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**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

|                                                                                                                                                                             |                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <b>Title - Sujet</b><br>TRACTOR, LOADER, BACKHOE                                                                                                                            |                                                                                  |
| <b>Solicitation No. - N° de l'invitation</b><br>W8476-133914/A                                                                                                              | <b>Amendment No. - N° modif.</b><br>003                                          |
| <b>Client Reference No. - N° de référence du client</b><br>W8476-133914                                                                                                     | <b>Date</b><br>2012-09-05                                                        |
| <b>GETS Reference No. - N° de référence de SEAG</b><br>PW-\$\$HS-616-60885                                                                                                  |                                                                                  |
| <b>File No. - N° de dossier</b><br>hs616.W8476-133914                                                                                                                       | <b>CCC No./N° CCC - FMS No./N° VME</b>                                           |
| <b>Solicitation Closes - L'invitation prend fin</b><br><b>at - à 02:00 PM</b><br><b>on - le 2012-09-14</b>                                                                  | <b>Time Zone</b><br><b>Fuseau horaire</b><br>Eastern Daylight Saving<br>Time EDT |
| <b>F.O.B. - F.A.B.</b><br><b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/> |                                                                                  |
| <b>Address Enquiries to: - Adresser toutes questions à:</b><br>Robertson, Kim                                                                                               | <b>Buyer Id - Id de l'acheteur</b><br>hs616                                      |
| <b>Telephone No. - N° de téléphone</b><br>(819) 956-3876 ( )                                                                                                                | <b>FAX No. - N° de FAX</b><br>(819) 956-5227                                     |
| <b>Destination - of Goods, Services, and Construction:</b><br><b>Destination - des biens, services et construction:</b>                                                     |                                                                                  |

**Instructions: See Herein**

**Instructions: Voir aux présentes**

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

## Amendment 003

This amendment was created to answer the following questions. A revised Purchase Description and Technical Questionnaire are attached.

### 1. Question:

ITEM 3.4.3 (f) - Backhoe Loading Reach - Requirement 2,900 mm - With our largest backhoe we are at 2,470 mm. Will this be acceptable? We exceed all the other requirements of the specification.

### 2. Answer:

The purchase description was built around an operating requirement for the "BACKHOE DIGGING DEPTH". The "BACKHOE LOADING REACH" requirement of 2,900mm can be reduced to a minimum loading reach of 2,400mm. This dimension can include the extension of the Dipper Stick Extension. Changes to the Purchase Description are as follows:

3.4.3 Backhoe Performance - The backhoe, ~~either with a solid boom or an extensible boom in its retracted position, shall:~~

- (a) Have a dipper cylinder digging force, of at least that given as "BACKHOE DIPPER FORCE" in the Configuration Capability Table;
- (b) Have a bucket cylinder digging force, of at least that given as "BACKHOE BUCKET FORCE" in the Configuration Capability Table;
- (c) Have a maximum digging depth of at least that given as "BACKHOE DIGGING DEPTH" in the Configuration Capability Table. ~~Digging depth includes dipper extension, where required;~~
- (d) Have a backhoe reach at ground from centre of swing axis of at least that given as "BACKHOE REACH" in the Configuration Capability Table;
- (e) Have a backhoe loading height of at least that given as "BACKHOE LOADING HEIGHT" in the Configuration Capability Table; and
- (f) Have a backhoe loading reach of at least that given as "BACKHOE LOADING REACH" in the Configuration Capability Table.

### 3.5.2 Attachments and Features

(c) Dipper Stick Extension - A hydraulic dipper stick extension. ~~The extension shall extend the digging depth by at least that given as "DIPPER EXTENSION" in the Configuration Capability Table.~~

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W8476-133914/A

Client Ref. No. - N° de réf. du client

W8476-133914

Amd. No. - N° de la modif.

