vehicle **must** be provided with a telescopic mast; and
- ii. The standard mast **must** have full free lift.

(b) **Forks** - The vehicle **must** be provided with forks having a nominal fork length of “**FORK LENGTH**” as given in the A.1 - Data Table (Appendix A);

(c) **Load Backrest** - The load backrest **must** have a nominal height of 1,219 mm (48 inches);

(d) **Straddle Legs**

- i. The vehicle **must** be provided with straddle legs with a separation, in increments, covering a range of at least that given as “**MINIMUM SEPARATION**” and “**MAXIMUM SEPARATION**” in the A.1 - Data Table (Appendix A);
- ii. The straddle separation is defined as the distance between straddle legs inside edges, preferably in increments of 50 mm; and
- iii. The straddle separation **must** be provided when stated in the call-up, if no separation is stated in the call-up then the maximum separation **must** be provided.

3.5.1. **Features and Accessories** - When requested, the following feature and accessories **must** be provided with the vehicle:

(a) **Mast no. 2**

- i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));

-
- ii. Mast no. 2 **must** have full free lift;
 - iii. Mast no. 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (b) **Mast no. 3**
- i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 3 **must** have full free lift;
 - iii. Mast no. 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (c) **Mast no. 4**
- i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 4 **must** have full free lift;
 - iii. Mast no. 4 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (d) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 50 mm to either side of the centerline; and
- (e) **Cold Storage Preparation**
- i. The vehicle **must** be provided with preparation for operations in a refrigerated warehouse; and
 - ii. The preparations **must** include low temperature lubricants, anti-seize compounds, hydraulic fluids and heated and/or sealed switches and controls.
- 3.6. **Operator/Forklift Body Clearance** - Sufficient clearance beneath the vehicle **must** be provided so operator’s feet cannot be trapped entering or leaving ramps.
- 3.7. **Chassis** - ***Commercially Equipped***
-

3.8. **Motors - Commercially Equipped**

3.9. **Transmission - Commercially Equipped**

3.10. **Brake System**

- (a) The brake system **must** conform to CSA B335, or an **Equivalent**;
- (b) The brakes **must** be automatically applied when the steering handle is no less than 5 degrees from the true vertical and horizontal positions;
- (c) When the steering handle is released from the operating position, it **must** return to a vertical braking position;
- (d) The braking system **must** be interlocked by a relay; and
- (e) The braking system **must** disconnect the traction motor power when the brakes are applied.

3.11. **Steering**

- (a) The vehicle steering system **must** be through the drive wheel using a steering handle equipped with comfortable handgrips;
- (b) The steering handle, in the horizontal position, **must** protrude at least 610 mm from the rear of the truck;
- (c) The steering handle **must** turn the drive wheel assembly at least 90 degrees in each direction from the straight-ahead position; and
- (d) The steering handle **must** automatically return to the vertical position when released from the operating position.

3.12. **Tires – Commercially Equipped**

3.13. **Controls**

- (a) The vehicle **must** be provided with an electronic speed controller providing infinitely variable speed control in both directions mounted in the steering handle;
- (b) The automatic controls **must** be provided with an emergency reversing button mounted at the end of the steering handle;
- (c) The emergency-reversing button **must** immediately reverse the vehicle direction of motion when depressed to protect the operator from injury during close quarter manoeuvring; and
- (d) The lift controls **must** be self-centring and **must** be interconnected so they cannot be operated with the steering handle in travel position.

3.14. **Instruments** - The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.

3.15. **Electrical System**

- (a) The vehicle **must** be provided with an electrical system operating at no less than twenty four (24) volts;
- (b) Batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in the A.1 - Data Table (Appendix A); and

-
- (c) The vehicle **must** be provided with a back-up alarm to alert personnel that the vehicle is in back-up mode.
- 3.15.1. **Electrical Features and Accessories** – When requested, the following feature and accessories **must** be provided with the vehicle:
- (a) **120 V, Single Phase Charger** - A charger **must** be supplied for connection to a 120-volt, single phase, 60Hz power source;
 - (b) **220 V, Single Phase Charger** - A charger **must** be supplied for connection to a 220-volt, single phase, 60Hz power source;
 - (c) **220 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 220-volt, three phase, 60Hz power source;
 - (d) **440 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 440-volt, three phase, 60Hz power source; and
 - (e) **550 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 550-volt, three phase, 60Hz power source.
- 3.16. **Lighting** - ***Commercially Equipped***
- 3.17. **Hydraulic System** - ***Commercially Equipped***
- 3.18. **Lubricants and Hydraulic Fluids**
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint** - ***Commercially Equipped***
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
 - (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

4. **INTEGRATED LOGISTIC SUPPORT**

4.1. **Documentation and Support Items**

4.1.1. **Items supplied to the *Technical Authority***

(a) **Manuals for Approval**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;,
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 30 working days of receipt;
- ix. The Contractor **must** supply responses to the ***Technical Authority's*** comments;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the ***Technical Authority***.

(b) **Photographs and Line Drawings**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
- iv. Photographs **must** have a plain background;
- v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and

-
- vi. Photographs **must** have a resolution of at least eight (8) megapixels.
- (c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- (f) **Initial Parts Kit List**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one

-
- (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii. A complete change of all filters and filter elements **must** be included in the list; and
 - iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2. **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package.
- (f) **Parts Manual**
 - i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;
 - iii. It is desirable to supply the parts manual in French in addition to the English version;

-
- iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM; and
 - (g) **Keys** – The vehicle **must** be provided with two (2) sets of keys.

4.2. **Training**

(a) **Training - Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;

iv. **Curriculum**

- 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
 - 3. The operation segment **must** include sub-systems including automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;

- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training;
- iv. The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
- v. The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
- vi. The troubleshooting course **must** be supplied at the delivery destination;
- vii. The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
- viii. After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below must be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1. Data Table

The following table indicates performance and features by Configuration that ***must*** be provided.

			CONFIGURATION			
CHARACTERISTIC		PARAGRAPH	UNITS	A	B	C
LIFT CAPACITY		3.4.1 (a)	kg	905	1,355	1,805
			lbs	2,000	3,000	4,000
STANDARD MAST	LIFT HEIGHT	3.4.1 (b)	mm	3,200	3,200	3,145
			in	126	126	124
	VEHICLE HEIGHT	3.4.1 (c)	mm	2,340	2,185	2,185
			in	92	86	86
FORK LENGTH		3.5 (b)	mm	1,067	1,067	1,067
			in	42	42	42
MINIMUM SEPARATION		3.5 (d)	mm	940	940	940
			in	37	37	37
MAXIMUM SEPARATION			mm	1,245	1,245	1,245
			in	49	49	49
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	2,435	2,435	2,540
			in	96	96	100
	VEHICLE HEIGHT		mm	1,920	1,935	2,110
			in	75 1/2	76	83
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	3,655	3,655	3,655
			in	144	144	144
	VEHICLE HEIGHT		mm	2,440	2,440	2,440
			in	96	96	96
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm			4,300
			in			169 1/2
	VEHICLE HEIGHT		mm			2,290
			in			90
BATTERY CAPACITY		3.15 (b)	kWh	10	10	10

A.2. Feature and Accessory Table

The following table indicates, with "X", for each configuration the accessories, attachments and features (with a clause reference) that **must** be provided when specified in the solicitation:

		CONFIGURATION		
DESCRIPTION	PARAGRAPH	A	B	C
"EE" Safety Rating Feature	3.3.5	X	X	X
Mast no. 2	3.5.1 (a)	X	X	X
Mast no. 3	3.5.1 (b)	X	X	X
Mast no. 4	3.5.1 (c)	-	-	X
Side Shifter	3.5.1 (d)	X	X	X
Cold Storage Preparation	3.5.1 (e)	X	X	X
120 V, Single Phase Charger	3.15.1 (a)	X	X	X
220 V, Single Phase Charger	3.15.1 (b)	X	X	X
220 V, 3 Phase Charger	3.15.1 (c)	X	X	X
440 V, 3 Phase Charger	3.15.1 (d)	X	X	X
550 V, 3 Phase Charger	3.15.1 (e)	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X
Training – Familiarization	4.2 (a)	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA

For

Group 4A: Electric Straddle Type, Walkie Stacker Forklift Truck

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.1	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C:
3.3.5 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.4)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C:
3.4.1 (a)	The vehicle, with the standard mast and no accessories, <i>must</i> have a load capacity at a 610 mm load centre of at least that given as “LIFT	Capacity/load center	lbs/inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	CAPACITY ” in the A.1 - Data Table (Appendix A)			
3.4.1 (b)	The vehicle must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “STANDARD MAST – LIFT HEIGHT” in the A.1 - Data Table (Appendix A)	Lift height	inch	Config A: Config B: Config C:
3.4.1 (c)	The vehicle, with the standard mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “VEHICLE HEIGHT” in the A.1 - Data Table (Appendix A)	Vehicle height	inch	Config A: Config B: Config C:
3.5 (d) i.	The vehicle must be provided with straddle legs with a separation, in increments, covering a range of at least that given as “MINIMUM SEPARATION” and “MAXIMUM SEPARATION” in the A.1 - Data Table (Appendix A)	Minimum and maximum separation	inch	Config A: Config B: Config C:
3.5.1(a)-iii & iv	Mast no. 2 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “MAST 2” –	Lift height and vehicle height	Inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	<p>“LIFT HEIGHT” in the A.1 - Data Table (Appendix A); and The vehicle, with mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “MAST 2” – “VEHICLE HEIGHT” in the A.1 - Data Table (Appendix A).</p>			
3.5.1(b)-iii & iv	<p>Mast no. 3 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “MAST 3” – “LIFT HEIGHT” in the A.1 - Data Table (Appendix A); and The vehicle, with mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “MAST 3” – “VEHICLE HEIGHT” in the A.1 - Data Table (Appendix A).</p>	Lift height and vehicle height	Inch	<p>Config A: Config B: Config C:</p>
3.5.1(c)-iii & iv	<p>Mast no. 4 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “MAST 4” – “LIFT HEIGHT” in the A.1 - Data Table (Appendix A); and The vehicle, with mast no. 4 in its lowest</p>	Lift height and vehicle height	Inch	Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	position, must pass under a horizontal beam with a height above ground level of that given as " MAST 4 " – " VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A).			
3.15 (b)	Batteries must have a capacity of at least " BATTERY CAPACITY " as given in the A.1 - Data Table (Appendix A)	Battery capacity	kWh	Config A: Config B: Config C:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) "**Equivalent**" **must** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT
GROUP 4B
PURCHASE DESCRIPTION (PD) (SA)
For
Electric Walkie Stacker, Straddle Reach Forklift Truck

Date: 09 September 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense



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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for straddle reach walkie stackers with features and accessories.

1.2. **Instructions**

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- b) Requirements that are identified by the word “***must***”, ***must*** be treated as mandatory. Deviations will not be permitted.
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- d) Where “***must***” or “will” are not used, the information provided is for guidance only.
- e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***Equivalent*** standard ***must*** be supplied by the Contractor.
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an ***Equivalent must*** be supplied, when requested by the ***Technical Authority***.
- g) While the International System of Units (SI) ***must*** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- a) “***Provided***” means “provided and installed”.
- b) “***Technical Authority***” means the official responsible for the technical content of this requirement.
- c) “***Equivalent***” means a standard, means, or component type that the ***Technical Authority*** has approved for this requirement as meeting the specified requirements for fit, form, function, and performance.
- d) “***Commercially Equipped***” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.

2. **APPLICABLE DOCUMENTS**

2.1 **Government Furnished Documents** - NOT APPLICABLE

2.2.0 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.2.1 **SAE Standards**

SAE World Headquarters
400 Commonwealth Dr,
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.2.2 **CSA B335**

Safety Standards for Lift Trucks

Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.2.3 **UL 583**

Standard for Electric-Battery-Powered Industrial Trucks

Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.2.4 **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

2.2.5 **ANSI Standards**

ANSI/ITSDF B56.1 Safety Standard for Low Lift and High Lift Trucks
Industrial Truck Standards Development Foundation
1750 K Street NW, Suite 460, Washington DC 20009, USA
<http://www.itsdf.org/>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle **must** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle **must** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle **must** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle **must** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (32°F to 104°F).
- 3.2.2. **Terrain** - The vehicle **must** operate on use-roughened concrete floors while being used for stacking and un-stacking pallets and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels **must** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects **must** be in accordance with the latest edition of ANSI/ITDSF B56.1.
- 3.3.3. **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"E" Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 583, or an ***Equivalent***.
- 3.3.5. **"EE" Safety Rating Feature**

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- (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.4); and
 - (b) A certification label confirming the vehicle meets the “EE” safety rating **must** be permanently affixed to the vehicle before delivery.
- 3.4. **Vehicle** - The vehicle **must** be straddle-type walkie stacker with powered movement and reach.
- 3.4.1. **Forklift Performance**
- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity at a 610 mm load centre of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A);
 - (b) The vehicle **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**STANDARD MAST - LIFT HEIGHT**” in the A.1 - Data Table (Appendix A);
 - (c) The vehicle, with the standard mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - (d) The vehicle **must** have a reach depth of at least that given as “**REACH**” in the A.1 - Data Table (Appendix A).
- 3.5. **Equipment**
- (a) **Standard Mast**
 - i. The vehicle **must** be provided with a telescopic mast; and
 - ii. The standard mast **must** have full free lift.
 - (b) **Forks** - The vehicle **must** be provided with forks having a nominal fork length of “**FORK LENGTH**” as given in the A.1 - Data Table (Appendix A);
 - (c) **Load Backrest** - The load backrest **must** have a nominal height of 1,219 mm (48 inches);
 - (d) **Straddle Legs**
 - i. The vehicle **must** be provided with straddle legs with a separation, in increments, covering a range of at least that given as “**MINIMUM SEPARATION**” and “**MAXIMUM SEPARATION**” in the A.1 - Data Table (Appendix A);
 - ii. The straddle separation is defined as the distance between straddle legs inside edges, preferably in increments of 50 mm; and
 - iii. The straddle separation **must** be provided when stated in the call-up, if no separation is stated in the call-up then the maximum separation **must** be provided.
 - (e) **Reach Mechanism**
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- i. The vehicle **must** be provided with a mechanism capable of moving the load forward, with the forklift stationary; and
 - ii. The mechanism **must** move the forks forward a distance of at least that given as “**REACH**” in the A.1 - Data Table (Appendix A).

3.5.1. **Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:

(a) **Mast no. 2**

- i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 2 **must** have full free lift;
- iii. Mast no. 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
- iv. The vehicle, with mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

(b) **Mast no. 3**

- i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 3 **must** have full free lift;
- iii. Mast no. 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
- iv. The vehicle, with mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

(c) **Mast no. 4**

- i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast no. 4 **must** have full free lift;
- iii. Mast no. 4 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
- iv. The vehicle, with mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

- (d) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 50 mm to either side of the centerline; and

(e) **Cold Storage Preparation**

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- i. The vehicle **must** be provided with preparation for operations in a refrigerated warehouse; and
 - ii. The preparations **must** include low temperature lubricants, anti-seize compounds, hydraulic fluids and heated and/or sealed switches and controls.
 - 3.6. **Operator/Forklift Body Clearance** - Sufficient clearance beneath the vehicle **must** be provided so operator's feet cannot be trapped entering or leaving ramps.
 - 3.7. **Chassis - Commercially Equipped**
 - 3.8. **Motors - Commercially Equipped**
 - 3.9. **Transmission - Commercially Equipped**
 - 3.10. **Brake System**
 - (a) The brake system **must** conform to CSA B335, or an **Equivalent**;
 - (b) The brakes **must** be automatically applied when the steering handle is no less than 5 degrees from the true vertical and horizontal positions;
 - (c) When the steering handle is released from the operating position, it **must** return to a vertical braking position;
 - (d) The braking system **must** be interlocked by a relay; and
 - (e) The braking system **must** disconnect the traction motor power when the brakes are applied.
 - 3.11. **Steering**
 - (a) The vehicle steering system **must** be through the drive wheel using a steering handle equipped with comfortable handgrips;
 - (b) The steering handle, in the horizontal position, **must** protrude by at least 610 mm from the rear of the truck;
 - (c) The steering handle **must** turn the drive wheel assembly at least 90 degrees in each direction from the straight-ahead position; and
 - (d) The steering handle **must** automatically return to the vertical position when released from the operating position.
 - 3.12. **Tires – Commercially Equipped**
 - 3.13. **Controls**
 - (a) The vehicle **must** be provided with an electronic speed controller providing infinitely variable speed control in both directions mounted in the steering handle;
 - (b) The automatic controls **must** be provided with an emergency reversing button mounted at the end of the steering handle;
 - (c) The emergency-reversing button **must** immediately reverse the vehicle direction of motion when depressed to protect the operator from injury during close quarter manoeuvring; and

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- (d) The lift controls **must** be self-centring and **must** be interconnected so they cannot be operated with the steering handle in travel position.
- 3.14. **Instruments** - The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.
- 3.15. **Electrical System**
- (a) The vehicle **must** be provided an electrical system operating at no less than twenty four (24) volts;
- (b) Batteries **must** have a capacity of at least “**BATTERY CAPACITY**” as given in the A.1 - Data Table (Appendix A); and
- (c) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in back-up mode.
- 3.15.1. **Electrical Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested
- (a) **120 V, Single Phase Charger** - A charger **must** be supplied for connection to a 120-volt, single phase, 60Hz power source;
- (b) **220 V, Single Phase Charger** - A charger **must** be supplied for connection to a 220-volt, single phase, 60Hz power source;
- (c) **220 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 220-volt, three phase, 60Hz power source;
- (d) **440 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 440-volt, three phase, 60Hz power source; and
- (e) **550 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 550-volt, three phase, 60Hz power source.
- 3.16. **Lighting** - ***Commercially Equipped***
- 3.17. **Hydraulic System** - ***Commercially Equipped***
- 3.18. **Lubricants and Hydraulic Fluids**
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
- (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint** - ***Commercially Equipped***
- 3.20. **Identification** - The manufacturer's name, model, and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
-

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- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment, and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
 - (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

4 **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts, and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 15 working days of receipt;
- ix. The Contractor **must** supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve the manuals;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;

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- iv. Photographs **must** have a plain background;
 - v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.
- (c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features), and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- (f) **Initial Parts Kit List**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts

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- needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii. A complete change of all filters and filter elements **must** be included in the list; and
 - iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features, and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package
- (f) **Parts Manual**
 - i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;
 - iii. It is desirable to supply the parts manual in French in addition to the English version; and

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- iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
 - (g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2 **Training**

(a) **Training – Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
- iv. **Curriculum**
 - 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures, and daily/weekly operator servicing procedures;
 - 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting, and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis, and adjustments training
- iv. The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
- v. The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
- vi. The troubleshooting course **must** be supplied at the delivery destination;
- vii. The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
- viii. After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data	Digital	x	-	-	
	Paper**	-	-	x	

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Sheets French and English					
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA

APPENDIX A

A.1. Data Table

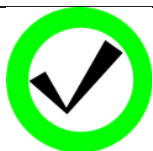
The following table indicates performance and features by Configuration that ***must*** be provided.

