

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

2018-10-24

o



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.

1. SCOPE

1.1 **Scope** - This Purchase Description describes the requirements for Mid-Range Diesel 4x2 Flat Tilt bed 24 feet with heavy duty crane.

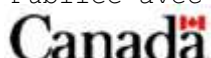
1.2 **Instructions** - The following instructions apply to this specification.

- (a) Requirements, **which** are identified by the word "must", are mandatory. Deviations will not be permitted;
- (b) Requirements identified by "must" **or** "equivalent" are mandatory. The Technical Authority will consider substitutes/alternatives for acceptance as a Technical Authority approved 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 "must", "must" **or** "equivalent", **or** "will" are not used, the information provided is for guidance only;
- (e) In this document "provided" means "provided and installed";
- (f) Where a standard is specified and the Contractor has offered an **equivalent**, that equivalent standard must be supplied by the Contractor, at no cost to Canada, when requested by the **Technical Authority**;
- (g) Where a technical certification is referred to in this Purchase Description, a copy of the certification **or** an acceptable proof of compliance **must** be provided for the vehicle when requested by the Technical Authority up until the date of the expiration of the warranty period;
- (h) While the SI system is used as the primary system of measurement to define requirements in this Purchase Description, both the SI system and the Standard system of measurements may be indicated. Conversions from one system of measurement to the other may not be exact; and
- (i) Dimensions stated as nominal are treated as approximate dimensions. Nominal dimensions reflect a method by **which** materials **or** products

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


RDIMS # 4990051

© 2016 DND Canada
Page 1 of 21

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

are generally identified for sale commercially, but **which** differ from the actual dimensions.

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

1.3 **Definitions**

- (a) "**Technical Authority**" means the official responsible for the technical content of this Purchase Description.
- (b) "**Equivalent**" means a standard, means, or component type, which the Technical Authority has approved for this requirement as meeting the specified requirements for fit, form, function and performance;
- (c) "**Commercially Equipped**" means that the vehicle is provided in its standard commercial configuration with no additional government-specific requirements;
- (d) "**Road Legal**" means the vehicle can be legally operated on all Canadian highways and secondary roads, without restrictions or special permits;
- (e) "**Curb Weight**" (CW) means the weight of the fully equipped vehicle. The curb weight includes the cab and chassis, all attached accessories, equipment, fuel, lubricant and coolants. The Curb Weight does not include the Payload or the weight of the driver/passenger(s) or their personal kit and equipment;
- (f) "**Payload**" means the maximum cargo load carrying capacity of the vehicle. The payload is the calculated difference between the Curb Weight and the Gross Vehicle Weight Rating.
- (g) "**Gross Vehicle Weight**" (GVW) means the sum of the Curb Weight, the weight of a driver and passenger (80 kg per person) and the Payload. The GVW cannot exceed the Gross Vehicle Weight Rating (GVWR);
- (h) "**Gross Vehicle Weight Rating**" (GVWR) means the maximum operating weight of the vehicle as stated by the manufacturer;
- (i) "**Gross Combined Weight Rating**" (GCWR) means the maximum allowable combined weight of the vehicle, with passengers and equipment in the vehicle and the **Payload**, plus the weight of the trailer and payload in the trailer; and
- (j) "**Gross Axle Weight Rating**" (GAWR) means the load capacity of an axle.

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

1.4 **Data Table** - The following table shows the **minimum** required performance **which** must be provided.

CHARACTERISTIC	PARAGRAPH	UNITS	Cab & Chassis 4x2
HORSEPOWER	3.4 (c)	-	300
GVWR	3.4 (d)	kg	15,900
TOWED LOAD	3.4 (i)	kg	5,000
PAYLOAD	3.4 (h)	kg	6,000
FRAME RBM	3.6	kg-m	20,193
FUEL CAPACITY	3.7.2 (a)	litres	375
CRANE MOMENT	3.21.1 (h) v	kg-m	12,500
CRANE LIFT	3.21.1 (h) vii	Kg	5,000
CRANE REACH	3.21.1 (h) viii	mm	14,000

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

2. **APPLICABLE DOCUMENTS** - The following documents are referenced in this specification. Canada will not be supplying any reference documents. Available information on the organization is supplied.

SAE Standards

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

Motor Vehicle Safety Act (MVSA)

Government of Canada / Transport Canada,
<http://www.tc.gc.ca/eng/act-regulations/regulations-crc-c1038htm>

Hazardous Products Act

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

Year Book

Tire and Rim Association Inc.,
3200 West Market Street, Akron, Ohio, 44313

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

3. **REQUIREMENTS**

3.1 **Standard Design**

- (a) The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by selling this type and size class of vehicle for at least five (5) years;
- (b) The vehicle **must include** all components, equipment and accessories normally supplied for this application, although they may not specifically be described in this Purchase Description;
- (c) The vehicle **must** have engineering certification available for this application from the original manufacturers of major equipment, systems and assemblies;
- (d) 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; and
- (e) The vehicle and accessories **must** operate in accordance with all OEM (original equipment manufacturers) rated capacities and performance specifications.