003

File No. - N° du dossier

hs616W8476-133914

Buyer ID - Id de l'acheteur

hs616

CCC No./N° CCC - FMS No/ N° VME

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\* See clarification to the Configuration Capability Table in the attached Purchase Description.

**2. Question:**

Item 3.5.1 (a) GP Bucket & 3.5.2 (b) 4 in 1 Bucket - The GP bucket is normally larger than the 4 in 1 bucket because of the weight of the 4 in 1. Is this requirement correct or should the capacities be reversed?

**2. Answer:**

This question highlighted an error in bucket sizes. Please see revised table for corrected capacities of Item 3.5.1 (a) General Purpose Bucket and 3.5.2 (b) Multi-Purpose Bucket (4 in 1 Bucket).

\* See updated Attachment Capability Table in the attached Purchase Description.



**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**

**TRACTOR, LOADER, BACKHOE**

**1. SCOPE**

1.1 **Scope** - This purchase description covers the requirements for a diesel engine driven, pneumatic tired type industrial tractor with integral front-end loader and backhoe.

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**<sup>(E)</sup>" 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**<sup>(E)</sup>", 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

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- (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;
- (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. The certificate of attestation **shall** show the representative's printed name, qualifications and position.

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 a clause reference.

| CHARACTERISTIC         | CLAUSE    | UNITS | CONFIGURATION |   |        |
|------------------------|-----------|-------|---------------|---|--------|
|                        |           |       | A             | B | C      |
| FORWARD SPEED          | 3.4       | km/h  | -             | - | 35     |
|                        |           | mph   | -             | - | 22     |
| REVERSE SPEED          | 3.4       | km/h  | -             | - | 20     |
|                        |           | mph   | -             | - | 13     |
| LOADER LIFT            | 3.4.2 (a) | kg    | -             | - | 2,925  |
|                        |           | lbs   | -             | - | 6,450  |
| LOADER BREAKOUT        | 3.4.2 (b) | kN    | -             | - | 42.8   |
|                        |           | lbs   | -             | - | 9,630  |
| LOADER REACH           | 3.4.2 (c) | mm    | -             | - | 740    |
|                        |           | in    | -             | - | 29     |
| LOADER DUMP CLEARANCE  | 3.4.2 (d) | mm    | -             | - | 2,600  |
|                        |           | in    | -             | - | 103    |
| BACKHOE DIPPER FORCE   | 3.4.3 (a) | kN    | -             | - | 38.8   |
|                        |           | lbs   | -             | - | 8,730  |
| BACKHOE BUCKET FORCE   | 3.4.3 (b) | kN    | -             | - | 59.7   |
|                        |           | lbs   | -             | - | 13,440 |
| BACKHOE DIGGING DEPTH  | 3.4.3 (c) | mm    | -             | - | 5,925  |
|                        |           | in    | -             | - | 234    |
| BACKHOE REACH          | 3.4.3 (d) | mm    | -             | - | 7,150  |
|                        |           | in    | -             | - | 282    |
| BACKHOE LOADING HEIGHT | 3.4.3 (e) | mm    | -             | - | 4,500  |
|                        |           | in    | -             | - | 178    |

| CHARACTERISTIC        | CLAUSE    | UNITS | CONFIGURATION |   |       |
|-----------------------|-----------|-------|---------------|---|-------|
|                       |           |       | A             | B | C     |
| BACKHOE LOADING REACH | 3.4.3 (f) | mm    | -             | - | 2,400 |
|                       |           | in    | -             | - | 94    |

