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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

<b>Title - Sujet</b> Forklift Trucks -Chariots élévateur Forklift Trucks -Chariots élévateur à fourches		
<b>Solicitation No. - N° de l'invitation</b> E60HS-21FRKL/A		<b>Date</b> 2021-05-25
<b>Client Reference No. - N° de référence du client</b> E60HS-21FRKL		<b>Amendment No. - N° modif.</b> 003
<b>File No. - N° de dossier</b> hs653.E60HS-21FRKL	<b>CCC No./N° CCC - FMS No./N° VME</b>	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$\$HS-653-79868		
<b>Date of Original Request for Supply Arrangement</b>		2021-03-18
<b>Date de demande pour un arrangement en matière d'app. originale</b>		
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> Eastern Daylight Saving Time EDT <b>on - le 2021-07-05</b> Heure Avancée de l'Est HAE		
<b>Address Enquiries to: - Adresser toutes questions à:</b> Martial, Daniel		<b>Buyer Id - Id de l'acheteur</b> hs653
<b>Telephone No. - N° de téléphone</b> (613) 296-7559 ( )		<b>FAX No. - N° de FAX</b> ( ) -
<b>Delivery Required - Livraison exigée</b>		
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b>		
<b>Security - Sécurité</b> 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

<b>Acknowledgement copy required</b>	<b>Yes - Oui</b>	<b>No - Non</b>
<b>Accusé de réception requis</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>The Offeror hereby acknowledges this revision to its Offer.</b> <b>Le proposant constate, par la présente, cette révision à son offre.</b>		
<b>Signature</b>	<b>Date</b>	
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)		
<b>For the Minister - Pour le Ministre</b>		

### Amendment 003

This Amendment 003 is raised to provide questions and answers to potential bidders and modify the Request for Supply Arrangement as follows:

#### 1. Questions and answers

**Question 3:** Our Company would like to request the following minor adjustments to various categories to be able to compete for future RFPs that will be issued under the new SA.

With a view to including as many vendors as possible, can you send these requests to the TA for consideration?

CATEGORY	CONFIG	PRAGRAPH	DESCRIPTION	SPECIFICATION IN RFSA	REQUESTED SPECIFICATION
1B	G	3.5.1(a)-iii	Vehicle Height	91"	93"
1B	G	3.5.1(b)-iii	Vehicle Height	109"	120.5"
1B	G	3.5.1(C)-iii	Vehicle Height	118"	122.4"
4C	A	3.4.1 (c)	Vehicle Height	93"	96"
4C	A	3.5.1(c)-iii & iv	Lift Height	160"	152"

**Response 3:** The request for adjustments has been reviewed and accepted by the DND Technical Authority. The Supply Arrangement documents have been revised accordingly.

#### 2. In Annex "B"

**Delete:**

Annex "B" - Purchase Description – Group 1B, Dated: 06 October 2020

**Insert:**

Annex "B" - Purchase Description – Group 1B, Dated: 10 May 2021

Solicitation No. - N° de l'invitation  
E60HS-21FRKL/A

Amd. No. - N° de la modif.  
003

Buyer ID - Id de l'acheteur  
HS653

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### **3. In Annex "I"**

#### **Delete:**

Annex "I" - Purchase Description – Group 4C, Dated: 09 September 2020

#### **Insert:**

Annex "I" - Purchase Description – Group 4C, Dated: 10 May 2021

**ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED.**



**NOTICE**

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

**SUPPLY ARRANGEMENT (SA) FOR CANADIAN FORCES MATERIAL HANDLING EQUIPMENT**

**GROUP 1B**

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

Date: 10 May 2021

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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.

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## 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

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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>



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### 3. **REQUIREMENTS**

#### 3.1. **Standard Design**

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

#### 3.2. **Operating Conditions**

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

#### 3.3. **Safety Standards**

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

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### 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.

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

(a) **Mast no. 2**

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

(b) **Mast no. 3**

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

(c) **Mast no. 4**

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

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

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

(f) **Fork Positioning Side Shifter**

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

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

### 3.6. **Operator Station**

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

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

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

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

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

3.8. **Engine**

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

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

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

3.8.3. **Engine Cold Weather Aids**

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



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

##### 4.1 **Documentation and Support Items**

##### 4.1.1 **Items Provided to Technical Authority**

###### (a) **Manuals for Approval**

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

###### (b) **Photographs and Line Drawings**

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

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

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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

