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11 Laurier St. / 11, rue Laurier
Place du Portage, Phase III
Core 0A1 / Noyau 0A1
Gatineau, Québec K1A 0S5
Bid Fax: (819) 997-9776

SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

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
11 Laurier St./11, rue Laurier
7B1, Place du Portage, Phase III
Gatineau
Québec
K1A 0S5

Title - Sujet SKID STEER 4 CONFIGURATIONS	
Solicitation No. - N° de l'invitation W8476-134212/A	**Amendment No. - N° modif.** 004
Client Reference No. - N° de référence du client W8476-134212	**Date** 2013-02-26
GETS Reference No. - N° de référence de SEAG PW-$$HS-604-61924	
File No. - N° de dossier hs604.W8476-134212	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2013-03-13**	**Time Zone** **Fuseau horaire** Eastern Daylight Saving Time EDT
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☑ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Bertrand(hs604), Alain	**Buyer Id - Id de l'acheteur** hs604
Telephone No. - N° de téléphone (819) 956-4025 ( )	**FAX No. - N° de FAX** (819) 956-5227
Destination - of Goods, Services, and Construction: **Destination - des biens, services et construction:**	

Instructions: See Herein

Instructions: Voir aux présentes

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

Canada

This solicitation modification # 4 is raised to supercede the Purchase Description dated 2012-29-10 with the revision dated 2013-19-02.

The following change was incorporated into the revised PD

Question 1:
Regarding 3.5.2 (s) - Landscape Rake:

For the landscape rake option, it asks for the unit to be 77 inches wide (3.5.2 s). Does this dimension represent the overall width or the working width of the unit? If it is overall width would you be willing to accept a unit with a working width of 72 inches?

Response 1:
Please see the following updates:

(s) Landscape Rake - A landscape rake. The landscape rake shall be capable of picking up rocks and preparing soil for seed. The landscape rake shall have a working width of at least that given as "LANDSCAPE RAKE - WIDTH" in the Attachment Capability Table.

The Attachment Capability Table updates:

INDUSTRIAL GRAPPLE	OPENING	3.5.2 (q)	mm	980
			in	39
BRUSH GRAPPLE	OPENING	3.5.2 (r)	mm	980
			in	39
LANDSCAPE RAKE	WIDTH	3.5.2 (s)	mm	**1,800**
			in	**71**

NOTICE

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

AVIS

Cette documentation a été révisée par l'Autorité technique et ne contient pas de marchandises contrôlées.

PURCHASE DESCRIPTION
FOR
LOADER, COMPACT, TRACKED

1. SCOPE

1.1 **Scope** - This purchase description covers the requirements for multiple configurations of a tracked type compact loader.

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

(a) Requirements, which are identified by the word "***shall***", are mandatory. Deviations will not be permitted;

(b) Requirements identified by "***shall***$^{(E)}$" are mandatory. The Technical Authority will consider substitutes/alternatives for acceptance as an Equivalent;

(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 "***shall***", "***shall***$^{(E)}$", or "will" are not used, the information provided is for guidance only;

(e) In this document "provided" ***shall*** mean "provided and installed";

(f) Where technical certification is required, a copy of the certification or an acceptable proof of compliance ***shall*** be provided upon request;

(g) Metric measurements ***shall*** be used to define the requirement. Other measurements are for reference only and may not be exact conversions; and

(h) Dimensions stated as nominal ***shall*** 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:

(a) "Technical Authority" - The government official responsible for technical content of this requirement;

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

(b) "Equivalent" - A standard, means, or component type, which has been accepted by the Technical Authority as meeting the specified requirements for form, fit, function and performance; and

(c) "Proof of Compliance" - A document such as a brochure, a third party test report, a report generated by third party software, or a certificate of attestation signed by a senior representative of the Original Equipment Manufacturer (such as a certified engineer) indicating the performance and/or feature specified.

1.4 **Configuration Capability Table** - Vehicles covered by this Purchase Description are represented as configurations. The following table shows required performance and dimensions by configuration with clause reference.