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

| DESCRIPTION OF OPTION              | CLAUSE    | CONFIGURATION |   |   |
|------------------------------------|-----------|---------------|---|---|
|                                    |           | A             | B | C |
| Hydraulic Coupling System (Loader) | 3.5.2 (a) | -             | - | ✓ |
| Multi-Purpose Bucket               | 3.5.2 (b) | -             | - | ✓ |
| Dipper Stick Extension             | 3.5.2 (c) | -             | - | ✓ |
| Air Suspension Seat                | 3.6 (b)   | -             | - | ✓ |
| Radio                              | 3.6 (d)   | -             | - | ✓ |
| Air Conditioning                   | 3.6.1 (a) | -             | - | ✓ |
| Engine Cold Weather Starting Aids  | 3.8.3     | -             | - | ✓ |
| Fuel Fired Preheat System          | 3.8.4 (a) | -             | - | ✓ |
| Front Wheel Assist                 | 3.9.1 (a) | -             | - | ✓ |
| Amber Coloured Strobe Light        | 3.16.1(a) | -             | - | ✓ |
| Automatic Greasing System          | 3.18.1    | -             | - | ✓ |
| Initial Parts Kit                  | 4.1.1 (c) | -             | - | ✓ |
| Training - Maintenance Personnel   | 4.2 (a)   | -             | - | ✓ |
| Training - Operators               | 4.2 (b)   | -             | - | ✓ |

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

| ATTACHMENT TYPE            | CHARACTERISTIC          | CLAUSE    | UNITS           | QUANTITY |   |      |
|----------------------------|-------------------------|-----------|-----------------|----------|---|------|
|                            |                         |           |                 | A        | B | C    |
| General Purpose FEL Bucket | GP BUCKET CAPACITY      | 3.5.1 (a) | m <sup>3</sup>  | -        | - | 1.15 |
|                            |                         |           | yd <sup>3</sup> | -        | - | 1.50 |
| Backhoe                    | BACKHOE BUCKET CAPACITY | 3.5.1 (b) | m <sup>3</sup>  | -        | - | 0.20 |
|                            |                         |           | yd <sup>3</sup> | -        | - | 0.27 |
|                            | BACKHOE BUCKET WIDTH    |           | mm              | -        | - | 600  |
|                            |                         |           | in              | -        | - | 24   |
| Multi-Purpose FEL Bucket   | 4-IN-1 CAPACITY         | 3.5.2 (b) | m <sup>3</sup>  | -        | - | 0.92 |
|                            |                         |           | yd <sup>3</sup> | -        | - | 1.20 |

## 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 accompanied by proof of compliance.

### 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 -40 to 37° C (-40 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 - Performance *shall* be measured in accordance with SAE or ISO standards. Performance *shall* be validated with Proof of Compliance.

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

3.4.2 Loader Performance - The loader *shall*:

- (a) Have a loader lift capacity at full height of at least that given as "**LOADER LIFT**" in the Configuration Capability Table;
- (b) Have a loader breakout force of at least that given as "**LOADER BREAKOUT**" in the Configuration Capability Table;
- (c) Have a loader reach at full height of at least that given as "**LOADER REACH**" in the Configuration Capability Table;
- (d) Have a clearance between the ground and the dumped loader bucket of at least that given as "**LOADER DUMP CLEARANCE**" in the Configuration Capability Table; and
- (e) Have a bucket width of no less than the overall vehicle width.