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

#### 4.2

#### **Training**

##### (a) **Training – Familiarization**

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

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

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

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

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

## APPENDIX A

### A.1. Data Table

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

			CONFIGURATION							
CHARACTERISTIC		PARAGRAPH	UNITS	A	B	C	D	E	F	G
LIFT CAPACITY		3.4.1 (a)	kg	1,805	2,260	2,715	3,170	3,625	4,535	5444
			lbs	4,000	5,000	6,000	7,000	8,000	10,000	12,000
LOAD CENTRE			mm	610	610	610	610	610	610	610
			inches	24	24	24	24	24	24	24
STANDARD MAST – LIFT HEIGHT		3.4.1 (c)	mm	4,720	4,720	4,720	4,720	4,670	4,695	4,695
			inches	186	186	186	186	184	185	180
STANDARD MAST – VEHICLE HEIGHT		3.4.1 (d)	mm	2,290	2,290	2,290	2,340	2,365	2,495	2,495
			inches	90	90	90	92	93	98	110
MAST 2	LIFT HEIGHT	3.5.1 (a)	mm	3,810	3,810	3,810	3,810	3,695	3,820	3,820
			inches	150	150	150	150	145.5	150	150
	VEHICLE HEIGHT		mm	2,140	2,140	2,140	2,140	2,365	2,315	2,362
			inches	84	84	84	84	93	91	93
MAST 3	LIFT HEIGHT	3.5.1 (b)	mm	5,330	5,330	5,330	5,205	5,155	5,255	5 255
			inches	210	210	210	205	203	207	207
	VEHICLE HEIGHT		mm	2,795	2,795	2,795	2,795	2,495	2,770	3,073
			inches	110	110	110	110	98	109	121
MAST 4	LIFT HEIGHT	3.5.1 (c)	mm	5,940	5,940	5,940	5,660	5,500	5,890	5,890
			inches	234	234	234	223	216.5	232	232
	VEHICLE HEIGHT		mm	2,925	2,925	2,925	2,925	2,795	3,000	3,124
			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.

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

Date: 10 May 2021

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



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## 1. **SCOPE**

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

## 1.2. **Instructions**

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

## 1.3. **Definitions**

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

## 2. **APPLICABLE DOCUMENTS**

2.1 **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 **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>

### 2.1.2 **UL 558**

#### **Standard for Industrial Trucks, Internal Combustion Engine-Powered**

Underwriters' Laboratories of Canada

7 Underwriters Road,

Toronto, Ontario, M1R 3A9

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

### 2.1.3 **SAE Standards**

SAE World Headquarters

400 Commonwealth Drive

Warrendale, PA, 15096-0001

<http://www.sae.org>

### 2.1.4 **Hazardous Products Act**

Government of Canada / Department of Justice

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

### 2.1.5 **ANSI Standards**

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

Industrial Truck Standards Development Foundation

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

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

### 3. **REQUIREMENTS**

#### 3.1. **Standard Design**

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

#### 3.2. **Operating Conditions**

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

#### 3.3. **Safety Standards**

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

- (a) The vehicle **must** be manufactured to meet the requirements of an “EE” safety rating in accordance with Standard UL 583, or an **Equivalent**, in lieu of the “E” safety rating (paragraph 3.3.4); and
  - (b) A certification label confirming the vehicle meets the “EE” safety rating **must** be permanently affixed to the vehicle before delivery.
- 3.4. **Vehicle** – The vehicle **must** be a counterbalance type walkie stacker with powered movement.
- 3.4.1. **Forklift Performance**
- (a) The vehicle, with the standard mast and no accessories, **must** have a load capacity at a 610 mm load centre of at least that given as “**LIFT CAPACITY**” in the A.1 - Data Table (Appendix A);
  - (b) The vehicle **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**STANDARD MAST - LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
  - (c) The vehicle, with the standard mast in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- 3.5. **Equipment**
- (a) **Standard Mast**
    - i. The vehicle **must** be provided with a telescopic mast; and
    - ii. The standard mast **must** have full free lift.
  - (b) **Forks** - The vehicle **must** be provided with forks having a nominal fork length of “**FORK LENGTH**” as given in the A.1 - Data Table (Appendix A);
  - (c) **Load Backrest** - The load backrest **must** have a nominal height of 1,219 mm (48 inches).
- 3.5.1. **Features and Accessories** - When requested, the following accessories, attachments and features **must** be provided:
- (a) **Mast no. 2**
    - i. The vehicle **must** be provided with mast no. 2, in lieu of the standard mast (paragraph 3.5 (a));
    - ii. Mast no. 2 **must** have full free lift;
    - iii. The vehicle, with mast no. 2, **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 2**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
    - iv. The vehicle, with mast no. 2 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 2**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
  - (b) **Mast no. 3**