			CONFIGURATION	
CHARACTERISTIC	PARAGRAPH	UNITS	A	B
LIFT CAPACITY	3.4.1 (a)	kg	905	1,360
		lbs	2,000	3,000
STANDARD MAST - LIFT HEIGHT	3.4.1 (b)	mm	3,045	3,045
		in	120	120
VEHICLE HEIGHT	3.4.1 (c)	mm	2,135	2,135
		in	84	84
REACH	3.4.1 (d)	mm	505	505
		in	20	20
FORK LENGTH	3.5 (b)	mm	1,067	1,067
		in	42	42
MINIMUM SEPARATION	3.5 (d)	mm	940	940
		in	37	37
MAXIMUM SEPARATION		mm	1,244	1,244
		in	49	49
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	2,435
			in	96
			mm	1,854
			in	73
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	3,755
			in	148
			mm	2,390
			in	94
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	4,365
			in	172
			mm	2,265
			in	89
BATTERY CAPACITY	3.15 (b)	kWh	10	10

A.2. Feature and Accessory Table

The following table indicates, with "X", for each configuration the accessories, attachments and features with a clause reference that ***must*** be provided when specified in the solicitation.

		CONFIGURATION	
DESCRIPTION	PARAGRAPH	A	B
"EE" Safety Rating Feature	3.3.5	X	X
Mast no. 2	3.5.1 (a)	X	X
Mast no. 3	3.5.1 (b)	X	X
Mast no. 4	3.5.1 (c)	X	X
Side Shifter	3.5.1 (d)	X	X
Cold Storage Preparation	3.5.1 (e)	X	X
120 V, Single Phase Charger	3.15.1 (a)	X	X
220 V, Single Phase Charger	3.15.1 (b)	X	X
220 V, 3 Phase Charger	3.15.1 (c)	X	X
440 V, 3 Phase Charger	3.15.1 (d)	X	X
550 V, 3 Phase Charger	3.15.1 (e)	X	X
Initial Parts Kit	4.1.1 (f)	X	X
Manuals for Approval	4.1.1 (a)	X	X
Maintenance Manual	4.1.2 (e)	X	X
Parts Manuals	4.1.2 (f)	X	X
Training – Familiarization	4.2 (a)	X	X
Training – Troubleshooting	4.2 (b)	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA

For

Group 4B: Electric Straddle Reach, Walkie Stacker Forklift Truck

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.1	Manufacturing standard	certificate or OEM brochure	Config A: Config B:
3.3.5 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.4)	Fire Safety standard	certificate or OEM brochure	Config A: Config B:
3.4.1 (a)	The vehicle, with the standard mast and no accessories, <i>must</i> have a load capacity at a 610 mm load centre of at least that given as “LIFT	Capacity/load center	lbs/inch	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	CAPACITY ” in the A.1 - Data Table (Appendix A)			
3.4.1 (b)	The vehicle must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “STANDARD MAST - LIFT HEIGHT” in the A.1 - Data Table (Appendix A)	Lift height	inch	Config A: Config B:
3.4.1 (c)	The vehicle, with the standard mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “VEHICLE HEIGHT” in the A.1 - Data Table (Appendix A)	vehicle height	inch	Config A: Config B:
3.4.1 (d)	The vehicle must have a reach depth of at least that given as “REACH” in the A.1 - Data Table (Appendix A)	reach	Inch	Config A: Config B:
3.5 (b)	Forks - The vehicle must be provided with forks having a nominal fork length of “FORK LENGTH” as given in the A.1 - Data Table (Appendix A)	Fork length	Inch	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.5 (d)	The vehicle must be provided with straddle legs with a separation, in increments, covering a range of at least that given as “ MINIMUM SEPARATION ” and “ MAXIMUM SEPARATION ” in the A.1 - Data Table (Appendix A)	Minimum and maximum separation	Inch	Config A: Config B:
3.5.1(a)-iii & iv	Mast no. 2 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 2 ” – “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 2 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A).	Lift height and vehicle height	Inch	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.5.1(b)-iii & iv	Mast no. 3 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 3 ” – “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 3 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A).	Lift height and vehicle height	Inch	Config A: Config B:
3.5.1(c)-iii & iv	Mast no. 4 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ MAST 4 ” – “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 4 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 4 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A).	Lift height and vehicle height	Inch	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.15 (b)	Batteries must have a capacity of at least “BATTERY CAPACITY” as given in the A.1 - Data Table (Appendix A).	Battery capacity	kWh	Config A: Config B:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) **“Equivalent” must** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT
GROUP 4C
PURCHASE DESCRIPTION (PD) (SA)
FOR
ELECTRIC WALKIE-STACKER, COUNTERBALANCE FORKLIFT TRUCK

Date: 09 September 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense



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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for electric counterbalance walkie-stacker with features and accessories.

1.2. **Instructions**

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- b) Requirements that are identified by the word “**must**”, **must** be treated as mandatory. Deviations will not be permitted.
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- d) Where “**must**” or “will” are not used, the information provided is for guidance only.
- e) Where a standard is specified and the Contractor has offered an **Equivalent**, that **Equivalent** standard **must** be supplied by the Contractor.
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an **Equivalent must** be supplied, when requested by the **Technical Authority**.
- g) While the International System of Units (SI) **must** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- h) Dimensions stated as nominal **must** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- a) “**Provided**” **must** mean “provided and installed”.
- b) “**Technical Authority**” means the official responsible for the technical content of this requirement.
- c) “**Equivalent**” means a standard, means, or component type that the **Technical Authority** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.
- d) “**Commercially Equipped**” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.

2. **APPLICABLE DOCUMENTS**

2.1 **Government Furnished Documents** - NOT APPLICABLE

2.2.0 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.2.1 **CSA B335**

Safety Standards for Lift Trucks

Canadian Standards Association (CSA)

5060 Spectrum Way, Suite 100

Mississauga, Ontario, L4W 5N6

<http://www.csa.ca/cm/ca/en/home>

2.2.2 **UL 558**

Standard for Industrial Trucks, Internal Combustion Engine-Powered

Underwriters' Laboratories of Canada

7 Underwriters Road,

Toronto, Ontario, M1R 3A9

<http://www.ulc.ca/>

2.2.3 **SAE Standards**

SAE World Headquarters

400 Commonwealth Drive

Warrendale, PA, 15096-0001

<http://www.sae.org>

2.2.4 **Hazardous Products Act**

Government of Canada / Department of Justice

<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

2.2.5 **ANSI Standards**

ANSI/ITSDF B56.1 Safety Standard for Low Lift and High Lift Trucks

Industrial Truck Standards Development Foundation

1750 K Street NW, Suite 460, Washington DC 20009, USA

<http://www.itsdf.org/>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle **must** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle **must** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle **must** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle **must** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (32°F to 104°F).
- 3.2.2. **Terrain** - The vehicle **must** operate on use-roughened concrete floors while being used for stacking and un-stacking pallets and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels **must** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects **must** be in accordance with the latest edition of ANSI/ITDSF B56.1.
- 3.3.3. **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) used in the manufacture and assembly of the product supplied.

3.3.4. **“E” Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an “E” safety rating in accordance with Standard UL 583, or an **Equivalent**.

3.3.5. **“EE” Safety Rating Feature**

- (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.4); and
- (b) A certification label confirming the vehicle meets the “EE” safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** – The vehicle **must** be a counterbalance type walkie stacker with powered movement.

3.4.1. **Forklift Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity at a 610 mm load centre of at least that given as **“LIFT CAPACITY”** in the A.1 - Data Table (Appendix A);
- (b) The vehicle **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as **“STANDARD MAST - LIFT HEIGHT”** in the A.1 - Data Table (Appendix A); and
- (c) The vehicle, with the standard mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as **“VEHICLE HEIGHT”** in the A.1 - Data Table (Appendix A).

3.5. **Equipment**

- (a) **Standard Mast**
 - i. The vehicle **must** be provided with a telescopic mast; and
 - ii. The standard mast **must** have full free lift.
- (b) **Forks** - The vehicle **must** be provided with forks having a nominal fork length of **“FORK LENGTH”** as given in the A.1 - Data Table (Appendix A);
- (c) **Load Backrest** - The load backrest **must** have a nominal height of 1,219 mm (48 inches).

3.5.1. **Features and Accessories** - When requested, the following accessories, attachments and features **must** be provided:

- (a) **Mast no. 2**
 - i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 2 **must** have full free lift;
 - iii. The vehicle, with mast no. 2, **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as **“MAST 2” – “LIFT HEIGHT”** in the A.1 - Data Table (Appendix A); and

- iv. The vehicle, with mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (b) **Mast no. 3**
 - i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 3 **must** have full free lift;
 - iii. The vehicle, with mast no. 3, **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (c) **Mast no. 4**
 - i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast no. 4 **must** have full free lift;
 - iii. The vehicle, with mast no. 4, **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. The vehicle, with mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (d) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 50 mm to either side of the centerline; and
- (e) **Cold Storage Preparation**
 - i. The vehicle **must** be provided with preparation for operations in a refrigerated warehouse; and
 - ii. The preparations **must** include low temperature lubricants, anti-seize compounds, hydraulic fluids and heated and/or sealed switches and controls.
- 3.6. **Operator/Forklift Body Clearance** - Sufficient clearance beneath the vehicle **must** be provided so operator’s feet cannot be trapped entering or leaving ramps.
- 3.7. **Chassis - Commercially Equipped**
- 3.8. **Motors - Commercially Equipped**
- 3.9. **Transmission - Commercially Equipped**

3.10. **Brake System**

- (a) The brake system **must** conform to CSA B335, or an **Equivalent**;
- (b) The brakes **must** be automatically applied when the steering handle is no less than 5 degrees from the true vertical and horizontal positions;
- (c) When the steering handle is released from the operating position, it **must** return to a vertical braking position;
- (d) The braking system **must** be interlocked by a relay; and
- (e) The braking system **must** disconnect the traction motor power when the brakes are applied.

3.11. **Steering**

- (a) The vehicle steering system **must** be through the drive wheel using a steering handle equipped with comfortable handgrips;
- (b) The steering handle, in the horizontal position, **must** protrude at least 610 mm from the rear of the truck;
- (c) The steering handle **must** turn the drive wheel assembly at least 90 degrees in each direction from the straight-ahead position; and
- (d) The steering handle **must** automatically return to the vertical position when released from the operating position.

3.12. **Tires – Commercially Equipped**

3.13. **Controls**

- (a) The vehicle **must** be provided with an electronic speed controller providing infinitely variable speed control in both directions mounted in the steering handle;
- (b) The automatic controls **must** be provided with an emergency reversing button mounted at the end of the steering handle;
- (c) The emergency-reversing button **must** immediately reverse the vehicle direction of motion when depressed to protect the operator from injury during close quarter manoeuvring; and
- (d) The lift controls **must** be self-centring and **must** be interconnected so they cannot be operated with the steering handle in travel position.

3.14. **Instruments** - The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.

3.15. **Electrical System**

- (a) The vehicle **must** be provided with an electrical system operating at no less than twenty-four (24) volts;
- (b) Batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in the A.1 - Data Table (Appendix A); and
- (c) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in back-up mode.

- 3.15.1. **Electrical Features and Accessories** – When requested, the following accessories and features **must** be provided:
- (a) **120 V, Single Phase Charger** - A charger **must** be supplied for connection to a 120-volt, single phase, 60Hz power source;
 - (b) **220 V, Single Phase Charger** - A charger **must** be supplied for connection to a 220-volt, single phase, 60Hz power source;
 - (c) **220 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 220-volt, three phase, 60Hz power source;
 - (d) **440 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 440-volt, three phase, 60Hz power source; and
 - (e) **550 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 550-volt, three phase, 60Hz power source.
- 3.16. **Lighting** - ***Commercially Equipped***
- 3.17. **Hydraulic System** - ***Commercially Equipped***
- 3.18. **Lubricants and Hydraulic Fluids**
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings provided on the vehicle **must** conform to SAE J534.
- 3.19. **Paint** - ***Commercially Equipped***
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment, and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
 - (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

4 **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts, and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 15 working days of receipt;
- ix. The Contractor **must** supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve the manuals;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;

- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv. Photographs **must** have a plain background;
 - v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.
- (c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.

(f) **Initial Parts Kit List**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
- ii. A complete change of all filters and filter elements **must** be included in the list; and
- iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.

- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package
- (f) **Parts Manual**
 - i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;

- iii. It is desirable to supply the parts manual in French in addition to the English version; and
 - iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
- (g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2

Training

(a) **Training – Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
- iv. **Curriculum**
 - 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures, and daily/weekly operator servicing procedures;
 - 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting, and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis, and adjustments training
- iv. The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
- v. The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
- vi. The troubleshooting course **must** be supplied at the delivery destination;
- vii. The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
- viii. After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
	Digital	x	-	-	

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Listing of HAZMAT and Safety Data Sheets French and English	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1. Data Table

The following table indicates performance and features by Configuration that ***must*** be provided.

			CONFIGURATION		
CHARACTERISTIC	PARAGRAPH	UNITS	A	B	C
LIFT CAPACITY	3.4.1 (a)	kg	905	1,360	1,810
		lb	2,000	3,000	4,000
STANDARD MAST – LIFT HEIGHT	3.4.1 (b)	mm	3,655	3,810	3,755
		in	148	150	148
VEHICLE HEIGHT	3.4.1 (c)	mm	2,365	2,435	2,435
		in	93	96	96
FORK LENGTH	3.5 (b)	mm	1,067	1,067	1,067
		in	42	42	42
MAST 2	3.5.1 (a)	LIFT HEIGHT	mm	2,640	2,640
			in	104	104
		VEHICLE HEIGHT	mm	1,985	1,985
			in	78	78
MAST 3	3.5.1 (b)	LIFT HEIGHT	mm	3,045	3,200
			in	120	126
		VEHICLE HEIGHT	mm	2,110	2,110
			in	83	83
MAST 4	3.5.1 (c)	LIFT HEIGHT	mm	4,060	4,365
			in	160	172
		VEHICLE HEIGHT	mm	2,720	2,720
			in	107	107
BATTERY CAPACITY	3.15 (b)	kWh	10	10	10

A.2. Feature and Accessory Table

The following table indicates, with "**X**", for each configuration the accessories, attachments and features with a clause reference that **must** be provided when specified in the solicitation.

		CONFIGURATION		
DESCRIPTION	PARAGRAPH	A	B	C
"EE" Safety Rating Feature	3.3.5	X	X	X
Mast no. 2	3.5.1 (a)	X	X	X
Mast no. 3	3.5.1 (b)	X	X	X
Mast no. 4	3.5.1 (c)	X	X	X
Side Shifter	3.5.1 (d)	X	X	X
Cold Storage Preparation	3.5.1 (e)	X	X	X
120 V, Single Phase Charger	3.15.1 (a)	X	X	X
220 V, Single Phase Charger	3.15.1 (b)	X	X	X
220 V, 3 Phase Charger	3.15.1 (c)	X	X	X
440 V, 3 Phase Charger	3.15.1 (d)	X	X	X
550 V, 3 Phase Charger	3.15.1 (e)	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X
Training – Familiarization	4.2 (a)	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA

For

Group 4C: Electric Walkie-Stacker, Counterbalance Forklift Truck

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.1	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C:
3.3.5 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.4)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C:
3.4.1 (a)	The vehicle, with the standard mast and no accessories, <i>must</i> have a load capacity at a 610 mm load centre of at	Capacity/load center	lbs/inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	least that given as “ LIFT CAPACITY ” in the A.1 - Data Table (Appendix A)			
3.4.1 (b)	The vehicle must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ STANDARD MAST - LIFT HEIGHT ” in the A.1 - Data Table (Appendix A)	Lift height	inch	Config A: Config B: Config C:
3.4.1 (c)	The vehicle, with the standard mast in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)	Vehicle height	Inch	Config A: Config B: Config C:
3.5 (b)	Forks - The vehicle must be provided with forks having a nominal fork length of “ FORK LENGTH ” as given in the A.1 - Data Table (Appendix A)	Fork length	Inch	Config A: Config B: Config C:
3.5.1(a)-iii & iv	The vehicle, with mast no. 2, must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as	Lift height and vehicle height	Inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	<p>“MAST 2” – “LIFT HEIGHT” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “MAST 2” – “VEHICLE HEIGHT” in the A.1 - Data Table (Appendix A)</p>			
3.5.1(b)-iii & iv	<p>The vehicle, with mast no. 3, must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “MAST 3” – “LIFT HEIGHT” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “MAST 3” – “VEHICLE HEIGHT” in the A.1 - Data Table (Appendix A)</p>	Lift height and vehicle height	Inch	<p>Config A: Config B: Config C:</p>
3.5.1(c)-iii & iv	<p>The vehicle, with mast no. 4, must have a lift height, measured from the floor to the top surface of the forks in</p>	Lift height and vehicle height	Inch	<p>Config A: Config B: Config C:</p>

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	the full-up position, of at least that given as “ MAST 4 ” – “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 4 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 4 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)			
3.15 (b)	Batteries must have a capacity of at least “ BATTERY CAPACITY ” as given in the A.1 - Data Table (Appendix A)	Battery capacity	kWh	Config A: Config B: Config C:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) “**Equivalent**” **must** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance.



NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT
GROUP 5

PURCHASE DESCRIPTION (PD)
FOR
ELECTRIC MOTOR DRIVEN STOCK-PICKER FORKLIFT TRUCK

Date: 09 October 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense



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1. **SCOPE**

- 1.1 **Scope** - This specification covers the requirements for electric motor driven, stock-picker forklift trucks with features and accessories.
- 1.2 **Instructions** - The following instructions apply to this Purchase Description:
- (a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
 - (b) Requirements that are identified by the word “**must**”, **must** be treated as mandatory. Deviations will not be permitted.
 - (c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
 - (d) Where “**must**” or “will” are not used, the information provided is for guidance only.
 - (e) Where a standard is specified and the Contractor has offered an **Equivalent**, that **Equivalent** standard **must** be supplied by the Contractor.
 - (f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an **Equivalent must** be supplied, when requested by the **Technical Authority**.
 - (g) While the International System of Units (SI) **must** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
 - (h) Dimensions stated as nominal **must** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.
- 1.3 **Definitions**
- (a) “**Provided**” means “provided and installed”.
 - (b) “**Technical Authority**” **must** mean the official responsible for the technical content of this requirement; and
 - (c) “**Equivalent**” **must** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.
 - (d) “**Commercially Equipped**” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements

2. APPLICABLE DOCUMENTS

- 2.1 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.1.1 **SAE Standards**

SAE World Headquarters
400 Commonwealth Dr.,
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.1.2 **CSA B335-04**

Safety Standards for Lift Trucks
Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.3 **UL 583**

Standard for Electric-Battery-Powered Industrial Trucks
Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4 **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

2.1.5 **ANSI B56.1**

Standard for Electric-Battery-Powered Industrial Trucks
American National Standards Institute
1899 L Street, NW, 11th Floor
Washington, DC, 20036
<http://www.ansi.org/>

3. REQUIREMENTS

3.1 Standard Design

- 3.1.1 The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by selling this type and size class of vehicle for at least three (3) years;
- 3.1.2 The vehicle **must** include all components, equipment and accessories normally supplied for this application, although they may not specifically be described in this Purchase Description;
- 3.1.3 The vehicle **must** have engineering certification available for this application from the original manufacturers of major equipment, systems and assemblies;
- 3.1.4 The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and pollution in effect in Canada at the time of manufacture; and
- 3.1.5 The vehicle and accessories **must** operate in accordance with all original equipment manufacturers' (OEM) rated capacities and performance specifications.

3.2 Operating Conditions

- 3.2.1 **Weather** - The vehicle **must** start and operate under the extremes of weather conditions found in Canada in temperatures ranging from 0 to 40°C (32 to 104°F).
- 3.2.2 **Terrain** – The vehicle **must** be capable of being operated on use-roughened concrete floors while being used for stacking, un-stacking and moving general supplies in warehouses.

3.3 Safety Standards

- 3.3.1 **Vehicle Safety** – All vehicle design and safety aspects **must** be in accordance with ANSI B56.1 or an **Equivalent**.
- 3.3.2 **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) used in the manufacture and assembly of the product supplied.
- 3.3.3 **"E" Rating** - The vehicle **must** be manufactured to meet the requirements of an "E" Rating in accordance with Standard UL 583, or an **Equivalent**.
- 3.3.4 **Safety Rating** - The safety ratings listed in the following paragraphs **must** be available for provision on the vehicle, as indicated in the A.2 - Feature and Accessory Table (Appendix A). The safety rating **must** be provided when required by the contract.

- (a) **"EE" Safety Rating**

- i The vehicle **must** be provided with a label attesting to the vehicle being built and certified to the "EE" rating in accordance with

standard UL 583, or an **Equivalent**, in lieu of the “E” rating (paragraph 3.3.3); and

- ii The label **must** be permanently affixed to the vehicle before delivery.

3.4 **Vehicle** – The vehicle **must** be an operator-up style stock-picker.

3.4.1 **Forklift Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a rated capacity of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A) at a load centre of no less than 610 mm. Lift capacity **must** be maintained to the specified platform height;
- (b) The vehicle **must** have a platform height of at least that given as “**STANDARD MAST**” - “**PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A); and
- (c) The vehicle **must** pass under a horizontal beam with a height above ground level of that given as “**STANDARD MAST**” - “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

3.5 **Equipment, Features, and Accessories**

3.5.1 **Equipment** - The vehicle **must** be provided with the equipment listed in the following paragraphs.

- (a) **Standard Mast** – The vehicle **must** be provided with the manufacturer’s mast for this type and size of vehicle;
- (b) **Forks** – The vehicle **must** be provided with forks having a nominal length of 1,016 mm (40 inches) or 1,066 mm (42 inches) beyond the edge of the platform; and
- (c) **Pallet Clamp** – The vehicle **must** be provided with a pallet clamp, flush with the top of the forks.

3.5.2 **Features and Accessories** – When requested, the following accessories and features **must** be provided:

- (a) **Mast no. 2**
 - i The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5.1 (a));
 - ii Mast no. 2 **must** have a platform height of at least that given as “**MAST 2**” – “**PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iii The vehicle, with mast no. 2, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

(b) **Mast no. 3**

- i The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5.1 (a));
- ii Mast no. 3 **must** have a platform height of at least that given as “**MAST 3**” – “**PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A); and
- iii The vehicle, with mast no. 3, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

(c) **Aisle Guide Rollers** – The vehicle **must** be provided with aisle guide rollers for guide rails from 1,219 to 1,524 mm wide.

(d) **Fire Extinguisher**

- i. Electric vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
- ii. The fire extinguisher **must** be readily accessible to the operator; and
- iii. The fire extinguisher **must** not interfere with the operation of the vehicle or the view of the operator.

3.6 **Operator Station**

- (a) The vehicle **must** be provided with a man-up style operator station;
- (b) The station **must** have an operator platform no less than 910 mm wide and 580 mm long;
- (c) The station **must** be provided with a full body harness;
- (d) The full body harness **must** be connected to a retractor for self-coiling of the operator’s harness tether strap;
- (e) The station **must** be provided with a retractable side gates;
- (f) The station **must** be provided with an overhead guard and an anti-fatigue floor mat;
- (g) The station **must** be provided with a wire mesh window or **Equivalent** between the operator’s platform and the mast; and
- (h) The station **must** be provided with overhead lights, fans, and a document storage pocket.

3.6.1 **Operator’s Station Features and Accessories** – When requested, the following accessories and features **must** be provided:

- (a) **Operator’s Window** – The vehicle **must** be provided with a transparent window in lieu of a wire mesh between the operator’s station and the mast.

3.7 **Chassis - Commercially Equipped**

3.8 **Motors - Commercially Equipped**

3.9 **Transmission - Commercially Equipped**

3.10 **Brake System**

- (a) The brake system **must** conform to CSA B335; and
- (b) The brakes **must** be provided with a dead-man type service brake, automatically applied upon removal of operator's foot from the pedal.

3.11 **Steering - Commercially Equipped**

3.12 **Tires – Commercially Equipped**

3.13 **Controls**

- (a) The vehicle **must** be provided with manufacturer's controls;
- (b) Controls **must** be provided with a "dead man" switch, which activates the brakes. It is preferable that the "dead man" switch turns off vehicle power.

3.13.1 **Control Features and Accessories** - When requested, the following accessories and features **must** be provided:

(a) **Wire Guidance System**

- i The vehicle **must** be provided with manufacturer's wire guidance system; and
- ii The preferred line frequency is 6.25 kHz. The Contractor **must** provide frequencies between 5.25 and 6.25 kHz, as required by the contract.

(b) **Wire Guidance Signal Generator**

- i A signal generator to provide the signal required for the wire guidance system **must** be supplied; and
- ii The preferred line frequency is 6.25 kHz. The Contractor **must** provide frequencies between 5.25 and 6.25 kHz, as required by the contract.

3.14 **Instruments**

- (a) The vehicle **must** be provided with manufacturer's instruments; and
- (b) The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.

3.15 **Electrical System**

- (a) The vehicle **must** be provided with at least 24 volts batteries;

-
- (b) Batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in the A.1 - Data Table (Appendix A); and
 - (c) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in backup mode.

3.15.1 **Electrical Features and Accessories** – When requested, the following accessories and features **must** be provided:

- (a) **220 V, Single Phase Charger** - A charger **must** be supplied for a 220 volt, single phase, 60Hz power source;
- (b) **220 V, 3 Phase Charger** - A charger **must** be supplied for a 220-volt, three phase, 60Hz power source;
- (c) **440 V, 3 Phase Charger** - A charger **must** be supplied for a 440-volt, three phase, 60Hz power source;
- (d) **550 V, 3 Phase Charger** - A charger **must** be supplied for a 550-volt, three phase, 60Hz power source; and
- (e) **Battery Watering Hose**
 - i The vehicle **must** be supplied with a hose for refilling the water reservoir for the battery watering system; and
 - ii The hose with quick connect attachment **must** be suitable for use with the watering system provided for the batteries as specified in paragraph 3.15 (a).
- (f) **Gate Interlock** – The vehicle **must** be provided with an interlock circuit that disables vehicle movements when either gate is opened.

3.16 **Lighting**

- (a) The vehicle **must** be provided with the manufacturer's lighting package;
- (b) **Flashing Beacon**
 - i The vehicle **must** be provided with a red flashing beacon light mounted on the rear of the vehicle; and
 - ii The beacon **must** be activated when the vehicle travels in reverse.
- (c) **Work Lights** – The vehicle **must** be provided with manufacturer's working light package.

3.17 **Hydraulic System**

- (a) The hydraulic system **must** be provided with all components required for the operation of the hydraulic equipment specified, including pump, reservoir, filters, and control valves; and
- (b) The hydraulic reservoir **must** be provided with a visual oil level indication.

3.18 **Lubricants and Hydraulic Fluids**

-
- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
 - (b) Grease fittings **must** conform to SAE J534 or an **Equivalent**.

3.19 **Paint** – **Commercially Equipped**

3.20 **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.

3.21 **Vehicle Delivery Condition**

- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted) and both the interior and exterior **must** be cleaned;
- (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
- (c) The space for assembly at destination will be provided, if required;
- (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
- (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery

4 **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts, and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 15 working days of receipt;
- ix. The Contractor **must** supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve the manuals;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;

-
- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv. Photographs **must** have a plain background;
 - v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.
- (c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
-

(f) **Initial Parts Kit List**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
- ii. A complete change of all filters and filter elements **must** be included in the list; and
- iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.

- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package
- (f) **Parts Manual**
 - i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;

-
- iii. It is desirable to supply the parts manual in French in addition to the English version; and
 - iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
- (g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2 **Training**

(a) **Training – Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
- iv. **Curriculum**
 - 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures, and daily/weekly operator servicing procedures;
 - 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting, and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis, and adjustments training
- iv. The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
- v. The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
- vi. The troubleshooting course **must** be supplied at the delivery destination;
- vii. The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
- viii. After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

5. APPENDIX A

A.1 Data Table

The following table shows required performance and dimensions for each Configuration and includes clause references that ***must*** be provided:

			CONFIGURATION			
CHARACTERISTIC		CLAUSe	UNITS	A	B	C
LIFT CAPACITY		3.4.1 (a)	kg	680	907	1,360
			lbs	1,500	2,000	3,000
STANDARD MAST	PLATFORM HEIGHT	3.4.1 (b)	mm	9,140	7,620	4,750
			inches	360	300	180
	VEHICLE HEIGHT	3.4.1 (c)	mm	3,965	3,355	2,745
			inches	156	132	108
MAST 2	PLATFORM HEIGHT	3.5.1 (a)	mm			5,380
			inches			212
	VEHICLE HEIGHT		mm			3,355
			inches			132
MAST 3	PLATFORM HEIGHT	3.5.1 (b)	mm			6,095
			inches			240
	VEHICLE HEIGHT		mm			2,745
			inches			108
BATTERY CAPACITY		3.15 (b)	kWh	20	20	20

A.2 Feature and Accessory Table

The following table indicates by Configuration, with an "X", the features and accessories, which ***must*** be available for provision and supplied with the vehicle when requested.

DESCRIPTION OF ACCESSORY	CLAUSE	CONFIGURATION		
		A	B	C
"EE" Safety Rating	3.3.4 (a)	X	X	X
Mast no. 2	3.5.2 (a)	-	-	X
Mast no. 3	3.5.2 (b)	-	-	X
Aisle Guide Rollers	3.5.2 (c)	X	X	X
Fire Extinguisher	3.5.2 (d)	X	X	X
Operator's Window	3.6.1 (a)	X	X	X
Wire Guidance System	3.13.1 (a)	X	X	X
Wire Guidance Signal Generator	3.13.1 (b)	X	X	X
220 V, Single Phase Charger	3.15.1 (a)	X	X	X
220 V, 3 Phase Charger	3.15.1 (b)	X	X	X
440 V, 3 Phase Charger	3.15.1 (c)	X	X	X
550 V, 3 Phase Charger	3.15.1 (d)	X	X	X
Battery Watering Hose	3.15.1 (e)	X	X	X
Gate Interlock	3.15.1 (f)	X	X	X
Work Lights	3.16.1 (a)	X	X	X
Initial Parts Kit	4.1.2 (d)	X	X	X
Maintenance manual	4.1.2 (e)	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X
Training - Familiarization	4.2 (a)	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA

For

Group 5: Electric Motor Driven Stockpicker Forklift Truck

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least three (3) years	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C:
3.3.1	All vehicle design, construction and safety aspects must be in accordance with the latest edition of CSA B335 or an <i>Equivalent</i>	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C:
3.3.4 (a)	The vehicle <i>must</i> be provided with a label attesting to the vehicle being built and certified to the “ <i>EE</i> ” rating in accordance with standard UL 583, or an <i>Equivalent</i> , in lieu of the “ <i>E</i> ” rating (paragraph 3.3.3)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C:
3.4.1(a)	The vehicle, with the standard mast and no accessories, <i>must</i> have a rated capacity of at least that given as “ LIFT CAPACITY ” in the A.1 - Data Table (Appendix A)	Capacity/load center	lbs/inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	at a load centre of no less than 610 mm. Lift capacity must be maintained to the specified platform height			
3.4.1(b)	The vehicle must have a platform height of at least that given as “ STANDARD MAST ” - “ PLATFORM HEIGHT ” in the A.1 - Data Table (Appendix A).	Platform height	inch	Config A: Config B: Config C:
3.4.1(c)	The vehicle must pass under a horizontal beam with a height above ground level of that given as “ STANDARD MAST ” - “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A).	Vehicle height	Inch	Config C:
3.5.2(a)-ii	Mast no. 2 must have a platform height of at least that given as “ MAST 2 ” – “ PLATFORM HEIGHT ” in the A.1 - Data Table (Appendix A);	Platform height	Inch	Config C:
3.5.2(a)-iii	The vehicle, with mast no. 2, must pass under a horizontal beam with a height above ground level of that given as “ MAST 2 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A).	Vehicle height		Config C:
3.5.2(b)-ii	Mast no. 3 must have a platform height of at least that given as	Platform height	Inch	Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	"MAST 3" – "PLATFORM HEIGHT" in the A.1 - Data Table (Appendix A);			
3.5.2(b)-iii	The vehicle, with mast no. 3, must pass under a horizontal beam with a height above ground level of that given as "MAST 3" – "VEHICLE HEIGHT" in the A.1 - Data Table (Appendix A).	vehicle height	Inch	Config C:
3.15 (b)	Batteries must have a capacity of at least "BATTERY CAPACITY" as given in the A.1 - Data Table (Appendix A);	Battery capacity	kWh	Config A: Config B: Config C:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) **"Equivalent" must** mean a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 6A

PURCHASE DESCRIPTION (PD) (SA) FOR

ELECTRIC MOTOR DRIVEN, SWING REACH FORKLIFT TRUCK WITH ELEVATING OPERATOR PLATFORM

Date: 09 October 2020

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1. **SCOPE**

1.1 **Scope** – This Purchase Description covers the requirements for electric swing reach forklift trucks with elevating operator platform type with features and accessories.