CHARACTERISTIC	CLAUSE	UNITS	Configuration F (1-4)
FORWARD SPEED	3.4.1	km/h	11
		mph	7
REVERSE SPEED	3.4.1	km/h	11
		mph	7
RATED OPERATING CAPACITY	3.4.2 (a)	kg	1,300
		lbs	2,875
DUMP HEIGHT	3.4.2 (c)	mm	2,300
		in	91
DUMP REACH	3.4.2 (d)	mm	580
		in	23
TRACK WIDTH	3.12	mm	440
		in	17.5

1.4.1 **Attachment Capability Table** – The following table shows required performance and capacity information by attachment with a clause reference.

ATTACHMENT TYPE	CHARACTERISTIC	CLAUSE	UNITS	QUANTITY
GENERAL PURPOSE BUCKET	BUCKET CAPACITY	3.5.1 (a)	m^3	0.50
			ft^3	17.7
LIGHT MATERIAL BUCKET	BUCKET CAPACITY	3.5.2 (a)	m^3	0.70
			ft^3	24.8
4 IN 1 BUCKET	BUCKET CAPACITY	3.5.2 (b)	m^3	0.40
			ft^3	14.2
SIDE DISCHARGE BUCKET	BUCKET CAPACITY	3.5.2 (c)	m^3	0.40
			ft^3	14.2
FORKLIFT	CAPACITY	3.5.2 (d)	kg	2,200
			lbs	4,850
SNOW PUSHER	WIDTH	3.5.2 (f)	mm	2,400
			in	95
SNOW BLOWER	SWATH	3.5.2 (g)	mm	2,100
			in	83

ATTACHMENT TYPE	CHARACTERISTIC	CLAUSE	UNITS	QUANTITY
DOZER BLADE	WIDTH	3.5.2 (h)	mm	2,400
			in	95
ANGLE SWEEPER	SWATH	3.5.2 (i)	mm	2,000
			in	80
ROLLER COMPACTOR	WIDTH	3.5.2 (j)	mm	2,000
			in	80
	DRUM DIAMETER		mm	600
			in	24
COLD PLANER	CUTTING WIDTH	3.5.2 (k)	mm	400
			in	16
HYRAULIC BREAKER	BREAKER ENERGY	3.5.2 (l)	J	800
			ft*lbf	591
BACKHOE	DIG DEPTH	3.5.2 (m)	mm	3,000
			in	120
	REACH		mm	1,500
			in	60
	DUMP		mm	2,400
			in	95
	BUCKET FORCE		kN	19.6
			lbs	4,410
	BOOM FORCE		kN	14.7
			lbs	3,310
	BUCKET WIDTH		mm	400
			in	16
TRENCHER	WIDTH	3.5.2 (n)	mm	150
			in	6
	DEPTH		mm	1,000
			in	40
ROTARY TILLER	WIDTH	3.5.2 (o)	mm	1,650
			in	65
	DEPTH		mm	125
			in	5
EARTH AUGER	DIAMETER	3.5.2 (p)	mm	450
			in	18
	LENGTH		mm	1,450
			in	58
INDUSTRIAL GRAPPLE	OPENING	3.5.2 (q)	mm	980
			in	39
BRUSH GRAPPLE	OPENING	3.5.2 (r)	mm	980
			in	39
LANDSCAPE RAKE	WIDTH	3.5.2 (s)	mm	1,800
			in	71

1.4.2 **Attachment and Option Applicability Table** - The following table indicates with "✓" for each configuration, the attachments or options which ***shall*** be provided.