3.4.3 Backhoe Performance - The backhoe *shall*:

- (a) Have a dipper cylinder digging force, of at least that given as "**BACKHOE DIPPER FORCE**" in the Configuration Capability Table;
- (b) Have a bucket cylinder digging force, of at least that given as "**BACKHOE BUCKET FORCE**" in the Configuration Capability Table;
- (c) Have a maximum digging depth of at least that given as "**BACKHOE DIGGING DEPTH**" in the Configuration Capability Table;
- (d) Have a backhoe reach at ground from centre of swing axis of at least that given as "**BACKHOE REACH**" in the Configuration Capability Table;
- (e) Have a backhoe loading height of at least that given as "**BACKHOE LOADING HEIGHT**" in the Configuration Capability Table; and
- (f) Have a backhoe loading reach of at least that given as "**BACKHOE LOADING 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** be responsible for 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) **Front-End Loader** - A front end loader. Proof of compliance **shall** be provided. The front-end loader **shall** have a general purpose material bucket with replaceable cutting edges or teeth, having a capacity, rated in accordance with SAE Standard J742, of at least given as "GP BUCKET CAPACITY" in the Attachment Capability Table;
- (b) **Backhoe** - An integral hydraulic backhoe. Proof of compliance **shall** be provided. The backhoe **shall** have a digging bucket with teeth, with a capacity of at least that given as "BACKHOE BUCKET CAPACITY" in the Attachment Capability Table and a width of at least that given as "BACKHOE BUCKET WIDTH" in the Attachment Capability Table;
- (c) **Stabilizer** - Stabilizing arms for backhoe operations. Stabilizers flip pads **shall** have a rubber base to avoid damage to paved surfaces;
- (d) **Vehicle Tie-Down Devices** - Vehicle tie-down devices. Permanent and integrally vehicle tie-down devices **shall**:
  - i 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;
  - ii 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;
  - 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;
- (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; and
- (g) **Filler Caps** - Clearly/permanently identified filler caps by contents, using international symbols, a standard (i.e. SAE 10W30) or written in French and English.

3.5.2 **Attachments and Features** - The following equipment and features **shall** be provided, when indicated with an "✓" in the Attachment and Features Table:

- (a) **Hydraulic Coupling System (Loader)** - A hydraulic coupler, activated from the operator station;
- (b) **Multi-Purpose Bucket** - A multi-purpose (4-in-1) bucket compatible with the loader arm quick connect, with a capacity of at least that given as "4-IN-1 CAPACITY" in the Attachment Capability Table; and
- (c) **Dipper Stick Extension** - A hydraulic dipper stick extension.

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

- (a) **ROPS Cab** - A weatherproof pressurized, insulated cab incorporating Roll Over Protective Structure, which **shall**<sup>(B)</sup> 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 wipers 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 visibly labelled one window as an emergency operator escape route.
- (b) **Air 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 without having to move from 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 includes a CD player and an auxiliary input connection;

3.6.1 **Operator Station Options** - The following **shall** be available as options when specified in the Attachment and Features Table:

- (a) **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.

3.7.1 **Suspension Options** - The following options **shall** be provided when specified in the Attachment and Features Table.

- (a) **Ride Control System** - An automatic ride control system for the cushioning of the carried load and vehicle while operating at higher speed **shall** be installed.

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 -40° 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 an ether injection system, glow plug or intake air preheat system.

3.8.4 **Engine Options** - The following options **shall** be provided when specified in the Attachment and Features Table:

- (a) **Fuel-Fired Pre-Heater** - A fuel-fired preheat system. The fuel-fired pre-heater **shall** be the size recommended by the heater manufacturer. The model **shall** be subject to Technical Authority approval.
- 3.9 **Transmission** - The vehicle **shall**<sup>(B)</sup> be equipped with one of the following types of transmission:
- (a) A power shift or power shuttle; or
- (b) An infinitely variable forward and reverse hydrostatic, servo-controlled drive incorporating automatic controls to compensate for speed and load.
- 3.9.1 **Transmission Options** - The following transmission options **shall** be provided when specified in the Attachment and Features Table:
- (a) **Front Wheel Assist** - Front wheel assist system (driver-selected), providing a 4 X 4 capability by delivering power to front wheels.
- 3.10 **Brake System** - The vehicle **shall** be equipped with the manufacturer's standard braking system.
- 3.11 **Steering** - The vehicle **shall** be equipped with the manufacturer's standard steering system with at least one steer axle.
- 3.12 **Wheels, Rims and Tires** - The wheels, tires and rims **shall** have tire manufacturer certification that tires and rims provided are suitable and adequately sized for this application. Tires **shall** be tubeless and have R-4 tread.
- 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. The controls **shall** be easily accessible to the operator.
- 3.13.1 **Backhoe Controls** - The controls for the backhoe **shall** be joystick type.
- 3.14 **Instruments** - Instruments **shall** be manufacturer's standard including a numeric read-out hour-meter, which displays accumulated running time up to a minimum of 9,999 hours.
- 3.15 **Electrical System** - The vehicle electrical system **shall** be the manufacturer's standard. The electrical system **shall** include a back up alarm system.
- 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 Features 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;

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.