- i. The vehicle **must** be provided with mast no. 3, in lieu of the standard mast (paragraph 3.5 (a));
  - ii. Mast no. 3 **must** have full free lift;
  - iii. The vehicle, with mast no. 3, **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 3**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
  - iv. The vehicle, with mast no. 3 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 3**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (c) **Mast no. 4**
- i. The vehicle **must** be provided with mast no. 4, in lieu of the standard mast (paragraph 3.5 (a));
  - ii. Mast no. 4 **must** have full free lift;
  - iii. The vehicle, with mast no. 4, **must** have a lift height, measured from the floor to the top surface of the forks in the full-up position, of at least that given as “**MAST 4**” – “**LIFT HEIGHT**” in the A.1 - Data Table (Appendix A); and
  - iv. The vehicle, with mast no. 4 in its lowest position, **must** pass under a horizontal beam with a height above ground level of that given as “**MAST 4**” – “**VEHICLE HEIGHT**” in the A.1 - Data Table (Appendix A).
- (d) **Side Shifter** – The vehicle **must** be provided with a side shifter capable of shifting the fully loaded forks simultaneously at least 50 mm to either side of the centerline; and
- (e) **Cold Storage Preparation**
- i. The vehicle **must** be provided with preparation for operations in a refrigerated warehouse; and
  - ii. The preparations **must** include low temperature lubricants, anti-seize compounds, hydraulic fluids and heated and/or sealed switches and controls.
- 3.6. **Operator/Forklift Body Clearance** - Sufficient clearance beneath the vehicle **must** be provided so operator’s feet cannot be trapped entering or leaving ramps.
- 3.7. **Chassis - Commercially Equipped**
- 3.8. **Motors - Commercially Equipped**
- 3.9. **Transmission - Commercially Equipped**
- 3.10. **Brake System**
- (a) The brake system **must** conform to CSA B335, or an **Equivalent**;
  - (b) The brakes **must** be automatically applied when the steering handle is no less than 5 degrees from the true vertical and horizontal positions;

- (c) When the steering handle is released from the operating position, it **must** return to a vertical braking position;
- (d) The braking system **must** be interlocked by a relay; and
- (e) The braking system **must** disconnect the traction motor power when the brakes are applied.

#### 3.11. **Steering**

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

#### 3.12. **Tires – Commercially Equipped**

#### 3.13. **Controls**

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

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

#### 3.15. **Electrical System**

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

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

- (a) **120 V, Single Phase Charger** - A charger **must** be supplied for connection to a 120-volt, single phase, 60Hz power source;



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

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

### 4.1 **Documentation and Support Items**

#### 4.1.1 **Items Provided to Technical Authority**

(a) **Manuals for Approval**

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

(b) **Photographs and Line Drawings**

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

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

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

#### 4.1.2 **Items with Each Vehicle**

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

## 4.2 **Training**

### (a) **Training – Familiarization**

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

### (b) **Training – Troubleshooting**

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

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

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

Item	Format	Delivered to TA by E-mail	Delivered to TA by mail/courier	Copy with Vehicle	Remarks
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	
<b>The items below <i>must</i> be provided only if training is requested in the bid solicitation/contract.</b>					
Training Plan/Curriculum	Digital	x	-	-	For each type of course required.
Proof of Familiarization Course Certificate	Digital	x	-	-	PA will provide template

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

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

## APPENDIX A

### A.1. Data Table

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

			CONFIGURATION		
CHARACTERISTIC	PARAGRAPH	UNITS	A	B	C
LIFT CAPACITY	3.4.1 (a)	kg	905	1,360	1,810
		lb	2,000	3,000	4,000
STANDARD MAST – LIFT HEIGHT	3.4.1 (b)	mm	3,655	3,810	3,755
		in	148	150	148
VEHICLE HEIGHT	3.4.1 (c)	mm	2,438	2,438	2,438
		in	96	96	96
FORK LENGTH	3.5 (b)	mm	1,067	1,067	1,067
		in	42	42	42
MAST 2	3.5.1 (a)	LIFT HEIGHT	mm	2,640	2,640
			in	104	104
		VEHICLE HEIGHT	mm	1,985	1,985
			in	78	78
MAST 3	3.5.1 (b)	LIFT HEIGHT	mm	3,045	3,200
			in	120	126
		VEHICLE HEIGHT	mm	2,110	2,110
			in	83	83
MAST 4	3.5.1 (c)	LIFT HEIGHT	mm	3,861	4,365
			in	152	172
		VEHICLE HEIGHT	mm	2,720	2,720
			in	107	107
BATTERY CAPACITY	3.15 (b)	kWh	10	10	10



## A.2. Feature and Accessory Table

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

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