		CONFIGURATION F			
DESCRIPTION OF OPTION	**CLAUSE**	**1**	**2**	**3**	**4**
GENERAL PURPOSE BUCKET	3.5.1 (a)	✓	✓	✓	✓
LIGHT MATERIAL BUCKET	3.5.2 (a)	✓	✓	✓	✓
4 IN 1 BUCKET	3.5.2 (b)		✓	✓	
SIDE DISCHARGE BUCKET	3.5.2 (c)	✓		✓	
FORKLIFT ATTACHMENT	3.5.2 (d)	✓	✓	✓	✓
FORK-LEVELING SYSTEM	3.5.2 (e)	✓	✓	✓	✓
SNOW PUSHER	3.5.2 (f)	✓			
SNOW BLOWER	3.5.2 (g)	✓	✓		
DOZER BLADE	3.5.2 (h)	✓	✓	✓	
ANGLE SWEEPER	3.5.2 (i)		✓	✓	
ROLLER COMPACTOR	3.5.2 (j)	✓			
COLD PLANER	3.5.2 (k)	✓			
HYDRAULIC BREAKER	3.5.2 (l)		✓	✓	
BACKHOE	3.5.2 (m)		✓	✓	
TRENCHER	3.5.2 (n)		✓		
ROTARY TILLER	3.5.2 (o)	✓			
EARTH AUGER	3.5.2 (p)	✓	✓	✓	
INDUSTRIAL GRAPPLE	3.5.2 (q)	✓			
BRUSH GRAPPLE	3.5.2 (r)	✓			
LANDSCAPE RAKE	3.5.2 (s)			✓	
AMBER COLOURED STROBE LIGHT	3.16.1 (a)	✓	✓	✓	✓
ADDITIONAL WORKING LIGHTS	3.16.1 (b)	✓	✓	✓	✓
AUXILIARY HYDRAULIC SYSTEM	3.17.1 (a)	✓	✓	✓	✓
INITIAL PARTS KIT	4.1.1 (c)	✓	✓	✓	✓
TRAINING - FAMILIARIZATION	4.2 (a)	✓	✓	✓	✓

2. APPLICABLE DOCUMENTS

2.1 **Government Furnished Documents** - **NOT APPLICABLE**

2.2 **Other Publications** - The following documents form part of this Purchase Description. Web sites for the organization are given when available. Effective documents are those in effect on date of manufacture. Sources are as shown:

SAE Handbook

Society of Automotive Engineers Inc.
400 Commonwealth Dr.,
Warrendale, PA, 15096
http://www.sae.org

International Organization for Standardization (ISO)

ISO Central Secretariat
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** - The vehicle/equipment ***shall***:

(a) Be the latest model. The manufacturer ***shall*** have manufactured and sold this type and size class of vehicle for at least 1 year;

(b) Have engineering certification available, upon demand, for this application from the original manufacturers of major equipment systems and assemblies;

(c) Conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and pollution in effect in Canada at the time of manufacture; and

(d) Have system and component capacities not greater than their published ratings (i.e. product or component brochures), or if not, a proof of compliance ***shall*** be provided.

3.2 **Operating Conditions**

3.2.1 **Weather** - The vehicle/equipment ***shall*** operate under the extremes of weather conditions found in Canada in temperatures ranging from -35 to 37° C (-31 to 99° F).

3.2.2 **Terrain** - The vehicle/equipment ***shall*** be capable of being operated on highways, secondary roads, gravel roads, and off-road (e.g. construction sites, open fields and dirt tracks). Terrain conditions ***shall*** include year round operations on snow, mud, sand and ice.

3.3 **Safety Standards**

3.3.1 **Noise Level** - The vehicle/equipment noise levels ***shall*** meet the requirements of legislation relative to Occupational Safety and Health both at the operator's station and exterior to the vehicle.

3.4 **Performance** – Proof of Compliance ***shall*** be provided to validate performance.

3.4.1 **Vehicle Performance** - The vehicle ***shall*** have forward and reverse speeds of at least that given in the Configuration Capability Table as **"FORWARD SPEED"** and **"REVERSE SPEED"** respectively.