3.18 **Lubricants and Hydraulic Fluids** - The vehicle **shall** be serviced with the manufacturer's non-proprietary standard lubricants and hydraulic fluids.

3.18.1 **Automatic Greasing System** - The vehicle **shall** be equipped with an Automatic Greasing System, which **shall** automatically provide grease to the majority of the greasing points, which **shall** include the quick coupler. The greasing system **shall** include a telltale light indicating that the system is functioning and a low grease level alarm in the operator's station.

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**<sup>(B)</sup> 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. 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);
  - iii **Maintenance (Shop Repair) Manuals** - The Maintenance (Shop Repair) Manual in English (French translation is desirable); and
- (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.
- (c) **Initial Parts Kit** - One Initial Parts Kit accompanying each vehicle/ equipment. Each Initial Parts Kit **shall** include a complete set of filters and filter elements from the Original Equipment Manufacturer.
- 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 with data and a vehicle picture on the Technical Authority provided form. This provides a document in accordance CFTO D-01-100-200/SF-002: "Preparation of Data Summaries for Commercial Vehicles & Equipment". The contractor may request the CFTO if they need further information. 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) **Copy of Warranty Letter** - The Contractor **shall** send a copy of the Warranty Letter, in electronic format, to the Technical Authority for each vehicle, at shipment; and
  - (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 eight (8) Mega pixels.
  - (e) **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.

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

- (a) **Training - Maintenance Personnel** - The Contractor **shall** provide a maintenance/repair training course. The course **shall** be given at the destination or contractor's facilities for a minimum duration of one (1) day to provide training of up to eight (8) maintenance personnel. Training **shall** be available in both official languages for destinations in the province of Quebec or when requested by the Technical Authority. The final dates **shall** be arranged with the Technical Authority. After completion of the course the Contractor **shall** have a "PROOF OF MAINTAINER TRAINING" certificate signed by a Crown Representative for the destination. The Technical Authority will supply this document in an electronic format. The course curriculum **shall** include:
- i Operation and maintenance safety precautions;
  - ii Preventive maintenance including servicing schedules (10 % of classroom time);
  - iii Trouble shooting, testing and adjustments (70 % of classroom time); and
  - iv Special tools and test equipment.
- (b) **Training - Operators** - The Contractor **shall** provide an operator training course. The course **shall** be given at the destination or contractor's facilities for a minimum duration of two (2) days to provide training for up to six (6) DND operators. Training **shall** be available in both official languages for destinations in the province of Quebec and when requested by the Crown. The final dates **shall** be arranged with the Life Cycle Material Manager (LCMM). After completion of the course the Contractor **shall** have a "PROOF OF OPERATOR TRAINING" certificate signed by a Crown Representative for the destination. The Technical Authority will supply this document in an electronic format. The course curriculum **shall** include:
- i Safety precautions to be observed while operating and servicing the vehicle;
  - ii Vehicle/equipment operating characteristics;
  - iii Vehicle/equipment operating procedures;
  - iv Pre-operating and pre-shutdown procedures;
  - v Daily/weekly operator servicing procedures; and
  - vi A minimum of two (2) hours practical operating experience per operator.



**2012-04-24**  
**Modified 2012-09-05**



**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.

**TECHNICAL INFORMATION QUESTIONNAIRE**

**CONFIGURATION C**

This Questionnaire covers technical information, which **shall** be provided for evaluation of the vehicle/equipment offered. Where a company is unsure if their vehicle/equipment/product/system complies, they **shall** provide a complete explanation.

