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**Revision to a Request for Supply
Arrangement - Révision à une demande
pour un arrangement en matière
d'approvisionnement**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

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 2021-10-21
Client Reference No. - N° de référence du client E60HS-21FRKL	Amendment No. - N° modif. 006
File No. - N° de dossier hs653.E60HS-21FRKL	CCC No./N° CCC - FMS No./N° VME
GETS Reference No. - N° de référence de SEAG PW-\$\$HS-653-79868	
Date of Original Request for Supply Arrangement 2021-03-18 Date de demande pour un arrangement en matière d'app. originale	
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	
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 () -
Delivery Required - Livraison exigée	
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	
Security - Sécurité This revision does not change the security requirements of the solicitation. Cette révision ne change pas les besoins en matière de sécurité de l'invitation.	

Instructions: See Herein

Instructions: Voir aux présentes

Acknowledgement copy required	Yes - Oui	No - Non
Accusé de réception requis	<input type="checkbox"/>	<input type="checkbox"/>
The Offeror hereby acknowledges this revision to its Offer. Le proposant constate, par la présente, cette révision à son offre.		
Signature	Date	
Name and title of person authorized to sign on behalf of offeror. (type or print) Nom et titre de la personne autorisée à signer au nom du proposant. (taper ou écrire en caractères d'imprimerie)		
For the Minister - Pour le Ministre		

Amendment 006

This amendment 006 is issued to provide questions and answers and modify the request for supply arrangement as follows:

1. Questions and Answers

Question 004: In Group 7b – Pallet Jack Performance, Section 3.4.1 part c, states that the overall fork spread shall be 22” & that the nominal individual fork thickness of 9”.

For operator safety while riding “on / in” the units, OEM recommends a wider overall width to increase unit stability when cornering. These units have faster speed than the walk behind style units. A narrower overall width can potentially cause the unit to tip, especially when carrying a full load. ANSI B56.1 Section 5.3.20 states that “operators should use caution when turning into an aisle as the load wheels tend to cut the corner”. Given the speed of these units, cornering capabilities as well as the capacity (6000 & 8000lbs), would the client consider an overall fork spread of 27.1” & individual fork thickness of 9.1” (For configurations A, B, C & D). The added overall width increases the overall stability of the unit, especially when carrying wider pallet loads (48” x 48” pallet for example).

Answer 004: Yes - an overall fork spread of 27.1” & individual fork thickness of 9.1” are acceptable.

Question 005: In Group 1A – Propane Engine Driven Forklift, With reference to Group 1A vehicle safety (3.3.2), ANSI B56.6 standard referred in the requirements refer to Rough Terrain Forklift but the purchase description is for Class 5 Industrial forklift. Please clarify.

Answer 005: This is a typo. ANSI B56.1 is applicable. Please refer to the revised Purchase Description (PD).

Question 006: In Group 1A – Propane Engine Driven Forklift, with reference to the lighting requirement in this application (3.16), please confirm on the number of rear working lights required.

Answer 006: One rear work light is required when requested.

Question 007: In Group 1A – Propane Engine Driven Forklift, with reference to lighting requirement, also confirm which one of the two lighting will be the best suited for this application, strobe or rotating beacon.

Answer 007: Lightning requirements must conform to section 3.16(b) of the Purchase Description (PD).

Question 008: In Group 1B – Diesel Engine Driven forklifts, With reference to Group 1B vehicle safety (3.3.2), ANSI B56.6 standard referred in the requirements refer to Rough Terrain Forklift but the purchase description is for Class 5 Industrial forklift. Please clarify.

Answer 008: 1. This is a typo. ANSI B56.1 is applicable. Please refer to the revised Purchase Description (PD).

Question 009: In Group 1B – Diesel Engine Driven forklifts, with reference to the lighting requirement in this application, please confirm on the number of rear working lights required.

Answer 009: 2. One rear work light is required when requested.

Question 010: In Group 1B – Diesel Engine Driven forklifts, with reference to lighting requirement, also confirm which one of the two lighting will be the best suited for this application, strobe or rotating beacon.