3.4.2 **Loader Performance** – The vehicle, without optional equipment or features, and in accordance with SAE 732, ISO 7131 or ISO 8313, ***shall***:

(a) Have a rated operating load which ***shall***$^{(E)}$ be measured in accordance with SAE J818, of at least the value given as **"RATED OPERATING CAPACITY"** in the Configuration Capability Table;

(b) Have a bucket width of at least the vehicle width;

(c) Have a dump height, with the general purpose bucket at maximum dump angle, of the bucket cutting edge of at least the value given as **"DUMP HEIGHT"** in the Configuration Capability Table; and

(d) Have a reach at the specified dump height of at least that given as "**DUMP REACH**" in the Configuration Capability Table.

3.4.3 **Vehicle Delivery Condition** – The vehicle ***shall*** be delivered to destination in a fully operational condition (serviced and adjusted). Both the interior and exterior of the vehicle ***shall*** be cleaned. If the vehicle requires assembly at destination, the Contractor ***shall*** supply all manpower and equipment to perform assembly. The consignee will provide the area required for assembly. For shipment verification, all items such as wheel wrenches, jacks, and all other tools, equipment and accessories which are shipped loose with the equipment, ***shall*** be listed on the shipping certificate or to an attached packing note.

3.5 **Equipment**

3.5.1 **Application Equipment** - Equipment/features below ***shall*** be provided:

(a) **General Purpose Bucket** - A general-purpose bucket. The general-purpose bucket ***shall*** have a heaped capacity of at least that given as "**GENERAL BURPOSE BUCKET - BUCKET CAPACITY**" in the Attachment Capability Table;

(b) **Lift Arm(s)** - Manufacturers standard Lift arm(s) complete with lift arm safety device;

(c) **Loader Arm Quick-Connect Attachment** – A quick-connect attachment. The quick-connect attachment ***shall***:

i Allow attachments to be mounted and demounted by an operator from inside the cab; and

ii Include all fittings for connection of hydraulic power required

for operation of all attachments required for the Configuration in the Attachment and Options Availability Table. Hydraulic Fittings ***shall*** be spill-proof.

(d) **Vehicle Tie-Down Devices** - Vehicle tie-down devices. Permanent and integrally vehicle tie-down devices ***shall***:

i Be designed for forward thrust of 4 G, a rearward thrust of 4 G, an upward thrust of 2 G and a side thrust of 1.5 G (1 G = shipping weight of the equipment), loads are not imposed simultaneously;

ii Be designed to withstand stresses imposed by thrust loads (all directions) with a factor of safety of 1.5 with respect to the ultimate strength of the material;

iii Be designed/located to prevent shifting or movement during transport on low-bed trailers, rail car and aboard ships;

iv Be located to permit easy attachment of cables or turnbuckles;

v Be identified and marked with maximum strain permitted. Markings ***shall*** be painted using a contrasting colour; and

vi Include complete tie down instructions showing locations. This information ***shall*** be shown in the manual and it is preferred that it is marked in the vehicle cab (in the form of decals).

(e) **Protection against Vandalism** – Vandal protection measures including provisions for locking the engine covers, filler caps and cab; and

(f) **Recovery Hooks** - Towing hooks, loops or a component with equivalent capability at the front and rear of the vehicle. Recovery hooks whose location is other than the vehicle chassis ***shall*** be approved by the Technical Authority.

3.5.2 **Equipment and Features** – The following equipment and features ***shall*** be provided, when indicated with an "✓" in the Attachment and Option Applicability Table:

(a) **Light Material Bucket** - A light material bucket, in addition to the standard bucket. The bucket ***shall*** have a heaped capacity of at least that given as "**LIGHT MATERIAL BUCKET - BUCKET CAPACITY**" in the Attachment Capability Table;

(b) **4 in 1 Bucket** - A 4-in-1 bucket, in addition to the standard bucket. The 4-in-1 bucket ***shall*** have a heaped capacity of at least that given as "**4-in-1 BUCKET - BUCKET CAPACITY**" in the Attachment Capability Table;