1.2 **Instructions** – The following instructions apply to this Purchase Description:

- (a) Requirements, which are identified by the word “***must***”, are mandatory. Deviations will not be permitted;
- (b) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part;
- (c) Where “***must***” or “will” are not used, the information supplied is for guidance only;
- (d) In this document “provided” ***must*** mean “provided and installed”;
- (e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***Equivalent*** standard ***must*** be supplied by the Contractor;
- (f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an acceptable Proof of Compliance ***must*** be supplied, when requested by the ***Technical Authority***;
- (g) While the SI system ***must*** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact; and
- (h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.

1.3 **Definitions**

- (a) “***Provided***” means “provided and installed”.
- (b) “***Technical Authority***” ***must*** mean the official responsible for the technical content of this Purchase Description;
- (c) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement as meeting the specified requirements for fit, form, function, and performance; and
- (d) “***Commercially Equipped***” ***must*** mean that the vehicle is provided in its standard commercial Configuration with no additional government-specified requirements.

2. APPLICABLE DOCUMENTS

2.1 **Other Publications** - The following documents are referenced in this Purchase Description. Canada will not be supplying any reference documents. Available information on the organization is supplied.

2.1.1 ANSI Standards

ANSI/ITSDF B56.1 **Safety Standard for Low Lift and High Lift Trucks**
Industrial Truck Standards Development Foundation
1750 K Street NW, Suite 460, Washington DC 20009, USA
<http://www.itsdf.org/>

2.1.2 SAE Standards

SAE World Headquarters
400 Commonwealth Dr.,
Warrendale, PA, 15096-0001
<http://www.sae.org>

2.1.3 B335

Safety Standards for Lift Trucks
Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.4 UL 583

Standard for Electric-Battery-Powered Industrial Trucks
Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.5 Hazardous Products Act

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

3. **REQUIREMENTS**

3.1 **Standard Design**

- 3.1.1 The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by selling this type and size class of vehicle for at least three (3) years;
- 3.1.2 The vehicle **must** include all components, equipment and accessories normally supplied for this application, although they may not specifically be described in this Purchase Description;
- 3.1.3 The vehicle **must** have engineering certification available for this application from the original manufacturers of major equipment, systems and assemblies;
- 3.1.4 The vehicle **must** conform to all applicable laws, regulations and industrial standards in effect in Canada at the time of manufacture. The regulatory areas may include but are not necessarily limited to manufacturing, health and safety, noise levels, environment and emissions; and
- 3.1.5 The vehicle and accessories **must** operate in accordance with all original equipment manufacturers' (OEM) rated capacities and performance specifications.

3.2 **Operating Conditions**

- 3.2.1 **Weather** - The vehicle **must** operate in temperatures ranging from 0 to 40°C (32 to 104°F).
- 3.2.2 **Terrain** – The forklift **must** operate on use-roughened concrete floors while being used stacking, un-stacking and moving general supplies in warehouses.

3.3 **Safety Standards**

- 3.3.1 **Vehicle Safety** – All vehicle design and safety aspects **must** be in accordance with ANSI/ITSDF B56.1 or an **Equivalent**.
- 3.3.2 **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) used in the manufacture and assembly of the product supplied.
- 3.3.3 **“E” Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an “E” safety rating in accordance with Standard UL 583, or an **Equivalent**.
- 3.3.4 **“EE” Safety Rating Feature**
 - (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.3); and
 - (b) A certification label confirming the vehicle meets the “EE” rating **must** be permanently affixed to the vehicle before delivery.

3.4 **Vehicle**

- (a) The vehicle **must** be an operator-up type forklift where the operator compartment moves up and down with the mast movement;
- (b) The vehicle **must** be provided with a swing reach mechanism that allows the operator to place and remove loads to/from both sides of the aisle from a seated or standing position; and
- (c) The vehicle **must** be provided with automatic speed reduction with the platform raised and an inching mode in both the forward and reverse directions.

3.4.1 **Performance**

- (a) The vehicle, with the standard mast and no accessories, **must** have a rated load capacity of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A);
- (b) The vehicle **must** have a platform height, measured from the floor to the top surface of the fork with the mast in the full up position, of at least that given as “**STANDARD MAST – PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A);
- (c) The vehicle with the mast in its lowest position **must** pass under a horizontal beam with a height above ground level of that given as “**STANDARD MAST – VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A);
- (d) The vehicle **must** have an overall width of not exceeding that given as “**STANDARD MAST – VEHICLE WIDTH**” in the A.1 - Data Table (Appendix A); and
- (e) The vehicle **must** have a wheelbase not exceeding that given as “**WHEELBASE**” in the A.1 - Data Table (Appendix A).

3.4.2 **Manoeuvrability** - The vehicle **must** turn from an intersecting aisle that has a width as narrow as 3,963 mm (156 inches) for entry into the working aisle;

3.5 **Equipment**

- (a) **Standard Mast** – The vehicle **must** be provided with the standard mast;
- (b) **Standard Forks**
 - i. The vehicle **must** be provided with standard forks with a nominal length of either 1,066 mm (40 inches) or 1,219 mm (42 inches); and
 - ii. The vehicle **must** be provided with forks having tapered design that progressively gets thicker towards the base.
- (c) **Standard Load Backrest** – The vehicle **must** be provided with the manufacturer’s load backrest; and
- (d) **Swing Reach Mechanism**
 - i. The vehicle **must** be provided with a swing reach mechanism;

-
- ii The swing reach mechanism **must** rotate the forks through at least 180 degrees; and
 - iii The swing reach mechanism **must** extend the forks such that the face of the load backrest **must** be completely extended past the side of the forklift on both sides.

3.5.1 **Features and Accessories** - The following accessories, attachments and features must be provided, when requested:

(a) **Mast no. 2**

- i The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5.1 (a));
- ii Mast no. 2 **must** have a fork height of at least that given as “**MAST 2**” – “**PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A); and
- iii The vehicle, with mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

(b) **Mast no. 3**

- i The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5.1 (a));
- ii Mast no. 3 **must** have a fork height of at least that given as “**MAST 3**” – “**PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A); and
- iii The vehicle, with mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

(c) **Mast no. 4**

- i The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5.1 (a));
- ii Mast no. 4 **must** have a fork height of at least that given as “**MAST 4**” – “**PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A); and
- iii The vehicle, with mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).

(d) **Mast no. 5**

- i The vehicle **must** be provided with mast no. 5, in lieu of the standard mast (paragraph 3.5.1 (a));

-
- ii Mast no. 5 **must** have a **platform** fork height of at least that given as “**MAST 5**” – “**PLATFORM HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iii The vehicle, with mast no. 5 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 5**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A)
- (e) **Fire Extinguisher**
- i. Electric vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - ii. The fire extinguisher **must** be readily accessible to the operator; and
 - iii. The fire extinguisher **must** not interfere with the operation of the vehicle or the view of the operator.

3.6 **Operator Station**

- (a) The vehicle **must** be provided with a man up style operator station;
- (b) The station **must** have an operator platform no less than 910 mm (36 inches) wide and 580 mm (23 inches) long;
- (c) The station **must** be provided with a full body harness;
- (d) The full body harness **must** be connected to a retractor for self-coiling of the operator's harness tether strap;
- (e) The station **must** be provided with retractable or folding side gates;
- (f) The station **must** be provided with an overhead guard and an anti-fatigue floor mat; and
- (g) The station **must** be provided with overhead lights, fans, and a document storage pocket.

3.7 **Chassis** - The vehicle chassis **must** be the manufacturer's standard for a vehicle of this type and size.

3.8 **Motors** - **Commercially Equipped**

3.9 **Transmission** - **Commercially Equipped**

3.10 **Brake System**

- (a) The brake system **must** conform to CSA B335; and
- (b) The brakes **must** be provided with a dead-man type service brake, automatically applied upon removal of operator's foot from the pedal.

3.11 **Steering** - **Commercially Equipped**

3.12 **Tires** – **Commercially Equipped**

3.13 **Controls**

- (a) The vehicle **must** be provided with manufacturer's standard controls:

-
- (b) The controls **must** be provided with a “dead man” switch on the operator platform, which safely brings all vehicle movement to a stop when the operator steps off the switch; and
 - (c) It is preferable that the “dead man” switch turns off vehicle power.
- 3.13.1 **Control Features and Accessories** - The following accessories, attachments and features must be provided, when requested:
- (a) **Wire Guidance System**
 - i The vehicle **must** be provided with manufacturer’s wire guidance system; and
 - ii The preferred line frequency is 6.25 kHz. The Contractor **must** provide frequencies between 5.25 and 6.25 kHz, as designated.
 - (b) **Wire Guidance Signal Generator**
 - i A signal generator to provide the signal required for the wire guidance system **must** be supplied; and
 - ii The preferred line frequency is 6.25 kHz. The Contractor **must** provide frequencies between 5.25 and 6.25 kHz, as designated.
- 3.14 **Instruments**
- (a) The vehicle **must** be provided with manufacturer’s standard instruments; and
 - (b) The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.
- 3.15 **Electrical System**
- (a) The vehicle **must** be provided with an electrical system operating at no less than twenty-four (24) volts;
 - (b) Batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in the A.1 - Data Table (Appendix A); and
 - (c) The vehicle **must** be provided with a backup alarm to alert personnel that the vehicle is in backup mode.
- 3.15.1 **Electrical Features and Accessories** - The following accessories, attachments and features must be provided, when requested:
- (a) **220 V, Single Phase Charger** - A charger **must** be supplied for connection to a 220-volt AC, single phase, 60Hz power source;
 - (b) **220 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 220-volt AC, three phase, 60Hz power source;
 - (c) **440 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 440-volt AC, three phase, 60Hz power source;
 - (d) **550 V, 3 Phase Charger** - A charger **must** be supplied for connection to a 550-volt AC, three phase, 60Hz power source; and

(e) **Battery Watering System**

- i The vehicle **must** be provided with a battery watering system;
- ii The battery watering system **must** be supplied with a removable hose; and
- iii The removable hose **must** be provided with a quick connect coupler.

- (f) **Side Gate Interlock** – The vehicle **must** be provided with an interlock circuit that disables vehicle movements when either side gate is opened.

3.16 **Lighting**

- (a) The vehicle **must** be provided with the manufacturer's standard lighting package;

(b) **Flashing Beacon**

- i The vehicle **must** be provided with a red flashing beacon light mounted on the rear of the vehicle; and
- ii The beacon **must** be activated when the vehicle travels in reverse.

3.16.1 **Lighting Features and Accessories** - The following accessories, attachments and features must be provided, when requested:

- (a) **Work Lights** – The vehicle **must** be provided with the manufacturer's working light package.

3.17 **Hydraulic System**

- (a) The hydraulic system **must** be provided with all components required for the operation of the hydraulic actuators provided, including pump, reservoir, filters, and control valves; and

- (b) The hydraulic reservoir **must** be provided with a visual oil level indicator.

3.18 **Lubricants and Hydraulic Fluids**

- (a) The vehicle **must** operate using synthetic, non-proprietary lubricants and hydraulic fluids; and

- (b) Grease fittings provided on the vehicle **must** conform to SAE J534 or an ***Equivalent***.

3.19 **Paint - Commercially equipped**

3.20 **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.

3.21 **Vehicle Delivery Condition**

- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted) and both the interior and exterior **must** be cleaned;
- (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
- (c) The space for assembly at destination will be provided, if required;

-
- (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, ***must*** be listed on the shipping certificate or to an attached packing note; and
 - (e) Lubricants installed in the vehicle at time of delivery ***must*** be suitable for the destination and the season of delivery.

4 **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts, and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 15 working days of receipt;
- ix. The Contractor **must** supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve the manuals;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;

-
- iv. Photographs **must** have a plain background;
 - v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.
- (c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- (f) **Initial Parts Kit List**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a

-
- period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii. A complete change of all filters and filter elements **must** be included in the list; and
 - iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package
- (f) **Parts Manual**
 - i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;
 - iii. It is desirable to supply the parts manual in French in addition to the English version; and
 - iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
- (g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2 **Training**

(a) **Training – Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
- iv. **Curriculum**
 1. The familiarization course **must** include operation and maintenance segments;
 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures, and daily/weekly operator servicing procedures;
 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 4. The maintenance segment **must** include diagnostics, trouble shooting, and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis, and adjustments training

-
- iv. The troubleshooting course ***must*** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
 - v. The troubleshooting course ***must*** accommodate up to eight (8) maintenance personnel;
 - vi. The troubleshooting course ***must*** be supplied at the delivery destination;
 - vii. The date for the troubleshooting course ***must*** be arranged with the ***Technical Authority***;
 - viii. After completion of the troubleshooting course, the Contractor ***must*** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
 - ix. The ***Technical Authority*** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1 Data Table

The following table shows required performance and dimensions by configuration, with a clause reference, that ***must*** be provided:

			CONFIGURATION		
CHARACTERISTIC	CLAUSE	UNITS	A	B	C
LIFT CAPACITY	3.4.1 (a)	kg	905	1,360	1,575
		lb	2,000	3,000	3,500
STANDARD MAST - PLATFORM HEIGHT	3.4.1 (b)	mm	4,850	4,850	4,850
		inches	191	191	191
STANDARD MAST - VEHICLE HEIGHT	3.4.1 (c)	mm	3,180	3,180	3,180
		inches	125	125	125
STANDARD MAST – VEHICLE WIDTH	3.4.1 (d)	mm	1,321	1,422	1,473
		inches	52	56	58
WHEELBASE	3.4.1 (e)	mm	2,032	2,032	2,286
		inches	80	80	90
MAST 2	3.5.1 (a)	PLATFORM HEIGHT	mm	5,486	5,486
			inches	216	216
		VEHICLE HEIGHT	mm	3,480	3 480
			inches	137	137
MAST 3	3.5.1 (b)	PLATFORM HEIGHT	mm	6,096	6,096
			inches	240	240
		VEHICLE HEIGHT	mm	3,990	3 990
			inches	157	157
MAST 4	3.5.1 (c)	PLATFORM HEIGHT	mm	7,620	7,620
			inches	300	300
		VEHICLE HEIGHT	mm	4,267	4,267
			inches	168	168
MAST 5	3.5.1 (d)	PLATFORM HEIGHT	mm	9,144	9,144
			inches	360	360
		VEHICLE HEIGHT	mm	5,185	5 185
			inches	204	204
BATTERY CAPACITY	3.15 (b)	kWh	30	30	30

A.2 Feature and Accessory Table - The following table indicates, with "X", for each configuration the accessories, attachments and features (with a clause reference) that **must** be provided when specified in the solicitation:

		CONFIGURATION	
DESCRIPTION	CLAUSE	A	B
"EE" Safety Rating	3.3.4	X	X
Mast no. 2	3.5.1 (a)	X	X
Mast no. 3	3.5.1 (b)	X	X
Mast no. 4	3.5.1 (c)	X	X
Mast no. 5	3.5.1 (d)	X	X
Fire Extinguisher	3.5.1 (e)	X	X
Wire Guidance System	3.13.1 (a)	X	X
Wire Guidance Signal Generator	3.13.1 (b)	X	X
220 V, Single Phase Charger	3.15.1 (a)	X	X
220 V, 3 Phase Charger	3.15.1 (b)	X	X
440 V, 3 Phase Charger	3.15.1 (c)	X	X
550 V, 3 Phase Charger	3.15.1 (d)	X	X
Battery Watering Hose	3.15.1 (e)	X	X
Side Gate Interlock	3.15.1 (f)	X	X
Work Lights	3.16.1 (a)	X	X
Initial Parts Kit	4.1.2 (d)	X	X
Maintenance Manuals	4.1.2 (e)	X	X
Parts Manual	4.1.2 (f)	X	X
Parts Manual	4.1.4 (g)	X	X
Training – Familiarization	4.2 (a)	X	X
Training – Troubleshooting	4.2 (b)	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA (TEC) FOR GROUP 6A: ELECTRIC MOTOR DRIVEN, SWING REACH FORKLIFT TRUCK WITH ELEVATING OPERATOR PLATFORM

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least three (3) years	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B:
3.3.1	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITSDF B56.1 or an <i>Equivalent</i>	Manufacturing standard	certificate or OEM brochure	Config A: Config B:
3.3.4 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.3)	Fire Safety standard	certificate or OEM brochure	Config A: Config B:
3.4(b)	The vehicle <i>must</i> be provided with a swing reach mechanism that allows the operator to place and remove loads to/from both sides of the aisle from a seated or standing position	Swing	document	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.4.1 (a)	The vehicle, with the standard mast and no accessories, must have a rated load capacity of at least that given as “ LIFT CAPACITY ” in the A.1 - Data Table (Appendix A);	Lift capacity	lbs	Config A: Config B: Config C:
3.4.1 (b)	The vehicle must have a fork height, measured from the floor to the top surface of the fork with the mast in the full up position, of at least that given as “ STANDARD MAST – PLATFORM HEIGHT ” in the A.1 - Data Table (Appendix A)	Lift height	inch or mm	Config A: Config B: Config C:
3.4.1 (c)	The vehicle with the mast in its lowest position must pass under a horizontal beam with a height above ground level of that given as “ STANDARD MAST – VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)	Vehicle height	inch or mm	Config A: Config B: Config C:
3.4.1 (d)	The vehicle must have an overall width of not exceeding that given as “ STANDARD MAST – VEHICLE WIDTH ” in the A.1 - Data Table (Appendix A).	Vehicle width	inch or mm	Config A: Config B: Config C:
3.4.1 (e)	The vehicle must have a wheelbase not exceeding that given as “ WHEELBASE ” in the	Wheelbase	inch or mm	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	A.1 - Data Table (Appendix A).			
3.5.1(a)-ii & iii	Mast no. 2 must have a fork height of at least that given as “ MAST 2 ” – “ PLATFORM HEIGHT ” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 2 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)	Lift height and vehicle height	inch or mm	Config A: Config B: Config C:
3.5.1(b)-ii & iii	Mast no. 3 must have a fork height of at least that given as “ MAST 3 ” – “ PLATFORM HEIGHT ” in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as “ MAST 3 ” – “ VEHICLE HEIGHT ” in the A.1 - Data Table (Appendix A)	Lift height and vehicle height	inch or mm	Config A: Config B: Config C:
3.5.1(c)-ii & iii	Mast no. 4 must have a fork height of at least that given as “ MAST 4 ” – “ PLATFORM	Lift height and vehicle height	inch or mm	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	HEIGHT in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 4 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " MAST 4 " – " VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A)			
3.5.1(d)-ii & iii	Mast no. 5 must have a fork height of at least that given as " MAST 5 " – " PLATFORM HEIGHT " in the A.1 - Data Table (Appendix A) and the vehicle, with mast no. 5 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as " MAST 5 " – " VEHICLE HEIGHT " in the A.1 - Data Table (Appendix A)	Lift height and vehicle height	inch or mm	Config A: Config B: Config C:
3.15 (b)	Batteries must have a capacity of at least " BATTERY CAPACITY " as given in the A.1 - Data Table (Appendix A)	Capacity	kWh	Config A: Config B: Config C:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):