Answer 010: Lightning requirements must conform to section 3.16(b) of the Purchase Description (PD).

Question 011: In Group 2B – Electric 4 wheels sit down rider truck, vehicle fork positioning side shifter requirements (3.5.1 (f)), please clarify what you mean by integrated fork-positioning side shifter and the application requirement.

Answer 011: 1. An integrated fork-positioner with side shifting system allows operator to move the forks and the fork assembly hydraulically to either side without leaving the operator's seat.

Question 012: In Group 2B – Electric 4 wheels sit down rider truck, with reference to tire requirements (3.12), please provide an estimate on the desired tire tread dimensions.

Answer 012: Manufacturer's standard tire tread dimensions are acceptable for the tires specified in section 3.12 of the Purchase Description (PD).

Question 013: In Group 2B – Electric 4 wheels sit down rider truck, with reference to the lighting requirement in this application, please confirm on the number of rear working lights required.

Answer 013: One rear work light is required.

Question 014: In Group 2B – Electric 4 wheels sit down rider truck, with reference to the Removable cab requirement (3.6.1 (a)), please clarify if the requirement is for a hard cab with a wiper or a Vinyl cab that is removable.

Answer 014: Either a removable hard or vinyl cab is acceptable.

Question 015: In Group 3A – Interim Reach & Tiering Stand-up, Electric motor driven forklift truck, with reference to the Group 3A vehicle requirements (3.6), please confirm if a 60" tall extended operator

backrest can be used in place of a second vertical post for additional protection against incidental intrusions in the operator's compartment. This is to meet the operator ergonomics and operator safety requirements.

Answer 015: A vertical second post is required.

Question 016: In Group 3A – Interim Reach & Tiering Stand-up, Electric motor driven forklift truck, with reference to Group 3A tire requirements (3.12), please clarify the description, smooth face tires.

Answer 016: Smooth face tires are cushion tires that are made of smooth solid rubber without any treads bonded to a metal ring or baseband.

Question 017: In Group 3A – Interim Reach & Tiering Stand-up, Electric motor driven forklift truck, with reference to the lighting requirement in this application (3.16), please confirm on the number of rear working lights required.

Answer 017: Please refer to section 3.16(a) of the Purchase Description for lighting requirements.

Question 018: In Group 3B - Electric Stand-Up Rider, Counterbalance Forklift Truck, with reference to the lighting requirement in this application (3.16), please confirm on the number of rear working lights required.

Answer 018: No rear working light is required for this type of vehicle but DND will accept any rear working light proposed by the manufacturer. Please refer to section 3.16(b) of the Purchase Description for lighting requirements.

Question 019: With reference to the RFSA E60HS-21FRKL/A, we have the following query for Group 6B. We request clarifications for the same.

Group 6B – Swing Mast, Operator Down, Electric Motor Driven Forklift Truck
With reference to Group 6B manufacturing standard (3.3.1), ANSI B56.6 standard referred in the requirements is the standard for Rough Terrain Forklift but the purchase description is for electric swing mast indoor forklift. Please clarify if the intent is to comply with ANSI B56.1 Industrial forklifts standard instead.

Answer 019: This is due to a typing error - ANSI B56.1 is applicable. Please refer to the revised Purchase Description (PD).

Question 020: Group 6B, please note that the purchase description clause (3.3.1, Manufacturing standard) mentions ANSI B56.1 industrial forklift standard. However, the Technical Evaluation Criteria table (3.3.1, Manufacturing standard) mentions ANSI B56.6 (Rough terrain forklift standard). Please clarify if the standard mentioned in the Technical Evaluation Criteria is a typographical error.

Answer 020: This is due to a typing error - ANSI B56.1 is applicable. Please refer to the revised Technical Evaluation Criteria.