(c) **Side Discharge Bucket** – A side discharge bucket, in addition to the standard bucket. The bucket ***shall*** have a heaped capacity of at least that given as "**SIDE DISCHARGE BUCKET - BUCKET CAPACITY**" in the Attachment Capability Table;

(d) **Forklift Attachment** - The forklift ***shall*** be capable of lifting a pallet weighing at least the value given as "**FORKLIFT - CAPACITY**" in the Attachment Capability Table at a load centre of 610 mm (24 in);

(e) **Fork-Leveling System** – A system that keeps the forks of the fork attachment at the same angle to the ground throughout the full lift of the loader arms. This may be either a design feature of the loader arm(s) or a hydraulic system that maintains the angle of inclination;

(f) **Snow Pusher** - A snow pusher. The width of the snow pusher ***shall*** be at least that given as "**SNOW PUSHER - WIDTH**" in the Attachment Capability Table;

(g) **Snow Blower** - Have a snow blower with a snow-blowing swath of at least the value given as "**SNOW BLOWER - SWATH**" in the Attachment Capability Table;

(h) **Dozer Blade** - A Dozer blade with hydraulic angling capabilities to both sides. The width of the blade angled ***shall*** be at least that given as "**DOZER BLADE - WIDTH**" in the Attachment Capability Table;

(i) **Angle Sweeper** – An angle Sweeper. The sweeper ***shall***:

i Have a sweeping swath of at least the value given as "**ANGLE SWEEPER - SWATH**" in the Attachment Capability Table; and

iii Angle to the left and right a minimum of 30 degrees.

(j) **Roller Compactor** - A vibrating roller compactor. The compactor ***shall***:

i Have a compactor face width of at least the value given as **"ROLLER COMPACTOR – WIDTH"** in the Attachment Capability Table;

ii Have a smooth drum with a diameter of at least the value given as **"ROLLER COMPACTOR – DIAMETER"** in the Attachment Capability Table; and

iii Have a vibrating system that is powered by the auxiliary hydraulic system of the loader.

(k) **Cold Planer Attachment** - A cold planer attachment. The planer ***shall***:

i Have a cutting width of at least that given as **"COLD PLANER – CUTTING WIDTH"** in the Attachment Capability Table;

ii Have hydraulic side shift and tilt back capability;

iii Have individually removable and replaceable teeth; and

iv Have all components required to operate the planer including all additional hydraulic and control components required.

(l) **Hydraulic Breaker** - A hydraulic breaker. The breaker ***shall***:

i Be able to be attached to the equipment in under five minutes;

ii Have a chisel point tool; and

iii Deliver breaker impact energy of at least the value given as "**HYDRAULIC BREAKER - BREAKER ENERGY**" for the configuration in the Attachment Capability Table.

(m) **Backhoe** - The backhoe ***shall***:

i Have a minimum digging depth of at least that given as "**BACKHOE - DIG DEPTH**" in the Attachment Capability Table;

ii Have a reach from centre of swing axis of at least that given as "**BACKHOE - REACH**" in the Attachment Capability Table;

iii Have a dump height of at least that given as "**BACKHOE - DUMP**" in the Attachment Capability Table;

iv Have a bucket cylinder digging force of at least that given as "**BACKHOE - BUCKET FORCE**" in the Attachment Capability Table;

v Have a boom cylinder digging force of at least that given as "**BACKEHOE - BOOM FORCE**" in the Attachment Capability Table; and

vi Have a heavy duty digging bucket with a width of at least that given as "**BACKHOE - BUCKET WIDTH**" in the Attachment Capability Table.