**Company Name** - \_\_\_\_\_

**Name of Representative** - \_\_\_\_\_

**Title of Representative** - \_\_\_\_\_

**Address** - \_\_\_\_\_

**Telephone Number** - \_\_\_\_\_ **Fax Number** - \_\_\_\_\_

**Manufacturer's Name** - \_\_\_\_\_

**Make** - \_\_\_\_\_ **Model** - \_\_\_\_\_

**Compliance**

Equipment provided complies with all specified requirements? YES ☐ NO ☐

**Substitutes/Alternatives**

Are any substitutes/alternatives offered as equivalent? YES ☐ NO ☐

If yes, list substitutes/alternatives:

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If yes, list information provided for evaluation of substitutes/alternatives:

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**Signature** - \_\_\_\_\_ **Date** - \_\_\_\_\_

**OPI DSVPM 4 - DAPVS 4**

Issued on Authority of the Chief of the Defence Staff

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**COMPLIANCE TABLES**

The representative completing this questionnaire is requested to complete the tables below. The **VALUE** column is for the numerical quantity of the capability described in the **CHARACTERISTIC** column. Please ensure that the **VALUE** represents the metric units.

It is preferred that each **VALUE** be certified by a Proof of Compliance such as a brochure. For each **VALUE**, please list the document title and page number where that value is found in the **DOCUMENT TITLE** and **PAGE** columns. The bidder is encouraged to circle or highlight the referred value in the Proof of Compliance.

| CLAUSE    | CHARACTERISTIC         | VALUE | UNIT | DOCUMENT TITLE | PAGE |
|-----------|------------------------|-------|------|----------------|------|
| 3.4.1     | FORWARD SPEED          |       | km/h |                |      |
|           | REVERSE SPEED          |       | km/h |                |      |
| 3.4.2 (a) | LOADER LIFT            |       | kg   |                |      |
| 3.4.2 (b) | LOADER BREAKOUT        |       | kN   |                |      |
| 3.4.2 (c) | LOADER REACH           |       | mm   |                |      |
| 3.4.2 (d) | LOADER DUMP CLEARANCE  |       | mm   |                |      |
| 3.4.3 (a) | BACKHOE DIPPER FORCE   |       | kN   |                |      |
| 3.4.3 (b) | BACKHOE BUCKET FORCE   |       | kN   |                |      |
| 3.4.3 (c) | BACKHOE DIGGING DEPTH  |       | mm   |                |      |
| 3.4.3 (d) | BACKHOE REACH          |       | mm   |                |      |
| 3.4.3 (e) | BACKHOE LOADING HEIGHT |       | mm   |                |      |
| 3.4.3 (f) | BACKHOE LOADING REACH  |       | mm   |                |      |

**ATTACHMENT CAPABILITY COMPLIANCE TABLE**

| CLAUSE    | CHARACTERISTIC          | VALUE | UNIT           | DOCUMENT TITLE | PAGE |
|-----------|-------------------------|-------|----------------|----------------|------|
| 3.5.1 (a) | GP BUCKET CAPACITY      |       | m <sup>3</sup> |                |      |
| 3.5.1 (b) | BACKHOE BUCKET CAPACITY |       | m <sup>3</sup> |                |      |
|           | BACKHOE BUCKET WIDTH    |       | mm             |                |      |
| 3.5.2 (b) | 4-IN-1 CAPACITY         |       | mm             |                |      |
| 3.5.2 (c) | DIPPER EXTENSION        |       | mm             |                |      |