2. Annex A - Purchase Description – Group 1A

Delete: In its entirety

Insert: Annex A - Purchase Description – Group 1A, dated August 31st 2021

3. Appendix A1 - Technical Evaluation Matrix – Group 1A

Delete: In its entirety

Insert: Appendix A1 - Technical Evaluation Matrix – Group 1A, dated August 31st 2021

4. Annex "B" - Purchase Description – Group 1B

Delete: In its entirety

Insert: Annex "B" - Purchase Description – Group 1B, dated August 31 2021

5. Appendix "B1" - Technical Evaluation Matrix – Group 1B

Delete: In its entirety

Insert: Appendix "B1" - Technical Evaluation Matrix – Group 1B, dated August 31st 2021

6. Annex E - Purchase Description – Group 3A

Delete: In its entirety

Insert : Annex E - Purchase Description – Group 3A, dates August 27th 2021

7. Annex "L" Purchase Description – Group 6B

Delete: In its entirety

Insert: Annex "L" Purchase Description – Group 6B, dated October 6 2021

8. Appendix "L1" - Technical Evaluation Matrix – Group 6B

Delete: In its entirety

Insert: Appendix "L1" - Technical Evaluation Matrix – Group 6B, dated October 6 2021

9. Annex "O" Purchase Description – Group 7B

Delete: In its entirety

Insert: Annex "O" Purchase Description – Group 7B, dates August 31st 2021

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

Delete: In its entirety

Insert: Appendix "O1" - Technical Evaluation Matrix – Group 7B, dates August 31st 2021

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.



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 1A

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

Date: 31 August, 2021

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 B56.1.
- 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. **“LP” Safety Rating** - The vehicle **must** be manufactured to meet the requirements of an “LP” 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**

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- 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, stoplights and turn signals; and
 - (b) **Additional Working Lights** – The vehicle **must** be provided with at least one additional adjustable work light on the front and at the rear.
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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.

CHARACTERISTIC		PARAGRAPH	UNITS	CONFIGURATION					
				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 B56.1	Manufacturing standard	certificate or OEM brochure	Config A: Config B: Config C: Config D: Config E: Config F:
3.3.5 (a)	The vehicle 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	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 <i>must</i> 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, <i>must</i> 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 contained controlled goods.

SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT

GROUP 1B

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

Date: 31 August 2021

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 B56.1.
- 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. **"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, stoplights and turn signals; and
- (b) **Additional Working Lights** – The vehicle **must** be provided with at least one additional adjustable work light on the front and at the rear.
- 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.

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:

CHARACTERISTIC		PARAGRAPH	UNITS	CONFIGURATION						
				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
	VEHICLE HEIGHT		inches	150	150	150	150	145.5	150	150
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	5,330	5,330	5,330	5,205	5,155	5,255	5,255
	VEHICLE HEIGHT		inches	210	210	210	205	203	207	207
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	5,940	5,940	5,940	5,660	5,500	5,890	5,890
	VEHICLE HEIGHT		inches	234	234	234	223	216.5	232	232
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	2,925	2,925	2,925	2,925	2,795	3,000	3,124
	VEHICLE HEIGHT		inches	115	115	115	115	110	118	123

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 B56.1	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 in accordance with	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
	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 ”	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 the A.1 - Data Table (Appendix A)			
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 6B

**Purchase Description (PD) For
Swing Mast, Operator-down, Electric Motor Driven Forklift Trucks**

Date: 06 October 2021

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 3.3.2);
 - 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.

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 that given as “**OVERALL WIDTH**” in A.1 - Data Table of Appendix A.

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:

CHARACTERISTIC	CLAUSE	UNITS	CONFIGURATION				
			A	B	C	D	E
LIFT CAPACITY	3.4.2(a)	kg	1,361	1,814	2,722	3,628	5,443
		lb	3,000	4,000	6,000	8,000	12,000
LIFT HEIGHT	3.4.2(b)	mm	4,724	4,724	3,658	3,658	3,658
		in	186	186	144	144	144
COLLAPSED HEIGHT	3.4.2(d)	mm	2,235	2,235	2,311	2,311	2,337
		in	88	88	91	91	92
FREE LIFT	3.4.2(e)	mm	1,219	1,219	1,037	1,067	1,067
		in	48	48	42	42	42
MAST ROTATION	3.4.2(f)	degree	90° to the right				
OVERALL WIDTH	3.4.2(g)	mm	1,321	1,321	1,371	1,422	1,778
		in	52	52	54	56	70
MAST 1 – LIFT HEIGHT	3.5.1(a-ii)	mm	5,486	5,486	4,724	4,724	4,724
		in	216	216	186	186	186
MAST 1 – VEHICLE HEIGHT	3.5.1(a-iii)	mm	2,540	2,540	2,642	2,642	2,642
		in	100	100	104	104	104
MAST 2 – LIFT HEIGHT	3.5.1(b-ii)	mm	6,096	6,096	5,385	5,385	5,385
		in	240	240	212	212	212
MAST 2 – VEHICLE HEIGHT	3.5.1(b-iii)	mm	2,794	2,794	2,896	2,896	3,048
		in	110	110	114	114	120
MAST 3 – LIFT HEIGHT	3.5.1(c-ii)	mm	6,705	6,705	6,096	6,096	6,096
		in	264	264	240	240	240
MAST 3 – VEHICLE HEIGHT	3.5.1(c-iii)	mm	3,150	3,150	3,200	3,200	3,200
		in	124	124	126	126	126
BATTERY CAPACITY	3.15(a)	kWh	30	30	50	50	50
BATTERY VOLTAGE	3.15(b)	volt	48	48	72	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:

DESCRIPTION	PARAGRAPH	CONFIGURATION				
		A	B	C	D	E
"EE" Safety Rating Feature	3.3.3 (a)	X	X	X	X	X
Mast 1	3.5.1 (a)	X	X	X	X	X
Mast 2	3.5.1 (b)	X	X	X	X	X
Mast 3	3.5.1 (c)	X	X	X	X	X
Fork Tine Position Guide	3.5.1 (d)	X	X	X	X	X
Battery Watering System	3.15.1 (e)	X	X	X	X	X
Battery Rollers	3.15.1 (f)	X	X	X	X	X
220 V, Single Phase Charger	3.15.1 (g)	X	X	X	X	X
220 V, 3 Phase Charger	3.15.1 (g)	X	X	X	X	X
Initial Parts Kit	4.1.1 (f)	X	X	X	X	X
Manuals for Approval	4.1.1 (a)	X	X	X	X	X
Maintenance Manual	4.1.2 (e)	X	X	X	X	X
Parts Manuals	4.1.2 (f)	X	X	X	X	X
Training – Familiarization	4.2 (a)	X	X	X	X	X
Training – Troubleshooting	4.2 (b)	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 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: Config E:
3.3.1	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: Config E:
3.3.3 (a)	The vehicle must 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 3.3.2);	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C: Config D: Config E:
3.4.2(a)	The vehicle must have a load capacity, at a 610 mm (24 inches) load	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
	center of at least that given as "LIFT CAPACITY" in the A.1 - Data Table of Appendix A			Config C: Config D: Config E:
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: Config E:
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: Config E:
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: Config E:
3.4.2(h)	The vehicle must have an overall width of not exceeding that given as	Overall width	inch	Config A: Config B:



Table of Technical Evaluation Criteria				
PD Reference	Requirement	Substantial Information required	Value	Location of Substantial Information in Bid Proposal
	“OVERALL WIDTH” in the A.1 - Data Table of Appendix A.			Config C: Config D: Config E:
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: Config E:
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: Config E:
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: Config E:
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: Config E:



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: Config E:
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: Config E:
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: Config E:
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: Config E:

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.

	<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 7B
PURCHASE DESCRIPTION (PD) (SA)
For
Electric Pallet Jack with an Operator Platform

Date: 31 August 2021

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 688 mm (27.1 inches) having forks with a nominal width of 231 mm (9.1 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));

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- (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

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- (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;

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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;
 - 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**.
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- (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;

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- 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 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)	Fire Safety standard	certificate or OEM brochure	Config A: Config B: Config C: Config D:
3.4.1(a)	The vehicle must 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 688 mm (27.1 inches) having forks with a nominal width of 231 mm (9.1 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.