(n) **Trenching Attachment** - A chain type trenching attachment. The trenching attachment ***shall*** be able to dig a trench with a width of at least that given as "**TRENCH WIDTH**" and a depth of at least that given as "**TRENCH DEPTH**" in the Attachment Capability Table. The trenching attachment ***shall*** have side shift capability and a soil spreading auger;

(o) **Rotary Tiller** – A rotary tiller. The rotary tiller ***shall*** be capable of operation in forward and reverse drive direction. The rotary tiller ***shall*** have a cutting width of at least that given as "**ROTARY TILLER – WIDTH**" and a cutting depth of at least that given as "**ROTARY TILLER – DEPTH**" in the Attachment Capability Table;

(p) **Earth Auger** – A heavy-duty earth auger. The Earth Auger ***shall*** be equipped with a heavy-duty auger bit which has a diameter of at least that given as "**EARTH AUGER - DIAMETER**" and a length of at least that given as "**EARTH AUGER – LENGTH**" in the Attachment Capability Table;

(q) **Industrial Grapple** - An industrial grapple. The grapple ***shall*** have an opening of at least the value given as "**INDUSTRIAL GRAPPLE - OPENING**" in the Attachment Capability Table;

(r) **Brush Grapple** – A brush grapple. The grapple ***shall*** have spaced tines to allow small debris to pass through. The grapple ***shall*** have an opening of at least the value given as "**BRUSH GRAPPLE – OPENING**" in the Attachment Capability Table; and

(s) **Landscape Rake** – A landscape rake. The landscape rake ***shall*** be capable of picking up rocks and preparing soil for seed. The landscape rake ***shall*** have a working width of at least that given as **"LANDSCAPE RAKE – WIDTH"** in the Attachment Capability Table.

3.6 **Operator Station** - The operator station ***shall*** include:

(a) **ROPS Cab** - A weatherproof pressurized, insulated cab incorporating Roll Over Protective Structure, which ***shall***[E] conform to SAE J1040 or ISO 3471. The cab ***shall***:

i Have a ventilation and defrosting system capable of keeping windows free from frost and moisture and include a heater conforming to SAE J1503 and SAE J169 or conforming to ISO 10263-4;

ii Have safety glass in windows. It is preferred the glass be tinted to reduce solar heating load;

iii Have windshield wiper(s) conforming to SAE J198 having at least 2 speeds preferably with an intermittent setting, including a windshield washer for each wiper; and

iv Have two lockable doors, or one door and at least one visibly labeled window as an emergency operator escape route.

(b) **Suspension Seat** - An operator's air suspension seat and backrest in conformance with SAE J899 or in conformance with ISO 11112:1995 and ISO 7096. The seat ***shall*** be selected to be comfortable for an operator who may be operating the vehicle for extremely long periods and have seat material being a breathable fabric or a mesh surface. The seat ***shall***:

i Be equipped with seat belts, conforming to with SAE J386 , Type 1 or ISO 6683; and

ii Be horizontally and vertically adjustable while in a seated position.

(c) **Mirror(s)** - Rear view mirror(s) positioned to provide a full view of both sides for safe reverse operations;

(d) **Radio** – A radio which turns off automatically when the vehicle is not in service. It is preferred that the radio system includes a CD player and an auxiliary input connection; and

(e) **Air Conditioner** - An air conditioning system conforming to SAE J1503 and SAE J169 or conforming to ISO 10263-4. Air conditioning units ***shall*** not use ozone depleting refrigerants such as CFCs (ChloroFluoroCarbons) but preferably use HFCs (Hydro FluoroCarbons).

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

3.8 **Engine** - The engine ***shall*** be diesel powered.

3.8.1 **Engine Components** - Engine components ***shall*** be the manufacturer’s standard.

3.8.2 **Fuel Tank(s)** - The fuel tank(s) ***shall*** be the manufacturer’s standard. The fuel tank(s) ***shall*** be at least half full when delivered.

3.8.3 **Engine Cold Weather Aids** - The engine ***shall*** be equipped with cold weather aids to enable the engine (operating with winter grade fuels/oils) to be started at temperatures down to -35° C. The following ***shall*** be included:

(a) 110-volt engine heater(s) with a capacity as recommended by the engine manufacturer or conforming to SAE Information Sheet J1310; and

(b) A low temperature starting aid. The engine ***shall*** have one of the following: an ether injection system, glow plug or intake air preheat system.