**PURCHASE DESCRIPTION PARAGRAPHS**

3.1 **Standard Design** - Complies? YES ☐ NO ☐

(a) Length of time this model in production/sold commercially \_\_\_\_\_ years

(d) Is system/component used within published capacities? YES ☐ NO ☐

3.2.1 **Weather** - Vehicle operates between -40 and 37° C? YES ☐ NO ☐

**List preparations required (if any)** \_\_\_\_\_

3.2.2 **Terrain** - Vehicle operates in specified terrain? YES ☐ NO ☐

3.3.1 **Noise Level** - Complies? YES ☐ NO ☐

3.4.1 **Vehicle Performance** - Complies? YES ☐ NO ☐

3.4.2 **Loader Performance** - Complies? YES ☐ NO ☐

3.4.3 **Backhoe Performance** - Complies? YES ☐ NO ☐

3.4.4 **Vehicle Delivery Condition** - Complies? YES ☐ NO ☐

3.5.1 **Application Equipment**

(a) **Front-End Loader** - Complies? YES ☐ NO ☐

(b) **Backhoe** - Complies? YES ☐ NO ☐

(c) **Stabilizers** - Comply? YES ☐ NO ☐

(d) **Vehicle Tie-Down Devices** - Comply? YES ☐ NO ☐

Explanations \_\_\_\_\_

(e) **Protection against Vandalism** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

(f) **Recovery Hooks** - Comply? YES ☐ NO ☐

Explanations \_\_\_\_\_

(g) **Filler Caps** - Comply? YES ☐ NO ☐

Explanations \_\_\_\_\_

3.5.2 **Attachments and Features**

(a) **Hydraulic Coupling System (Loader)** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

(b) **Multi-Purpose Bucket** - Complies? YES ☐ NO ☐

(c) **Dipper Stick Extension** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

**Digging depth extended \_\_\_\_\_ metres**

### 3.6 **Operator Station**

(a) **ROPS Cab** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

Is ROPS presently certified? YES ☐ NO ☐

**Certification Date \_\_\_\_\_ Certification Standard \_\_\_\_\_**

(b) **Air Suspension Seat** - Complies? YES ☐ NO ☐

(c) **Mirror(s)** - Comply? YES ☐ NO ☐

(d) **Radio** - Complies? YES ☐ NO ☐

#### 3.6.1 **Operator Station Options**

(a) **Air Conditioner** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

**Refrigerant \_\_\_\_\_**

#### 3.7.1 **Suspension Option**

(a) **Ride Control System** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

3.8 **Engine** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

3.8.3 **Engine Cold Weather Aids** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

(a) **110-Volt Engine heater - Type \_\_\_\_\_ - Wattage \_\_\_\_\_**

(b) **Type - ☐ Ether Injection ☐ Glow Plug ☐ Intake Air Preheat**

#### 3.8.4 **Engine Options**

(a) **Fuel-Fired Pre-Heater** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

**Make \_\_\_\_\_ Model \_\_\_\_\_**

3.9 **Transmission** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

(a) **Power shift** ☐ **Power Shuttle** ☐

(b) **Hydrostatic transmission** ☐

3.9.1 **Transmission Options**

(a) **Front Wheel Assist** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

3.12 **Wheels, Tires and Rims** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

**Front axle - Tire size** \_\_\_\_\_ **Tread type** \_\_\_\_\_

**Rear axle - Tire size** \_\_\_\_\_ **Tread type** \_\_\_\_\_

3.16.1 **Optional Lighting Equipment**

(a) **Amber Coloured Strobe Light** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

3.18.1 **Automatic Greasing System** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

**Number of points automatically greased** \_\_\_\_\_

**Make** \_\_\_\_\_ **Model** \_\_\_\_\_

3.20 **Identification** - Complies? YES ☐ NO ☐

Explanations \_\_\_\_\_

4. **Integrated Logistics Support** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

4.1.1 **Documents Provided with Each Vehicle**

(a) **Vehicle Manuals** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

(b) **Warranty Letter** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

- (c) **Initial Parts Kit** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

4.1.2 **Document Provided to the Technical Authority**

- (a) **Data Summary** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

- (b) **Sample Manuals** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

- (c) **Warranty Letter Technical Authority Copy** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

- (d) **Photographs** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

- (e) **Material Safety Data Sheets** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

4.2 **Training**

- (a) **Training - Maintenance Personnel** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_

- (b) **Training - Operators** - Will be provided as requested? YES ☐ NO ☐

Explanations \_\_\_\_\_