- (a) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

**SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING
EQUIPMENT**

GROUP 6B

**Purchase Description (PD) For
Swing Mast, Operator-down, Electric Motor Driven Forklift Trucks**

Date: 09 October 2020

OPI: DSVPM 4/DAPVS 4
National Defence Headquarters
Major General George R. Pearkes Building
Ottawa, Ontario
K1A 0K2

Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du Chef d'état-major de la Défense

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1. **SCOPE**

- 1.1. **Scope** - This purchase description covers the requirements for a Swing Mast, Operator-down, Electric Motor Driven forklift truck.
- 1.2. **Instructions** - The following instructions apply to this Purchase Description:
- a) Requirements, which are identified by the word “**must**”, are mandatory. Deviations will not be permitted;
 - b) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part;
 - c) Where “**must**”, or “will” are not used, the information provided is for guidance only;
 - d) Requirements identified by “**must**” or “**Equivalent**” are mandatory. The **Technical Authority** will consider substitutes/alternatives for acceptance as a **Technical Authority** approved **equivalent**;
 - e) Where a standard is specified and the Contractor has offered an **Equivalent**, that **equivalent** standard **must** be supplied by the Contractor, at no cost to Canada, when requested by the **Technical Authority**;
 - f) Where technical certification is required, a copy of the certification or an **Equivalent must** be provided by the Contractor upon request;
 - g) Metric measurements **must** be used to define the requirement. Other measurements are for reference only and may not be exact conversions; and
 - h) Dimensions stated as nominal **must** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.
- 1.3. **Definitions** - The following definitions apply to the interpretation of this Purchase Description:
- 1.3.1. “**Provided**” **must** mean “provided and installed”; and
 - 1.3.2. “**Equivalent**” – A standard, means, or component type, which has been accepted by the **Technical Authority** as meeting the specified requirements for form, function and performance.

2. APPLICABLE DOCUMENTS

2.1 **Other Publications** – The following documents form part of this Purchase Description. Websites for the organization are given when available. Unless otherwise specified, effective documents are those in effect on the date of manufacture. Sources are as shown:

2.1.1 CAN/CSA Standards

CAN/CSA-B335-04 Safety Standard for Lift Trucks

Canadian Standards Association (CSA)

5060 Spectrum Way, Mississauga, Ontario, L4W 5N6

<http://www.scc.ca/en/standardsdb/standards/19235>

2.1.2 UL Standards

UL 583 Standards for Safety, Electric Battery Powered Industrial Trucks

Underwriters' Laboratories of Canada

7 Crouse Road, Scarborough, Ontario, M1R 3A9

<http://www.ulc.ca/>

2.1.3 ANSI Standards

ANSI/ITSDF B56.1 Standard for Safety for Low Lift and High Lift Trucks

Industrial Truck Standards Development Foundation

1750 K Street NW, Suite 460

Washington DC 20009, USA

<http://www.itsdf.org/>

2.1.4 Hazardous Product Act

Ministry of Justice, Government of Canada

<http://laws-lois.justice.gc.ca>

3. REQUIREMENTS

3.1. **Standard Design**

- 3.1.1. The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle **must** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle **must** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle **must** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically be described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** - The vehicle/equipment **must** operate in temperatures ranging from 0 to 40° C (32 to 104° F) in Canada.
- 3.2.2. **Terrain** – The vehicle **must** operate on used-roughened concrete floors while being used stacking, un-stacking and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Vehicle's Stability and Safety** – All vehicle design, construction and safety aspects **must** be in accordance with the latest edition of ANSI B56.1.
- 3.3.2. **"E" Rating** – The vehicle **must** be manufactured to meet the requirements of an "E" Rating in accordance with Standard UL 583 or equivalent.
- 3.3.3. **"EE" Safety Rating Feature**
 - a) The vehicle **must** be manufactured to meet the requirements of an "EE" safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the "E" safety rating (paragraph 3.3.3);
 - b) The UL or equivalent certification **must** be provided to the Technical Authority, upon request; and
 - c) An authorized certification mark confirming the vehicle meets the UL or equivalent safety rating **must** be permanently affixed to the vehicle before delivery.

3.3.4. **Hazardous Materials**

- (a) The contractor **must** minimize the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals used in the fabrication of the product supplied; and
- (b) Items considered as hazardous materials **must** be those given in the Hazardous Products Acts.

3.4. **Performance**

3.4.1. **Vehicle**

- a) The vehicle **must** be an operator-down type forklift where the operator compartment does not move with the mast movement;
- b) The vehicle **must** be provided with a swing mechanism that allows the operator to place and remove loads to/from the right side of the aisle only; and
- c) The vehicle **must** be a non-articulated type forklift.

3.4.2. **Forklift Performance**

- a) The vehicle **must** have a load capacity, at a 610 mm (24 inches) load center of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table of Appendix A;
- b) The vehicle **must** have a lift height of at least that given as “**LIFT HEIGHT**” in the A.1 - Data Table of Appendix A, when measured from the floor to the top of the forks with mast in vertical position;
- c) The load capacity **must** not de-rate to below specified load capacity before a load lift height of 3,302 mm (130 inches) but **must** lift a load of at least 907 kg (2000 lbs) to the specified “**LIFT HEIGHT**” in A.1- Data Table of Appendix A;
- d) The vehicle **must** have an overall vehicle height and a collapsed mast of no more than that given as “**COLLAPSED HEIGHT**” in the A.1 - Data Table of Appendix A; and
- e) The vehicle **must** have a free lift height (load backrest removed) of at least that given as “**FREE LIFT**” in the A.1 - Data Table of Appendix A;
- f) The vehicle **must** be able to handle standard 1,016 mm (40 inches) x 1,220 mm (48 inches) pallets;
- g) The vehicle’s entire mast assembly **must** rotate 90° to the right side of the driver (facing front of the vehicle) for placing and removing pallets; and
- h) The vehicle **must** have an overall width of not exceeding 1,371 mm (54 inches).

3.5. **Equipment**

- a) **Mast** - The vehicle **must** be provided with a wide, see-through, vertically extendible hydraulic mast;
- b) **Forks**
 - (i) The vehicle **must** be provided with a forks having a nominal fork length of 1,016 mm (40 inches) or 1,067 mm (42 inches);
 - (ii) When requested, forks with a nominal length of 914 mm (36 inches) **must** be provided.
- c) **Backrest** - The vehicle **must** be provided with a load backrest having a minimum height of 914 mm (36 inches);
- d) **Fork Positioner** - The vehicle **must** be provided with a fork positioner to hydraulically increase and decrease the spacing between the forks; and
- e) **Fire Extinguisher**
 - i. Electric vehicles must be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - ii. The fire extinguisher must be readily accessible to the operator; and
 - iii. The fire extinguisher must not interfere with the operation of the vehicle or the view of the operator

3.5.1. **Application Equipment** - The following accessories, attachments and features **must** be provided, when requested:

(a) **Mast 1**

- i. The vehicle **must** be provided with Mast 1, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast 1 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 1 – LIFT HEIGHT**” in A.1 - Data Table (Appendix A);
- iii. The vehicle, with Mast 1 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 1 – VEHICLE HEIGHT**” in A.1 - Data Table (Appendix A); and
- iv. Mast-1 **must** have full free lift.

(b) **Mast 2**

- i. The vehicle **must** be provided with mast 2, in lieu of the standard mast (paragraph 3.5 (a));
- ii. Mast 2 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2 – LIFT HEIGHT**” in the A.1 - Data Table (Appendix A).
- iii. The vehicle, with Mast 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2 – VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and

- iv. Mast – 2 **must** have full free lift.
- (c) **Mast 3**
 - i. The vehicle **must** be provided with Mast 3, in lieu of the standard mast (paragraph 3.5 (a));
 - ii. Mast 3 **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3 – LIFT HEIGHT**” in the A.1 - Data Table (Appendix A).
 - iii. The vehicle, with Mast 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3 – VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A); and
 - iv. Mast 3 **must** have full free lift
- (d) **Fork Tine Position Guide**
 - i. The vehicle **must** be provided with a fork tine position guide;
 - ii. The fork tine position guide **must** be permanently attached to the backrest;
 - iii. The fork tine position guide **must** use a laser to create a line that shows the level of the top of the fork tines;
 - iv. The fork tine position guide **must** be connected to the vehicle electrical system;
 - v. The fork tine position guide **must** automatically turn off when the vehicle is turned off; and
 - vi. The fork tine position guide **must** automatically turn off when the forks are within 2,130 mm (84 inches) of ground level.
- 3.6. **Operator Station**
 - a) **Overhead Guard** - The vehicle **must** be provided with a driver's overhead guard with wire mesh or equivalent mounted to protect operator;
 - b) **Seat** - The vehicle **must** be provided with a padded water-resistant operator's seat and backrest equipped with seat belts; and
 - c) **Mirror(s)** - The vehicle **must** be provided with rear view mirror(s) positioned providing a full view of both sides for safe reverse operations.
- 3.7. **Chassis** - The vehicle chassis **must** be the manufacturers standard for a vehicle of this type and size.
- 3.8. **Motors** - The vehicle **must** be provided with a standard motor of this type and size.
- 3.9. **Drive Unit** - The vehicle **must** be provided with a standard drive unit for this type and size of vehicle.
- 3.10. **Brake System** - The vehicle **must** be equipped with manufacturer's standard braking system conforming to CSA B335-04 or an **Equivalent**.

- 3.11. **Steering** - The vehicle **must** be provided with a standard steering system conforming to CSA B335 or an **Equivalent**.
- 3.12. **Wheels, Rims and Tires** - The vehicle **must** be provided with commercial standard wheels, tires and rims for this type and size of vehicle.
- 3.13. **Controls** - The vehicle **must** be provided with commercial standard joystick control systems for this type and size of vehicle.
- 3.14. **Instruments** – The vehicle **must** be provided with commercial standard instruments for this type and size of vehicle including an hour-meter which records accumulated running time up to 9,999 hours as well as a battery state-of-charge indicator with lift interrupt.
- 3.15. **Electrical System**
- a) The electrical system of the vehicle **must** have a minimum battery capacity of that given as "**BATTERY CAPACITY**" in the A.1 - Data Table of Appendix A;
 - b) Batteries **must** have a minimum voltage of at least that given as "**BATTERY VOLTAGE**" in the A.1 - Data Table of Appendix A with battery connectors colour coded to indicate the polarity;
 - c) The battery charger **must** be capable of charging the forklift batteries from the designated source of a 550 volt, three phase, 60Hz power source;
 - d) The vehicle **must** be provided with a back-up alarm system to alert personnel that the vehicle is in back-up mode;
 - e) The vehicle **must** be provided with an emergency power disconnect located within easy reach of the operator;
 - f) The vehicle **must** have battery compartment rollers and other features, which allow the rapid changing of the battery with a recharged battery; and
 - g) When requested, the vehicle **must** be provided with battery charger capable of charging the forklift batteries from a 220 volt/three phase and 220 volt/single phase, 60 Hz power sources in lieu of charger specified in section 3.15.1(c) above.
- 3.16. **Lighting**
- a) **Working Lights** – The vehicle **must** be provided with lights illuminating the front and rear working areas for operations in dark locations; and
 - b) **Reverse Movement Strobe Light** – The vehicle **must** be provided with a red strobe mounted on the rear of the forklift, which is activated when the vehicle travels in reverse.
- 3.17. **Hydraulic System** - The vehicle **must** be provided with a hydraulic system that supports the operation of all hydraulic components.

- 3.18. **Lubricants and Hydraulic Fluids** - The vehicle **must** be serviced with the manufacturer's non-proprietary standard lubricants and hydraulic fluids.
- 3.19. **Paint** - The vehicle **must** be painted using commercial colors having a high-durability, corrosion-resistant type coating.
- 3.20. **Identification** - The vehicle **must** be provided with an identification plate having manufacturer's name, model and serial number permanently marked in a conspicuous and protected location.
- 3.21 **Instruments, Decals and Data Plates**
 - 3.21.1 Instruments, decals and data plates provided on the vehicle **must** be marked in metric units;
 - 3.21.2 Instruments, decals and data plates **must** be marked using international symbols. Where international symbols are not possible, bilingual markings (English and French) must be provided; and
 - 3.21.3 Warning and precautionary data plates **must** be provided in a bilingual format.

4. **Integrated Logistic Support**

4.1. **Documentation and Support Items**

4.1.1. **Items Provided to Technical Authority**

a) **Manuals for Approval**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 15 working days of receipt;
- ix. The Contractor **must** supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve manuals.
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

b) **Photographs and Line Drawings**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;

- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv. Photographs **must** have a plain background;
 - v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.
- c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and

- iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- f) **Initial Parts Kit List**
 - i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii. A complete change of all filters and filter elements **must** be included in the list; and
 - iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2. **Items with Each Vehicle**

- a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package

f) **Parts Manual**

- i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
- ii. The parts manual **must** be supplied in English in paper and digital format;
- iii. It is desirable to supply the parts manual in French in addition to the English version; and
- iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.

4.2. **Training**

a) **Training – Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;

iv. **Curriculum**

1. The familiarization course **must** include operation and maintenance segments;
 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
 - vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
 - vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;

- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
 - ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.
- b) **Training – Troubleshooting**
- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
 - ii. The instructor **must** be an OEM Factory Certified Training Provider;
 - iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training
 - iv. The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
 - v. The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
 - vi. The troubleshooting course **must** be supplied at the delivery destination;
 - vii. The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
 - viii. After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
 - ix. The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

- 4.3. **LS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA

5 **DELIVERY CONDITION**

- 5.1 The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). The vehicle **must** be cleaned;
- 5.2 If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
- 5.3 The space for assembly at destination will be provided, if required; and
- 5.4 All items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose with the equipment, **must** be listed on the shipping certificate or to an attached packing note.

APPENDIX A

A1 - Data Table - The following table shows required performance and dimensions by configuration, with a clause reference, that **must** be provided:

			CONFIGURATION			
CHARACTERISTIC	CLAUSE	UNITS	A	B	C	D
LIFT CAPACITY	3.4.2(a)	kg	1,361	1,814	2,722	3,628
		lb	3,000	4,000	6,000	8,000
LIFT HEIGHT	3.4.2(b)	mm	4,724	4,724	3,658	3,658
		in	186	186	144	144
COLLAPSED HEIGHT	3.4.2(d)	mm	2,235	2,235	2,311	2,311
		in	88	88	91	91
FREE LIFT	3.4.2(e)	mm	1,219	1,219	1,037	1,067
		in	48	48	42	42
MAST ROTATION	3.4.2(f)	degree	90° to the right	90° to the right	90° to the right	90° to the right
OVERALL WIDTH	3.4.2(g)	mm	1,321	1,321	1,371	1,422
		in	52	52	54	56
MAST 1 – LIFT HEIGHT	3.5.1(a-ii)	mm	5,486	5,486	4,724	4,724
		in	216	216	186	186
MAST 1 – VEHICLE HEIGHT	3.5.1(a-iii)	mm	2,540	2,540	2,642	2,642
		in	100	100	104	104
MAST 2 – LIFT HEIGHT	3.5.1(b-ii)	mm	6,096	6,096	5,385	5,385
		in	240	240	212	212
MAST 2 – VEHICLE HEIGHT	3.5.1(b-iii)	mm	2,794	2,794	2,896	2,896
		in	110	110	114	114
MAST 3 – LIFT HEIGHT	3.5.1(c-ii)	mm	6,705	6,705	6,096	6,096
		in	264	264	240	240
MAST 3 – VEHICLE HEIGHT	3.5.1(c-iii)	mm	3,150	3,150	3,200	3,200
		in	124	124	126	126
BATTERY CAPACITY	3.15(a)	kWh	30	30	50	50
BATTERY VOLTAGE	3.15(b)	volt	48	48	72	72

A.2 Feature Table – The following table indicates, with "X", for each configuration the accessories, attachments and features (with a clause reference) that ***must*** be provided when specified in the solicitation:

		CONFIGURATION			
DESCRIPTION	PARAGRAPH	A	B	C	D
"EE" Safety Rating Feature	3.3.3 (a)	X	X	X	X
Mast 1	3.5.1 (a)	X	X	X	X
Mast 2	3.5.1 (b)	X	X	X	X
Mast 3	3.5.1 (c)	X	X	X	X
Fork Tine Position Guide	3.5.1 (d)	X	X	X	X
Battery Watering System	3.15.1 (e)	X	X	X	X
Battery Rollers	3.15.1 (f)	X	X	X	X
220 V, Single Phase Charger	3.15.1 (g)	X	X	X	X
220 V, 3 Phase Charger	3.15.1 (g)	X	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X	X
Training – Familiarization	4.2 (a)	X	X	X	X
Training – Troubleshooting	4.2 (b)	X	X	X	X



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA FOR GROUP 6B: SWING MAST, OPERATOR-DOWN, ELECTRIC MOTOR DRIVEN FORKLIFT TRUCK

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

NOTE: *Substantial Information must* be provided for all items offered as a substitute or alternative.