3.9 **Transmission** - The loader ***shall***:

(a) Be fitted with a hydrostatic type transmission or a continuously engaged clutch-type transmission;

(b) Deliver full power to the tracks; and

(c) Allow for same rotation or opposite rotation of tracks on opposite sides.

3.10 **Brake System** - The manufacturer's standard brake system ***shall*** be provided and ***shall***$^{(E)}$ conform with ISO 3450.

3.11 **Steering** - The steering system ***shall*** be the manufacturer's standard.

3.12 **Tracks** – The tracks ***shall*** be continuous rubber tracks with a width of at least that given as "**TRACK WIDTH**" in the Configuration Capability Table. The vehicle ***shall*** be supported on 2 tracks, 1 track on either side of the vehicle.

3.13 **Controls** - Controls ***shall*** be manufacturer's standard including a safety device ensuring that engine can only be started with the transmission in a neutral position and a throttle control positioned for convenient operation. Controls ***shall*** be capable of operating all attachment related to the given configuration as defined in the Attachment and Option Applicability Table.

3.14 **Instruments** - Instruments ***shall*** be manufacturer's standard including a numeric read-out hour-meter, which displays accumulated running time up to 9,999 hours.

3.15 **Electrical System** - The vehicle ***shall*** be equipped with the manufacturer's standard electrical system, which ***shall*** include:

(a) **Warning Horn** - A readily accessible driver-operated warning horn; and

(b) **Back-Up Alarm System** - A back-up alarm system to alert personnel that the vehicle is in back-up mode.

3.16 **Lighting** - The vehicle ***shall*** have the manufacturer's standard lights. The lights ***shall*** be LED where commercially available.

3.16.1 **Optional Lighting Equipment** – The following Lighting ***shall*** be provided as indicated in the Attachment and Option Applicability Table:

(a) **Amber Coloured Strobe Light** – Amber coloured omni-directional strobe light(s) either on continuously or with a dash mounted control switch. The strobe light(s) ***shall*** provide maximum vehicle visibility.

(b) **Additional Working Lights** - Include additional forward and rearward facing working lights for no/low light working conditions, LED where the manufacturer offers the option commercially.

3.17 **Hydraulic System** - The hydraulic system ***shall*** be the manufacturer's standard complete with all components required for the operation of the hydraulic equipment specified.

3.17.1 **Hydraulic System Options** - When specified in the Attachment and Option Applicability Table, the following hydraulic system options ***shall*** be provided:

(a) **Auxiliary Hydraulic System** – An auxiliary hydraulic system which ***shall*** include all the components to provide additional hydraulic power required for the operation of attachments that have high hydraulic flow requirements.

3.18 **Arctic Lubricants and Hydraulic Fluids** - The vehicle ***shall*** be serviced with Arctic lubricants. The preference is synthetic oils.

3.19 **Paint** - The vehicle ***shall*** be painted using manufacturer's standard commercial colours. The prime coating ***shall*** be a high-durability, corrosion-resistant type. The prime coating ***shall***$^{(E)}$ be epoxy type or baked powder coat.

3.20 **Identification** - The following information ***shall*** be permanently marked in a conspicuous and protected location:

(a) Manufacturer's name, model and serial number; and

(b) Manufacturer's Vehicle Identification Number (VIN), where applicable.

4. **Integrated Logistic Support** - The Contractor is required to ensure that spare parts required to properly maintain and repair vehicles are available for purchase for a period of 10 years.

4.1 **Documentation and Support Items** – The Contractor ***shall*** provide the following documentation and support items.

4.1.1 **Items with Each Vehicle** – The Contractor ***shall*** provide the following items with each vehicle:

(a) **Vehicle Manuals** – Manuals required for safe operation, maintenance and repair of the vehicle and all attachments. It is preferred that complete sets of manuals are provided on CD/DVD-ROM (without password(s), installation requirements or requiring an Internet connection). An Operator's Manuals in paper format ***shall*** always be provided with each vehicle. The Vehicle Manuals ***shall*** include:

i **Operator's Manuals** – Operator's manuals in a bilingual format or as 2 manuals in a single binder (one English, and one French);

ii **Parts Manuals** – The Parts Manuals in English (French translation is desirable); and

iii **Maintenance (Shop Repair) Manuals** - The Maintenance (Shop Repair) Manual in English (French translation is desirable).

(b) **Warranty Letter** – A paper copy of the completed bilingual Warranty Letter in the approved format provided with each vehicle shipped. Designated warranty providers ***shall*** honour the warranty letter; and

(c) **Initial Parts Kit** – One Initial Parts Kit accompanying each vehicle/ equipment. Each Initial Parts Kit ***shall*** include the set of filters and filter elements from the Original Equipment Manufacturer required for the first 6 months of regular maintenance.

4.1.2 **Documents Provided to Technical Authority** – Example documents are available from the Technical Authority. The Contractor ***shall*** provide the following documents to the Technical Authority:

(a) **Data Summary** - A bilingual Data Summary for each make/model/ configuration in accordance with the requirements of CFTO D-01-100-200/SF-002: "Preparation of Data Summaries for Commercial Vehicles & Equipment" with data and a vehicle picture. The Contractor ***shall*** provide a Data Summary before shipment of vehicles;

(b) **Sample Manuals** – A set of Sample Manuals in digital format, including the Operator, Parts and Maintenance Manuals. The sample manuals ***shall*** be delivered to the Technical Authority 30 working days before delivery of vehicles. Sample manuals will not be returned. The Technical Authority will provide manual approval or comments within 30 days;

(c) **Warranty Letter Technical Authority Copy** - The Contractor ***shall*** send a copy of the Warranty Letter, in electronic format, to the Technical Authority for each vehicle, at shipment;

(d) **Photographs** – Two (2) digital pictures, one left-front three-quarter view, and one right-rear three-quarter view of each make/model/ configuration. It is preferred that pictures have an uncluttered background. Pictures ***shall*** have a size of at least four (4) Mega pixels;

(e) **Preventative Maintenance Replacement Parts Kit List** - A list of parts needed to perform preventive maintenance on a vehicle/equipment during the first scheduled preventive maintenance. The list ***shall*** include the parts provided in the Initial Parts Kit and additional items recommended by the Original Equipment Manufacturer for review and acceptance by the Technical Authority. The list should be no more than 50 items. The list ***shall*** include the following elements:

i Part description;

ii Original Equipment Manufacturer Part number; and

iii Suggested quantity.

(f) **Material Safety Data Sheets** - The contractor ***shall*** provide a listing of all hazardous materials used in the fabrication of the product supplied to the Technical Authority, if there are no hazardous materials used, this ***shall*** be noted on the listing. The contractor ***shall*** provide Material Safety Data Sheets for all the hazardous materials used in the fabrication of the product supplied; and

(g) **Sample Training Plan** – A sample training plan in digital format ***shall*** be delivered to the Technical Authority for approval at least 30 working days before delivery of vehicles. Sample training plan will not be returned. The Technical Authority will provide training plan approval or comments within 30 days.

4.2 **Training** – The Contractor ***shall*** perform the following training:

(a) **Familiarization** - At least 1-day (8 hours) familiarization instruction at each destination, for a maximum of 8 personnel, no later than one month after delivery of each vehicle. The instruction ***shall*** include the detailed operation and normal servicing of the vehicle/equipment and ***shall*** be split into two – four (4) hour segments for operator familiarization and maintainer familiarization. Familiarization instructions ***shall*** be available in both official languages for destinations in the province of Quebec or as requested by the Technical Authority. The training dates ***shall*** be arranged in conjunction with the Technical Authority. After completion of the familiarization session, the Contractor ***shall*** have a copy of the **"PROOF OF FAMILIARIZATION INSTRUCTION"** certificate signed by the consignee. The Technical Authority will supply this document in an electronic format, when requested.