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C: Config D:
3.3.1	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.6	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C: Config D:
3.3.3 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.3);	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C: Config D:
3.4.2(a)	The vehicle <i>must</i> have a load capacity, at a 610 mm (24 inches) load center of at least that	Capacity/load center	lbs/inch	Config A: Config B: Config C:



Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	given as “LIFT CAPACITY” in the A.1 - Data Table of Appendix A			Config D:
3.4.2(b)	The vehicle must have a lift height of at least that given as “LIFT HEIGHT” in the A.1 - Data Table of Appendix A, when measured from the floor to the top of the forks with mast in vertical position	Lift height	inch	Config A: Config B: Config C: Config D:
3.4.2(d)	The vehicle must have an overall vehicle height and a collapsed mast of no more than that given as “COLLAPSED HEIGHT” in the A.1 - Data Table of Appendix A	Overall height	inch	Config A: Config B: Config C: Config D:
3.4.2(e)	The vehicle must have a free lift height (load backrest removed) of at least that given as “FREE LIFT” in the A.1 - Data Table of Appendix A	Free lift	inch	Config A: Config B: Config C: Config D:
3.4.2(g)	The vehicle’s entire mast assembly must rotate 90° to the right side of the driver (facing front of the vehicle) for placing and removing pallets.	Mast rotation	degree	Config A: Config B: Config C: Config D:
3.4.2(h)	The vehicle must have an overall width of not exceeding 1,371 mm (54 inches).	Overall width	inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
				Config D:
3.5(d)	The vehicle must be provided with a fork positioner to hydraulically increase and decrease the spacing between the forks	Fork positioner	document	Config A: Config B: Config C: Config D:
3.5.1(a)-ii	Mast 1 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as "MAST 1 – LIFT HEIGHT" in A.1 - Data Table (Appendix A);	lift height	Inch	Config A: Config B: Config C: Config D:
3.5.1(a)-iii	The vehicle, with Mast 1 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as "MAST 1 – VEHICLE HEIGHT" in A.1 - Data Table (Appendix A)	vehicle height	Inch	Config A: Config B: Config C: Config D:
3.5.1(b)-ii	Mast 2 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as "MAST 2 – LIFT HEIGHT" in the A.1 - Data Table (Appendix A).	lift height	Inch	Config A: Config B: Config C: Config D:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.5.1(b)-iii	The vehicle, with the Mast 2 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as "MAST 2 – VEHICLE HEIGHT" in the A.1 - Data Table (Appendix A);	vehicle height	Inch	Config A: Config B: Config C: Config D:
3.5.1(c)-ii	Mast 3 must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as "MAST 3 – LIFT HEIGHT" in the A.1 - Data Table (Appendix A).	lift height	Inch	Config A: Config B: Config C: Config D:
3.5.1(c)-iii	The vehicle, with Mast 3 in its lowest position, must pass under a horizontal beam with a height above ground level of that given as "MAST 3 – VEHICLE HEIGHT" in the A.1 - Data Table (Appendix A);	vehicle height	Inch	Config A: Config B: Config C: Config D:
3.15 (a)	The electrical system of the vehicle must have a minimum battery capacity of that given as " BATTERY CAPACITY " in the A.1 - Data Table of Appendix A	Battery Capacity	kWh	Config A: Config B: Config C: Config D:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

**SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING
EQUIPMENT**

GROUP 6C

**Purchase Description (PD) For
Turret Mast, Operator-down, Electric Motor Driven Forklift Trucks**

Date: 09 October, 2020

Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du Chef d'état-major de la Défense
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1. **SCOPE**

- 1.1. **Scope** – This purchase description covers the requirements for a Turret Mast, Operator-down, and Electric Motor Driven forklift trucks.
- 1.2. **Instructions** - The following instructions apply to this Purchase Description:
- a) Requirements, which are identified by the word “***must***”, are mandatory. Deviations will not be permitted;
 - b) Requirements identified with a “will” define actions to be performed by the Government of Canada and require no action/obligation on the Contractor’s part;
 - c) Where “***must***”, or “will” are not used, the information provided is for guidance only;
 - d) Requirements identified by “***must***” or “***Equivalent***” are mandatory. The ***Technical Authority*** will consider substitutes/alternatives for acceptance as a ***Technical Authority*** approved ***equivalent***;
 - e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***equivalent*** standard ***must*** be supplied by the Contractor, at no cost to the Government of Canada, when requested by the ***Technical Authority***;
 - f) Where technical certification is required, a copy of the certification or an ***Equivalent must*** be provided by the Contractor upon request;
 - g) Metric measurements ***must*** be used to define the requirement. Other measurements are for reference only and may not be exact conversions; and
 - h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.
- 1.3. **Definitions** - The following definitions apply to the interpretation of this Purchase Description:
- 1.3.1. “***Provided***” ***must*** mean “provided and installed”; and
 - 1.3.2. “***Equivalent***” – A standard, means, or component type, which has been accepted by the ***Technical Authority*** as meeting the specified requirements for form, function and performance.

2. APPLICABLE DOCUMENTS

- 2.1. **Other Publications** - The following documents form part of this Purchase Description. Web sites for the organization are given when available. Effective documents are those in effect on date of manufacture. Sources are as shown:

2.1.1. **ANSI Standards**

ANSI/ITSDF B56.1 Standard for Safety for Low Lift and High Lift Trucks
Industrial Truck Standards Development Foundation
1750 K Street NW, Suite 460
Washington DC 20009, USA
<http://www.itsdf.org/>

2.1.2. **CSA Standard**

B335 Safety Standards for Powered Industrial Trucks
Canadian Standards Association (CSA)
178 Rexdale Blvd.
Rexdale, Ontario, M9W 1R3
<http://www.csa.ca/Default.asp?language=English>

2.1.3. **UL Standard**

UL 583 Standards for Safety, Electric Battery Powered Industrial Trucks
Underwriters' Laboratories of Canada
7 Crouse Road,
Scarborough, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4 **Hazardous Product Act**

Ministry of Justice, Government of Canada
<http://laws-lois.justice.gc.ca>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle ***must*** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle ***must*** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle ***must*** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle ***must*** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle ***must*** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically be described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** - The vehicle/equipment ***must*** operate in temperatures ranging from 0 to 40° C (32 to 104° F) in Canada.
- 3.2.2. **Terrain** – The vehicle ***must*** operate on used-roughened concrete floors while being used stacking, un-stacking and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Vehicle's Stability and Safety** – All vehicle design, construction and safety aspects ***must*** be in accordance with the latest edition of ANSI B56.1.
- 3.3.2. **Hazardous Materials**
 - (a) The contractor ***must*** minimize the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals used in the fabrication of the product supplied; and
 - (b) Items considered as hazardous materials ***must*** be those given in the Hazardous Products Acts.
- 3.3.3. **"E" Safety Rating** – The vehicle ***must*** be manufactured to meet the requirements of an "E" Rating in accordance with Standard UL 583 or equivalent.

3.3.4. **“EE” Safety Rating Feature**

- a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.3);
- b) The UL or equivalent certification **must** be provided to the Technical Authority, upon request; and
- c) An authorized certification mark confirming the vehicle meets the UL or equivalent safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Performance:**

3.4.1. **Vehicle**

- a) The vehicle **must** be an operator-down type forklift where the operator compartment does not move with the mast movement;
- b) The vehicle **must** be provided with a swing reach mechanism that allows the operator to place and remove loads to/from both sides of the aisle; and
- c) The vehicle **must** be a non-articulated type forklift.

3.4.2. **Forklift Performance**

- a) The vehicle **must** have a rated load capacity, at a 610 mm (24 inches) load center of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table of Appendix A;
- b) The vehicle **must** have a lift height of at least that given as “**LIFT HEIGHT**” in the A.1 - Data Table of Appendix A, when measured from the floor to the top of the forks with mast in vertical position;
- c) The load capacity **must** not de-rate to below the load capacity that given as “**LIFT CAPACITY AT FULL HEIGHT**” in the A.1 - Data Table of Appendix A at the lift height specified in section 3.4.2(b) above;
- d) The vehicle **must** have an overall vehicle height and a collapsed mast of no more than that given as “**COLLAPSED HEIGHT**” in the A.1 - Data Table of Appendix A;
- e) The vehicle **must** have a free lift height (load backrest removed) of at least that given as “**FREE LIFT**” in the A.1 - Data Table of Appendix A;
- f) The vehicle **must** be able to handle standard 1,016 mm (40 inches) x 1,220 mm (48 inches) pallets;

-
- g) The vehicle **must** be provided with a mast configuration that allows fork-assembly to rotate to a degree of that given as “**MAST ROTATION**” in the A.1 - Data Table of Appendix A in order to place and remove loaded pallets to/from either side of an aisle without having to turn the entire vehicle around; and
 - h) The vehicle **must** have an overall width of not exceeding 1,371 mm (54 inches).

3.5. **Equipment**

3.5.1. **Application Equipment**

- a) **Mast** - The vehicle **must** be provided with a wide, see-through, vertically extendible hydraulic mast;
- b) **Forks**
 - (i) The vehicle **must** be provided with a forks having a nominal fork length of 1,016 mm (40 inches) or 1,067 mm (42 inches); and
 - (ii) When requested, forks with a nominal length of 914 mm (36 inches) **must** be provided.
- c) **Backrest** - The vehicle **must** be provided with a load backrest having a minimum height of 914 mm (36 inches); and
- d) **Fork Positioner** - The vehicle **must** be provided with a fork positioning attachment to hydraulically increase and decrease the spacing between the forks.
- e) **Fire Extinguisher**
 - i. Electric vehicles **must** be provided with a fire extinguisher having at least 1 kg (2.2 lb) of fire extinguishing chemicals;
 - ii. The fire extinguisher **must** be readily accessible to the operator; and
 - iii. The fire extinguisher **must** not interfere with the operation of the vehicle or the view of the operator.
- f) **Fork Tine Position Guide**
 - i. The vehicle **must** be provided with a fork tine position guide;
 - ii. The fork tine position guide **must** be permanently attached to the forklift carriage;
 - iii. The fork tine position guide **must** use a laser to create a line that shows the level of the top of the fork tines;
 - iv. The fork tine position guide **must** be connected to the vehicle electrical system;

-
- v. The fork tine position guide **must** automatically turn off when the vehicle is turned off; and
 - vi. The fork tine position guide **must** automatically turn off when the forks are within 2,130 mm (84 inches) of ground level.

3.6. **Operator Station**

- a) **Overhead Guard** - The vehicle **must** be provided with a driver's overhead guard with wire mesh or equivalent mounted to protect operator;
- b) **Seat** - The vehicle **must** be provided with a padded water-resistant operator's seat and backrest equipped with seat belts; and
- c) **Mirror(s)** - The vehicle **must** be provided with rear view mirror(s) positioned providing a full view of both sides for safe reverse operations.

3.7. **Chassis** - The vehicle chassis **must** be the manufacturers standard for a vehicle of this type and size.

3.8. **Motors** - The vehicle **must** be provided with a standard motor of this type and size.

3.9. **Drive Unit** - The vehicle **must** be provided with a standard drive unit for this type and size of vehicle.

3.10. **Brake System** - The vehicle **must** be equipped with manufacturer's standard braking system conforming to CSA B335-04 or an **Equivalent**.

3.11. **Steering** - The vehicle **must** be provided with a standard steering system conforming to CSA B335 or an **Equivalent**.

3.12. **Wheels, Rims and Tires** - The vehicle **must** be provided with commercial standard wheels, tires and rims for this type and size of vehicle.

3.13. **Controls** - The vehicle **must** be provided with commercial standard control systems for this type and size of vehicle.

3.14. **Instruments** – The vehicle **must** be provided with commercial standard instruments for this type and size of vehicle including an hour-meter which records accumulated running time up to 9,999 hours as well as a battery state-of-charge indicator with lift interrupt.

3.15. **Electrical System**

- a) The electrical system of the vehicle **must** have a minimum battery capacity of that given as "**BATTERY CAPACITY**" in the A.1 - Data Table of Appendix A;
- b) Batteries **must** have a nominal voltage of at least 48 volts with battery connectors colour coded to indicate the polarity;

-
- c) The battery charger **must** be capable of charging the forklift batteries from the designated source of a 550 volt, three phase, 60Hz power source;
 - d) The vehicle **must** be provided with a back-up alarm system to alert personnel that the vehicle is in back-up mode;
 - e) The vehicle **must** be provided with an emergency power disconnect located within easy reach of the operator;
 - f) The vehicle **must** have battery compartment rollers and other features, which allow the rapid changing of the battery with a recharged battery; and
 - g) When requested, the vehicle **must** be provided with battery charger capable of charging the forklift batteries from a 220 volt, three phase, and 60 Hz power source.

3.16. **Lighting**

- a) **Working Lights** – The vehicle **must** be provided with lights illuminating the front and rear working areas for operations in dark locations; and
- b) **Reverse Movement Strobe Light** – The vehicle **must** be provided with a red strobe mounted on the rear of the forklift, which is activated when the vehicle travels in reverse.

3.17. **Hydraulic System** - The vehicle **must** be provided with a hydraulic system that supports the operation of all hydraulic components.

3.18. **Lubricants and Hydraulic Fluids** - The vehicle **must** be serviced with the manufacturer's non-proprietary standard lubricants and hydraulic fluids.

3.19. **Paint** - The vehicle **must** be painted using commercial colors having a high-durability, corrosion-resistant type coating.

3.20. **Identification** - The vehicle **must** be provided with an identification plate having manufacturer's name, model and serial number permanently marked in a conspicuous and protected location.

4. Integrated Logistic Support

4.1. Documentation and Support Items

4.1.1. Items Provided to Technical Authority

a) Manuals for Approval

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 15 working days of receipt;
- ix. The Contractor must supply responses to the Technical Authority's (TA) comments;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

b) Photographs and Line Drawings

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;

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- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv. Photographs **must** have a plain background;
 - v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.
- c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;

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- iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
- f) **Initial Parts Kit List**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii. A complete change of all filters and filter elements **must** be included in the list; and
 - iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2. **Items with Each Vehicle**

- a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.

e) **Maintenance Manual**

- i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
- ii. The Contractor may supply this deliverable as a bilingual package

f) **Parts Manual**

- i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
- ii. The parts manual **must** be supplied in English in paper and digital format;
- iii. It is desirable to supply the parts manual in French in addition to the English version; and
- iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.

4.2. **Training**

a) **Training – Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;

iv. **Curriculum**

1. The familiarization course **must** include operation and maintenance segments;
2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).

-
- v. The familiarization course ***must*** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
 - vi. The familiarization course ***must*** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
 - vii. The date for the familiarization course ***must*** be arranged with the ***Technical Authority***;
 - viii. After completion of the familiarization course, the Contractor ***must*** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
 - ix. The ***Technical Authority*** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

5. DELIVERY CONDITION

- 5.1. The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). The vehicle **must** be cleaned;
- 5.2. If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
- 5.3. The space for assembly at destination will be provided, if required; and
- 5.4. All items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose with the equipment, **must** be listed on the shipping certificate or to an attached packing note.

APPENDIX A

A.1 - Data Table - The following table shows required performance and dimensions by configuration, with a clause reference, that ***must*** be provided:

CHARACTERISTIC	CLAUSE	UNITS	CONFIGURATION	
			A	B
RATED LIFT CAPACITY	3.4.2(a)	kg	1 360	1 814
		lb	3 000	4 000
LIFT HEIGHT	3.4.2(b)	mm	4 470	4 470
		in	176	176
CAPACITY AT FULL HEIGHT	3.4.2(c)	kg	998	1 134
		lb	2 200	2 500
COLLAPSED HEIGHT	3.4.2(d)	mm	2 591	2 591
		in	102	102
FREE LIFT	3.4.2(e)	mm	1 219	1 219
		in	48	48
MAST ROTATION	3.4.2(g)	degree	180 ⁰	180 ⁰
OVERALL WIDTH	3.4.2(h)	mm	1 422	1 422
		in	56	56
BATTERY CAPACITY	3.15(a)	kWh	30	30

A.2 Feature and Accessory Table – The following table indicates, with "X", for each configuration the accessories, attachments and features (with a clause reference) that **must** be provided:

		CONFIGURATION	
DESCRIPTION	CLAUSE	A	B
"EE" Safety Rating	3.3.4	X	X
Fork positioner	3.5.1 (d)	X	X
Fire Extinguisher	3.5.1 (e)	X	X
Fork Tine Position Guide	3.5.1 (f)	X	X
Work Lights	3.16.1 (a)	X	X
Reverse movement strobe light	3.16.1 (b)	X	X
Initial Parts Kit List	4.1.1 (f)	X	X
Manuals for Approval	4.1.1 (a)	X	X
Operator Manual	4.1.2 (a)	X	X
Warranty Letter	4.1.2 (b)	X	X
Safety Data Sheets	4.1.2 (c)	X	X
Initial Parts Kit	4.1.2 (d)	X	X
Maintenance Manuals	4.1.2 (e)	X	X
Parts Manual	4.1.2 (f)	X	X
Training – Familiarization	4.2 (a)	X	X
Training – Troubleshooting	4.2 (b)	X	X

TECHNICAL EVALUATION CRITERIA

For

Group 6C: Turret Mast, Operator-down, Electric Motor Driven Forklift Truck

This document covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle <i>must</i> be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B:
3.3.1	All vehicle design, construction and safety aspects <i>must</i> be in accordance with the latest edition of ANSI/ISTDI B56.1.	Manufacturing standard	certificate or OEM brochure	Config A: Config B:
3.3.4 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.3)	Fire Safety standard	certificate or OEM brochure	Config A: Config B:
3.4.2 (a)	The vehicle <i>must</i> have a rated load capacity, at a 610 mm (24 inches) load center of at least that given as “ LIFT CAPACITY ” in the A.1 - Data Table of Appendix A	Lift capacity	lbs	Config A: Config B:


Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.4.2 (b)	The vehicle must have a lift height of at least that given as “ LIFT HEIGHT ” in the A.1 - Data Table of Appendix A, when measured from the floor to the top of the forks with mast in vertical position	Lift height	inch	Config A: Config B:
3.4.2 (c)	The load capacity must not de-rate to below the load capacity that given as “ LIFT CAPACITY AT FULL HEIGHT ” in the A.1 - Data Table of Appendix A at the lift height specified in section 3.4.2(b) above	Lift capacity at full height	lbs	Config A: Config B:
3.4.2 (d)	The vehicle must have an overall vehicle height and a collapsed mast of no more than that given as “ COLLAPSED HEIGHT ” in the A.1 - Data Table of Appendix A	Collapsed height	Inch	Config A: Config B:
3.4.2 (e)	The vehicle must have a free lift height (load backrest removed) of at least that given as “ FREE LIFT ” in the A.1 - Data Table of Appendix A	Free lift	Inch	Config A: Config B:
3.4.2 (g)	The vehicle must be provided with a mast configuration that allows fork-assembly to rotate to a degree of that given as “ MAST ROTATION ” in the A.1 - Data Table of Appendix A in order to place and remove loaded pallets to/from either side of an aisle without having	Mast rotation	Degrees	Config A: Config B:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	to turn the entire vehicle around			
3.4.2 (h)	The vehicle must have an overall width of not exceeding 1,371 mm (54 inches)	Width	Inch	Config A: Config B:
3.5.1 (d)	The vehicle must be provided with a fork positioning attachment to hydraulically increase and decrease the spacing between the forks	Fork Spacing	document	Config A: Config B:
3.15 (a)	The electrical system of the vehicle must have a minimum battery capacity of that given as "BATTERY CAPACITY" in the A.1 - Data Table of Appendix A	Capacity	kWh	Config A: Config B:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

"Equivalent" **must** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance

	<p style="text-align: center;">NOTICE</p> <p>This documentation has been reviewed by the Technical Authority and does not contained controlled goods.</p>
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SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 7A

PURCHASE DESCRIPTION (PD)

For

Electric Walkie Pallet Jack

Date: 13 October 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense

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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for electric walkie pallet jacks with features and accessories.

1.2. **Instructions** - The following instructions apply to this Purchase Description:

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- b) Requirements that are identified by the word “***must***”, ***must*** be treated as mandatory. Deviations will not be permitted.
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- d) Where “***must***” or “will” are not used, the information provided is for guidance only.
- e) Where a standard is specified and the Contractor has offered an ***Equivalent***, that ***Equivalent*** standard ***must*** be supplied by the Contractor.
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an ***Equivalent must*** be supplied, when requested by the ***Technical Authority***.
- g) While the International System of Units (SI) ***must*** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- h) Dimensions stated as nominal ***must*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- a) “***Provided***” ***must*** mean “provided and installed”.
- b) “***Technical Authority***” means the official responsible for the technical content of this requirement.
- c) “***Equivalent***” means a standard, means, or component type that the ***Technical Authority*** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.
- d) “***Commercially Equipped***” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.

2. **APPLICABLE DOCUMENTS**

- 2.1. **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.1.1 **ANSI Standards**

ANSI/ITSDF B56.6 Standard for Safety for Rough Terrain Forklift Trucks
Industrial Truck Standards Development Foundation
1750 K Street NW, Suite 460, Washington DC 20009, USA
<http://www.itsdf.org/>

2.1.2 **CSA B335**

Safety Standards for Lift Trucks
Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.3 **UL 583**

Standard for Electric-Battery-Powered Industrial Trucks
Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4 **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle **must** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle **must** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle **must** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle **must** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (32°F to 104°F).
- 3.2.2. **Terrain** – The vehicle **shall** be capable of being operated on use-roughened concrete floors while being used for stacking, un-stacking and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels **must** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects **must** be in accordance with the latest edition of ANSI/ITDSF B56.6.
- 3.3.3. **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"E" Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 583, or an ***Equivalent***.

3.3.5. **“EE” Safety Rating Feature**

- (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.4); and
- (b) A certification label confirming the vehicle meets the “EE” safety rating **must** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** – The vehicle **must** be a walkie pallet jack.

3.4.1. **Pallet Jack Performance**

- (a) The pallet jack **must** have a rated capacity of at least that given as “**LIFT CAPACITY**” in the Data Table A.1 (Appendix A);
- (b) The pallet jack **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
- (c) The pallet jack **must** have a nominal fork outside width of 558 mm (22 inches) with forks having a nominal width of 170 mm (6.7 inches).

3.5. **Equipment**

- (a) **Standard Forks** – The vehicle **must** be provided with forks having a nominal fork length of “**FORK LENGTH**” as given in the A.1 - Data Table (Appendix A); and
- (b) **Standard Load Backrest** – The vehicle **must** be provided with a load backrest with a nominal height of 1,219 mm (48 inches).

3.5.1. **Features and Accessories** - The following accessories, attachments and features **must** be provided, when requested:

- (a) **Fork Length no. 2** – Forks, with a nominal length of that given as “**FORK LENGTH 2**” in the A.1 - Data Table (Appendix A), **must** be provided in lieu of the standard forks (paragraph 3.5 (a));
- (b) **Fork Length no. 3** – Forks, with a nominal length of that given as “**FORK LENGTH 3**” in the A.1 - Data Table (Appendix A), **must** be provided in lieu of the standard forks (paragraph 3.5 (a));
- (c) **Cold Storage Preparation**
 - i. The vehicle **must** be provided with preparation for operations in a refrigerated warehouse; and
 - ii. The preparations **must** include low temperature lubricants, anti-seize compounds, hydraulic fluids and heated and/or sealed switches and controls.
- (d) **Battery Removal Aids**
 - i. The vehicle **must** be provided with devices to aid in the removal and replacement of the battery; and
 - ii. The devices may include items such as battery rollers or pivoting battery mounts.

-
- 3.6. **Operator/Forklift Body Clearance - Commercially Equipped**
- 3.7. **Chassis - Commercially Equipped**
- 3.8. **Motors - Commercially Equipped**
- 3.9. **Transmission - Commercially Equipped**
- 3.10. **Brake System - Commercially Equipped**
- 3.11. **Steering – Commercially Equipped**
- 3.12. **Tires – Commercially Equipped**
- 3.13. **Controls - Commercially Equipped**
- 3.14. **Instruments** - The vehicle **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.
- 3.15. **Electrical System**
- (a) The vehicle batteries **must** have a capacity of at least "**BATTERY CAPACITY**" as given in the A.1 - Data Table (Appendix A); and
 - (b) The vehicle **must** be supplied with a CSA approved, fully automatic, constant voltage, heavy-duty type a battery charger that connects to a 120-volt, single phase 60 Hz power source.
- 3.16. **Lighting - Commercially Equipped**
- 3.17. **Hydraulic System - Commercially Equipped**
- 3.18. **Lubricants and Hydraulic Fluids - Commercially Equipped**
- 3.19. **Paint - Commercially Equipped**
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted) and both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
 - (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

4. **INTEGRATED LOGISTIC SUPPORT**

4.1. **Documentation and Support Items**

4.1.1. **Items supplied to the *Technical Authority***

(a) **Manuals for Approval**

- i. The Contractor ***must*** supply a set of manuals for each Configuration/model, in digital format, including the operator, parts and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals ***must*** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals ***must*** be supplied in a bilingual format as a package;
- iv. Digital copies ***must*** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies ***must*** be supplied on a CD or DVD;
- vi. Digital copies ***must*** be supplied in a searchable PDF format;
- vii. The CD or DVD ***must*** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 30 working days of receipt;
- ix. The Contractor ***must*** supply responses to the ***Technical Authority's*** comments;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract ***must*** have the same content as the electronic format approved by the ***Technical Authority***.

(b) **Photographs and Line Drawings**

- i. The Contractor ***must*** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment ***must*** be supplied;
- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle ***must*** be supplied. Brochure line drawings are acceptable;
- iv. Photographs ***must*** have a plain background;
- v. Photographs ***must*** be in a JPEG (*Joint Photographic Experts Group*) format; and

-
- vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.

(c) **Data Summary**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
- ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
- iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
- iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
- v. The Contractor **must** supply responses to the **Technical Authority's** comments.

(d) **Safety Data Sheets**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
- ii. If there are no hazardous materials used, this **must** be stated on the list; and
- iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list

(e) **Warranty Letter**

- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
- ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
- iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
- iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.

(f) **Initial Parts Kit List**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one

-
- (1) year in accordance with the maintenance manual for each Configuration/Model;
 - ii. A complete change of all filters and filter elements **must** be included in the list; and
 - iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.
- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2. **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package
- (f) **Parts Manual**
 - i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;
 - iii. It is desirable to supply the parts manual in French in addition to the English version; and

-
- iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.

(g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2. **Training**

(a) **Training - Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;

iv. **Curriculum**

- 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
 - 3. The operation segment **must** include sub-systems including automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;

-
- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis and adjustments training;
 - iv. The troubleshooting course **must** have a minimum duration of eight (8) hours but not exceeding eight (8) hours a day;
 - v. The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
 - vi. The troubleshooting course **must** be supplied at the delivery destination;
 - vii. The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
 - viii. After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
 - ix. The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

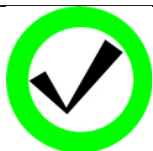
** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1. Data Table

The following table indicates performance and features with paragraph references for each Configuration of the vehicle that *must* be provided.

			CONFIGURATION		
CHARACTERISTIC	CLAUSE	UNITS	A	B	C
LIFT CAPACITY	3.4.2 (a)	kg	2,040	2,720	3,625
		lb	4,500	6,000	8,000
LIFT HEIGHT	3.4.2 (b)	mm	200	200	200
		in	8	8	8
FORK LENGTH	3.5.1 (a)	mm	1,065	1,065	1,065
		in	42	42	42
FORK LENGTH 2	3.5.2 (a)	mm	910	910	910
		in	36	36	36
FORK LENGTH 3	3.5.2 (b)	mm	1,215	1,215	1,215
		in	48	48	48
BATTERY CAPACITY	3.15 (a)	kWh	6	6	6



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA FOR GROUP 7A: ELECTRIC WALKIE PALLET JACK

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.6	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C:
3.3.5 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.4)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C:
3.4.1(a)	The pallet jack <i>must</i> have a rated capacity of at least that given as “LIFT CAPACITY” in the Data Table A.1 (Appendix A)	Capacity/load center	lbs/inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.4.1(b)	The pallet jack must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A)	Lift height	inch	Config A: Config B: Config C:
3.4.1(c)	The pallet jack must have a nominal fork outside width of 558 mm (22 inches) with forks having a nominal width of 170 mm (6.7 inches)	Outside Width	inch	Config A: Config B: Config C:
3.5 (a)	Standard Forks – The vehicle must be provided with forks having a nominal fork length of “ FORK LENGTH ” as given in the A.1 - Data Table (Appendix A)	Fork Length	Inch	Config A: Config B: Config C:
3.5 (b)	The vehicle must be provided with a load backrest with a nominal height of 1,219 mm (48 inches)	Load backrest height	Inch	Config A: Config B: Config C:
3.5.1(a)	Forks, with a nominal length of that given as “ FORK LENGTH 2 ” in the A.1 - Data Table (Appendix A), must be provided in lieu of the standard forks (paragraph 3.5 (a))	Fork length	Inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.5.1 (b)	Forks, with a nominal length of that given as " FORK LENGTH 3 " in the A.1 - Data Table (Appendix A), must be provided in lieu of the standard forks (paragraph 3.5 (a))	Fork length	Inch	Config A: Config B: Config C:
3.15 (a)	The vehicle batteries must have a capacity of at least " BATTERY CAPACITY " as given in the A.1 - Data Table (Appendix A)	Battery capacity	kWh	Config A: Config B: Config C:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance.



NOTICE

This documentation has been reviewed by the Technical Authority and does not contained controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 7B

PURCHASE DESCRIPTION (PD) (SA)

For

Electric Pallet Jack with an Operator Platform

Date: 13 October 2020

OPI DSVPM 4 – DAVPS 4
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du chef d'état-major de la Défense

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1. **SCOPE**

1.1. **Scope** - This Purchase Description covers the requirements for pallet jacks with a platform for the operator with features and accessories.

1.2. **Instructions**

- a) Appendix A containing the Data Table as well as the Feature and Accessory Table applicable to each Configuration is an integral part of this specification.
- b) Requirements that are identified by the word “**must**”, **must** be treated as mandatory. Deviations will not be permitted.
- c) Requirements identified with a “will” define actions to be performed by Canada and require no action/obligation on the Contractor’s part.
- d) Where “**must**” or “will” are not used, the information provided is for guidance only.
- e) Where a standard is specified and the Contractor has offered an **Equivalent**, that **Equivalent** standard **must** be supplied by the Contractor.
- f) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an **Equivalent must** be supplied, when requested by the **Technical Authority**.
- g) While the International System of Units (SI) **must** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact.
- h) Dimensions stated as nominal **must** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but that differ from the actual dimensions.

1.3. **Definitions**

- a) “**Provided**” **must** mean “provided and installed”.
- b) “**Technical Authority**” means the official responsible for the technical content of this requirement.
- c) “**Equivalent**” means a standard, means, or component type that the **Technical Authority** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.
- d) “**Commercially Equipped**” means that the vehicle is provided in its standard commercial configuration with no additional government-specified requirements.

2. **APPLICABLE DOCUMENTS**

- 2.1 **Other Publications** - Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the vehicle. Information on the organization is supplied below.

2.1.1 **ANSI Standards**

ANSI/ITSDF B56.6 Standard for Safety for Rough Terrain Forklift Trucks
Industrial Truck Standards Development Foundation
1750 K Street NW, Suite 460, Washington DC 20009, USA
<http://www.itsdf.org/>

2.1.2 **CSA B335**

Safety Standards for Lift Trucks

Canadian Standards Association (CSA)
5060 Spectrum Way, Suite 100
Mississauga, Ontario, L4W 5N6
<http://www.csa.ca/cm/ca/en/home>

2.1.3 **UL 583**

Standard for Electric-Battery-Powered Industrial Trucks

Underwriters' Laboratories of Canada
7 Underwriters Road,
Toronto, Ontario, M1R 3A9
<http://www.ulc.ca/>

2.1.4 **Hazardous Products Act**

Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>

3. **REQUIREMENTS**

3.1. **Standard Design**

- 3.1.1. The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year;
- 3.1.2. The vehicle **must** have engineering certification available, upon demand, for this application from the original equipment manufacturers (OEM) of major equipment systems and assemblies;
- 3.1.3. The vehicle **must** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and emissions in effect in Canada at the time of manufacture;
- 3.1.4. The vehicle **must** have systems and components not operating at greater than their ratings published by the systems or components manufacturers; and
- 3.1.5. The vehicle **must** include all components, equipment and accessories normally supplied for the model offered, although they may not be specifically described in this Purchase Description.

3.2. **Operating Conditions**

- 3.2.1. **Weather** – The vehicle **must** start and operate under weather conditions found in Canada in temperatures ranging from 0°C to 40°C (32°F to 104°F).
- 3.2.2. **Terrain** – The vehicle **must** operate on use-roughened concrete floors while being used for stacking, un-stacking, and moving general supplies in warehouses.

3.3. **Safety Standards**

- 3.3.1. **Noise Level** – The vehicle noise levels **must** meet the requirements of legislation relative to paragraph 7.4 of Canada Occupational Safety and Health Regulations both at the operator's station and exterior to the vehicle for exposures of eight (8) hours during a twenty four (24) hour period when measured in accordance with CAN/CSA Z107.56-13.
- 3.3.2. **Vehicle Safety** – All vehicle design, construction and safety aspects **must** be in accordance with the latest edition of ANSI/ITDSF B56.6.
- 3.3.3. **Hazardous Materials** – The Contractor **must** minimize or eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at the time of delivery.
- 3.3.4. **"E" Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an "E" safety rating in accordance with Standard UL 583, or an ***Equivalent***.

3.3.5. **“EE” Safety Rating Feature**

- (a) The vehicle ***must*** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an ***Equivalent***, in lieu of the “E” safety rating (paragraph 3.3.3); and
- (b) A certification label confirming the vehicle meets the “EE” safety rating ***must*** be permanently affixed to the vehicle before delivery.

3.4. **Vehicle** – The vehicle ***must*** be pallet jack type with a ride-on platform for the operator.

3.4.1. **Pallet Jack Performance**

- (a) The vehicle ***must*** have a rated capacity of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A);
- (b) The vehicle ***must*** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
- (c) The vehicle ***must*** have a nominal fork outside width of 558 mm (22 inches) having forks with a nominal width of 230 mm (9 inches).

3.5. **Equipment**

- (a) **Standard Forks** – The vehicle ***must*** be provided with forks having a nominal fork length of “**FORK LENGTH**” as given in the A.1 - Data Table (Appendix A); and
- (b) **Standard Load Backrest** – The vehicle ***must*** be provided with a load backrest with nominal height of 1,219 mm (48 inch).

3.5.1. **Features and Accessories** - The following accessories, attachments and features ***must*** be provided, when requested:

- (a) **Fork Length no. 2** – Forks, with a nominal length of that given as “**FORK LENGTH 2**” in the A.1 - Data Table (Appendix A), ***must*** be provided in lieu of the standard forks (paragraph 3.5 (a));
- (b) **Fork Length no. 3** – Forks, with a nominal length of that given as “**FORK LENGTH 3**” in the A.1 - Data Table (Appendix A), ***must*** be provided in lieu of the standard forks (paragraph 3.5 (a));
- (c) **Fork Length no. 4** – Forks, with a nominal length of that given as “**FORK LENGTH 4**” in the A.1 - Data Table (Appendix A), ***must*** be provided in lieu of the standard forks (paragraph 3.5 (a));
- (d) **Fork Length no. 5** – Forks, with a nominal length of that given as “**FORK LENGTH 5**” in the A.1 - Data Table (Appendix A), ***must*** be provided in lieu of the standard forks (paragraph 3.5 (a));
- (e) **Fork Length no. 6** – Forks, with a nominal length of that given as “**FORK LENGTH 6**” in the A.1 - Data Table (Appendix A), ***must*** be provided in lieu of the standard forks (paragraph 3.5 (a));

-
- (f) **Cold Storage Preparation**
 - i. The vehicle **must** be provided with preparation for operations in a refrigerated warehouse; and
 - ii. The preparations **must** include low temperature lubricants, anti-seize compounds, hydraulic fluids and heated and/or sealed switches and controls.
 - (g) **Spray Wash-Down** - The vehicle **must** be prepared so that it can be washed down with a high-pressure spray without damage; and
 - (h) **Battery Removal Aids**
 - i. The vehicle **must** be provided with devices to aid in the removal and replacement of the battery; and
 - ii. The devices may include items such as battery rollers or pivoting battery mounts.
- 3.6. **Operator Station**
- (a) The vehicle **must** be provided with an operator platform with a non-slip standing surface; and
 - (b) The platform **must** allow the operator to steer safely.
- 3.6.1. **Operator Station Position** - When requested, the following accessories and features **must** be provided:
- (a) **End Platform** - The platform **must** be located at the end of the vehicle behind the steering arm when indicated as “**END**” in the A.1 - Data Table (Appendix A); or
 - (b) **Centre Platform**
 - i. The platform **must** be located between the steering arm and the load backrest when indicated as “**CENTRE**” in the A.1 - Data Table (Appendix A); and
 - ii. The platform **must** be accessible from either side of the pallet jack.
- 3.7. **Chassis – Commercially Equipped**
- 3.8. **Motors – Commercially Equipped**
- 3.9. **Transmission – Commercially Equipped**
- 3.10. **Brake System – Commercially Equipped**
- 3.11. **Steering – Commercially Equipped**
- 3.12. **Tires – Commercially Equipped**
- 3.13. **Controls – Commercially Equipped**
- 3.14. **Instruments** - The instruments **must** be provided with an hour-meter with numerical read-out which records accumulated running time up to 9,999 hours and a battery state-of-charge indicator with lift interrupt.
- 3.15. **Electrical System**
- (a) The vehicle batteries **must** have a capacity of at least “**BATTERY CAPACITY**” as given in the A.1 - Data Table (Appendix A); and
-

-
- (b) The vehicle **must** be supplied with a CSA approved, fully automatic, constant voltage, heavy-duty type battery charger that connects to a 120-volt, single phase 60 Hz power source.
- 3.16. **Lighting** – Not applicable
- 3.17. **Hydraulic System - *Commercially Equipped***
- 3.18. **Lubricants and Hydraulic Fluids - *Commercially Equipped***
- 3.19. **Paint - *Commercially Equipped***
- 3.20. **Identification** - The manufacturer's name, model and vehicle serial number **must** be permanently marked in a conspicuous and protected location.
- 3.21. **Vehicle Delivery Condition**
- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior **must** be cleaned;
 - (b) If the vehicle requires assembly at destination, the Contractor **must** be responsible for all manpower and equipment to perform assembly;
 - (c) The space for assembly at destination will be provided, if required;
 - (d) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note; and
 - (e) Lubricants installed in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.

4 **INTEGRATED LOGISTICS SUPPORTS (ILS)**

4.1 **Documentation and Support Items**

4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a set of manuals for each Configuration/model, in digital format, including the operator, parts, and maintenance (shop repair) manuals. Manuals may cover more than one (1) Configuration/model;
- ii. The set of manuals **must** include manuals for all the specified accessories and features for the Configuration/model. Accessory manuals may be included as supplements to the vehicle manuals;
- iii. The operator manuals **must** be supplied in a bilingual format as a package;
- iv. Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- v. Digital copies **must** be supplied on a CD or DVD;
- vi. Digital copies **must** be supplied in a searchable PDF format;
- vii. The CD or DVD **must** be permanently and legibly marked with a list of contents;
- viii. Manual approval or comments will be supplied within 15 working days of receipt;
- ix. The Contractor **must** supply responses to the Technical Authority's (TA) comments. If comments are acceptable, the TA will approve the manuals;
- x. Manuals will not be returned; and
- xi. Paper copies of manuals delivered under this contract **must** have the same content as the electronic format approved by the **Technical Authority**.

(b) **Photographs and Line Drawings**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of each Configuration/Model;
- ii. One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;

-
- iii. One (1) front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
 - iv. Photographs **must** have a plain background;
 - v. Photographs **must** be in a JPEG (*Joint Photographic Experts Group*) format; and
 - vi. Photographs **must** have a resolution of at least eight (8) Mega pixels.
- (c) **Data Summary**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual data summary for each Configuration/model, with vehicle data (including accessories and features) and a vehicle picture;
 - ii. The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
 - iii. The Contractor **must** supply a digital copy (MS Word) of the completed data summary for approval;
 - iv. Data summary approval or comments will be supplied within 15 working days of receipt; and
 - v. The Contractor **must** supply responses to the **Technical Authority's** comments.
- (d) **Safety Data Sheets**
- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list, in digital format, of all hazardous materials used on the vehicle;
 - ii. If there are no hazardous materials used, this **must** be stated on the list; and
 - iii. The Contractor **must** supply safety data sheets in both official languages, in digital PDF format for all hazardous materials in the list
- (e) **Warranty Letter**
- i. The **Technical Authority** will supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a bilingual warranty letter template to the Contractor;
 - ii. The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
 - iii. The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - iv. The Contractor **must** supply the original warranty letter in digital format, for each vehicle delivered, to the **Technical Authority**.
-

(f) **Initial Parts Kit List**

- i. The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a list of parts needed to perform preventive maintenance on one (1) vehicle for a period of one (1) year in accordance with the maintenance manual for each Configuration/Model;
- ii. A complete change of all filters and filter elements **must** be included in the list; and
- iii. The list **must** include the following elements: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and unit cost.

- (g) **Training Plan(s)** - The Contractor **must** supply, no later than thirty (30) days prior to the forklift(s) being shipped to their delivery destination, a training plan for approval for each of the training courses listed in this purchase description to the **Technical Authority**. Approval or comments will be supplied within 15 working days of receipt of the training plan.

4.1.2 **Items with Each Vehicle**

- (a) **Operator's Manual** - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format with each vehicle delivered;
- (b) **Warranty Letter** - The Contractor **must** supply a copy of the warranty letter with each vehicle delivered;
- (c) **Safety Data Sheets**
 - i. The Contractor **must** supply a set of safety data sheets; and
 - ii. The safety data sheets **must** be the same as those supplied to the **Technical Authority** as described in the purchase description.
- (d) **Initial Parts Kit**
 - i. One (1) initial parts kit **must** be supplied; and
 - ii. The initial parts kit **must** include a set of parts in the approved initial parts kit list as described in this purchase description.
- (e) **Maintenance Manual**
 - i. The Contractor **must** supply the approved maintenance (shop repair) manuals in paper and digital format in English required for the maintenance and repair of the vehicle, features and accessories; and
 - ii. The Contractor may supply this deliverable as a bilingual package
- (f) **Parts Manual**
 - i. The Contractor **must** supply the approved parts manuals for the vehicle, features and accessories;
 - ii. The parts manual **must** be supplied in English in paper and digital format;

-
- iii. It is desirable to supply the parts manual in French in addition to the English version; and
 - iv. Digital parts manuals **must** be supplied in a searchable PDF format CD/DVD-ROM.
- (g) **Keys** – The vehicle must be provided with two (2) sets of keys.

4.2 **Training**

(a) **Training – Familiarization**

- i. The Contractor **must** supply a familiarization course, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination;
- iv. **Curriculum**
 - 1. The familiarization course **must** include operation and maintenance segments;
 - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures, and daily/weekly operator servicing procedures;
 - 3. The operation segment **must** include sub-systems including container handling attachment, automatic grease system and pre-heaters; and
 - 4. The maintenance segment **must** include diagnostics, trouble shooting, and operation of any special tools and test equipment (if any).
- v. The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- vi. The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vii. The date for the familiarization course **must** be arranged with the **Technical Authority**;
- viii. After completion of the familiarization course, the Contractor **must** have the “**PROOF OF FAMILIARIZATION**” certificate signed by the senior course attendee; and
- ix. The **Technical Authority** will supply the “**PROOF OF FAMILIARIZATION**” document template in a digital format.

(b) **Training – Troubleshooting**

- i. When requested, the Contractor **must** supply a troubleshooting course in the official language (English or French) specified in the contract for that delivery destination;
- ii. The instructor **must** be an OEM Factory Certified Training Provider;
- iii. The troubleshooting course **must** include detailed testing, troubleshooting, problem analysis, and adjustments training
- iv. The troubleshooting course **must** have a minimum duration of twenty four (24) hours but not exceeding eight (8) hours a day;
- v. The troubleshooting course **must** accommodate up to eight (8) maintenance personnel;
- vi. The troubleshooting course **must** be supplied at the delivery destination;
- vii. The date for the troubleshooting course **must** be arranged with the **Technical Authority**;
- viii. After completion of the troubleshooting course, the Contractor **must** have the “**PROOF OF TROUBLESHOOTING TRAINING**” certificate signed by the senior course attendee; and
- i. The **Technical Authority** will supply the “**PROOF OF TROUBLESHOOTING TRAINING**” document template in a digital format.

4.3 **ILS Data Deliverables Summary** - This table is for quick reference only. All detailed requirements to be met are contained under Paragraph 4 - Integrated Logistics Support.

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
Photographs and Line Drawings	Digital	x	-	-	
Data Summary	Digital	x	-	-	TA will provide template
Initial Parts Kit List *	Digital	x	-	-	
Warranty Letter	Digital	x	-	-	TA will provide template
	Paper**	-	-	x	
Listing of HAZMAT and Safety Data Sheets French and English	Digital	x	-	-	
	Paper**	-	-	x	
Operator Manual(s) Bilingual	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) English	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Maintenance (shop repair) Manual(s) French	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
Parts Manual(s)	Digital	-	x	x	On CD/DVD *
	Paper**	-	-	x	
The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

Notes: *Although a separate CD/DVD *must* be used for each Configuration, a single CD/DVD should ideally be used for all e-manuals covering a specific Configuration and its accessories.

** Paper copy *must* have identical content as the electronic copy approved by the TA.

APPENDIX A

A.1. Data Table

The following table indicates performance and features of the vehicle by Configuration that must be provided.

			CONFIGURATION			
CHARACTERISTIC	CLAUSE	UNITS	A	B	C	D
LIFT CAPACITY	3.4.2 (a)	kg	2,720	2,720	3,625	3,625
		lb	6,000	6,000	8,000	8,000
LIFT HEIGHT	3.4.2 (b)	mm	200	200	200	200
		in	8	8	8	8
FORK LENGTH	3.5 (a)	mm	1,065	1,065	1,065	1,065
		in	42	42	42	42
FORK LENGTH 2	3.5.1 (a)	mm	910	910	910	910
		in	36	36	36	36
FORK LENGTH 3	3.5.1 (b)	mm	1,215	1,215	1,215	1,215
		in	48	48	48	48
FORK LENGTH 4	3.5.1 (c)	mm	1,520	1,520	1,520	1,520
		in	60	60	60	60
FORK LENGTH 5	3.5.1 (d)	mm	1,825	1,825	1,825	1,825
		in	72	72	72	72
FORK LENGTH 6	3.5.1 (e)	mm	2,135	2,135	2,135	2,135
		in	84	84	84	84
POSITION OF PLATFORM	END	3.6.1 (a)	-	X	X	
	CENTRE	3.6.1 (b)	-	X		X
BATTERY CAPACITY	3.15 (a)	kWh	11	11	11	11



NOTICE

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

TECHNICAL EVALUATION CRITERIA FOR GROUP 7B: ELECTRIC PALLET JACK WITH AN OPERATOR PLATFORM

This questionnaire covers technical information, which **must** be provided for evaluation of the Configurations of the vehicle offered.

Where the specification paragraphs below indicate “**Substantial information**”, the “**Substantial information**” **must** be provided for each performance requirement/specification.

Bidders should indicate the document name/title and page number where the **Substantial information** can be found.

SUPPLIER INFORMATION

Supplier Name:

Supplier Address:

Submission Date:

Substitutes/Alternatives

Are any substitutes/alternatives offered as ***Equivalent?***

YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.1.1	The vehicle must be the latest model from a manufacturer who has demonstrated acceptability by manufacturing and selling this type and size class of vehicle for at least one (1) year	Vehicle Make	document	
		Vehicle Model and Year Introduced	document	Config A: Config B: Config C: Config D:
3.3.2	All vehicle design, construction and safety aspects must be in accordance with the latest edition of ANSI/ITDSF B56.6	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C: Config D:
3.3.5 (a)	The vehicle <i>must</i> be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an <i>Equivalent</i> , in lieu of the “E” safety rating (paragraph 3.3.3)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C: Config D:
3.4.1(a)	The vehicle <i>must</i> have a rated capacity of at least that given as “ LIFT CAPACITY ” in the A.1 - Data Table (Appendix A)	Capacity	lbs	Config A: Config B: Config C: Config D:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
3.4.1(b)	The vehicle must have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “ LIFT HEIGHT ” in the A.1 - Data Table (Appendix A)	Lift height	inch	Config A: Config B: Config C: Config D:
3.4.1(c)	The vehicle must have a nominal fork outside width of 558 mm (22 inches) having forks with a nominal width of 230 mm (9 inches)	Outside width	inch	Config A: Config B: Config C: Config D:
3.5 (a)	The vehicle must be provided with forks having a nominal fork length of “ FORK LENGTH ” as given in the A.1 - Data Table (Appendix A)	Fork length	Inch	Config A: Config B: Config C: Config D:
3.5 (b)	The vehicle must be provided with a load backrest with nominal height of 1,219 mm (48 inch)	Load backrest height	Inch	Config A: Config B: Config C: Config D:
3.5.1 (a)	Forks, with a nominal length of that given as “ FORK LENGTH 2 ” in the A.1 - Data Table (Appendix A), must be provided in lieu of the standard forks (paragraph 3.5 (a))	Fork length	Inch	Config A: Config B: Config C: Config D:
3.5.1 (b)	Forks, with a nominal length of that given as “ FORK LENGTH 3 ” in the A.1 - Data Table (Appendix A), must be	Fork length	Inch	Config A: Config B: Config C:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	provided in lieu of the standard forks (paragraph 3.5 (a))			Config D:
3.5.1(c)	Forks, with a nominal length of that given as "FORK LENGTH 4" in the A.1 - Data Table (Appendix A), must be provided in lieu of the standard forks (paragraph 3.5 (a))	Fork length	inch	Config A: Config B: Config C: Config D:
3.5.1(d)	Forks, with a nominal length of that given as "FORK LENGTH 5" in the A.1 - Data Table (Appendix A), must be provided in lieu of the standard forks (paragraph 3.5 (a))	Fork length	inch	Config A: Config B: Config C: Config D:
3.5.1 (e)	Forks, with a nominal length of that given as "FORK LENGTH 6" in the A.1 - Data Table (Appendix A), must be provided in lieu of the standard forks (paragraph 3.5 (a))	Fork length	inch	Config A: Config B: Config C: Config D:
3.6.1 (a)	The platform must be located at the end of the vehicle behind the steering arm when indicated as "END" in the A.1 - Data Table (Appendix A)	Platform position	document	Config A: Config C:
3.6.1 (b)	The platform must be located between the steering arm and the load backrest when indicated as "CENTRE"	Platform position	document	Config B: Config D:

Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	in the A.1 - Data Table (Appendix A). The platform must be accessible from either side of the pallet jack.			
3.15 (a)	The vehicle batteries must have a capacity of at least " BATTERY CAPACITY " as given in the A.1 - Data Table (Appendix A)	Battery capacity	kWh	Config A: Config B: Config C: Config D:

DEFINITIONS

The following definition(s) apply to the interpretation of this Technical Evaluation Criteria (TEC):

- (a) “***Equivalent***” ***must*** mean a standard, means, or component type, which the ***Technical Authority*** has approved for this requirement, in writing, as meeting the specified requirements for fit, form, function, and performance.