3.2 **Operating Conditions**

3.2.1 **Weather** - The vehicle **must** start and operate under the extremes of weather conditions found in Canada in temperatures ranging from -40 to 40°C.

3.2.2 **Terrain** - The vehicle **must** operate in all season, all-weather operations on highways and secondary roads.

3.3 **Safety Standards**

3.3.1 **Vehicle Safety Regulations**

- (a) The vehicle **must** meet the provisions of the Canada Motor Vehicle Safety Act;
- (b) The completed vehicle **must** be provided with a Safety Compliance Certification Label with a National Safety Mark (NSM); and
- (c) All systems and components **must** be safe and easy to use by a 5-95th percentile male **or** female under all operating conditions.

3.3.2 **Hazardous Materials** - The Contractor **must** minimize **or** eliminate the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals (as described in the Hazardous Products Act of Canada) on the vehicle at time of delivery.

3.4 **Performance**

- (a) The vehicle **must** have a road speed of 105 km/h operating at the GVWR on a flat, level road;
- (b) The vehicle **must** have a gradability, at a speed of at least 90 km/h, of at least 0.8 %, when operating at the GCWR (paragraph 3.4 (e));
- (c) The vehicle **must** have a gross engine horsepower of at least that given as "HORSEPOWER" in the Data Table (paragraph 1.4) in order to achieve the specified performance (paragraphs 3.4 (a) and 3.4 (b));

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- (d) The vehicle **must** have a GVWR of at least that given as "GVWR" in the Data Table (paragraph 1.4);
- (e) The vehicle **must** have a payload capacity of at least that given as "Payload" in the Data Table (paragraph 1.4); and
- (f) The vehicle **must** have a towed load capacity of at least that given as "Towed Load" in the Data Table (paragraph 1.4).

3.5 **Vehicle Cab - Conventional Cab**

- (a) **Cab** - The vehicle **must** be provided with an air suspended conventional cab with a rear visibility sliding window;
- (b) **Cab Features**
 - i The cab **must** be provided with seating for three(3) (the driver and two passengers);
 - ii The cab **must** be provided with a high-back air suspended driver's seat with fold up arm rest on the interior side;
 - iii Medium to dark coloured cloth upholstered seats **must** be provided;
 - iv The vehicle **must** be provided with a bench seat for two passengers;
 - v All seating position **must** be provided with retractable shoulder/lap belt assemblies. A lap belt assembly will be acceptable for the centre passenger in the bench seat;
 - vi The cab **must** be provided with tinted side windows;
 - vii The cab **must** be provided with windshield wipers with at least two (2) continuous speeds and one (1) intermittent speed;
 - viii The windshield wipers **must** be provided with arctic wiper blades;
 - ix The cab **must** be provided with two (2) rotating and pivoting interior sun visors mounted above the front windshield and usable on the side windows;
 - x The cab **must** be provided with padded armrests on both doors;
 - xi The cab **must** be provided with coat hooks;
 - xii The cab **must** be provided with black rubber floor covering;
 - xiii The cab **must** be provided with powered windows;
 - xiv The cab **must** be provided with an exterior sun visor mounted above the windshield;
 - xv The cab **must** be provided with an air horn;
 - xvi The cab **must** be provided with a stone and bug deflector mounted on the front hood; and

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

xvii The cab **must** be provided with powered door locks on all doors.

(c) **Mirrors**

i A rear view mirror system **must** be provided on the exterior of each side of the vehicle cab providing the operator with clear visibility to the sides and rear of the vehicle;

ii Each mirror system **must** be provided with a tall and narrow "West Coast" style flat section having a surface area of at least 150 mm x 400 mm (6 x 16 inches);

iii The flat mirror glass **must** be separately replaceable;

iv Each mirror **must** be provided with a convex mirror section located below the flat section, that has an area of at least 200 mm (8 inch) diameter;

v The convex mirror glass **must** be separately replaceable;

vi The flat section of the mirrors on both sides of the vehicle must be power adjustable from an in-cab control accessible to the operator;

vii The flat and convex mirrors **must** be provided with heating defrost elements;

viii Mirror heating **must** be activated by an in-cab control accessible to the operator; and

ix Heating elements **must** be replaceable.

(d) **Fender Mirror** - Tripod **or** fender integrated mirrors **must** be provided on the right and left hand fenders.

(e) **Air Conditioning** - The vehicle **must** be provided with an air conditioning system.

(f) **Radio**

i The vehicle **must** be provided with an AM/FM radio with a CD player; and

ii The radio **must** turn off automatically when the vehicle ignition is turned off.

3.6 **Chassis**

(a) The vehicle **must** be provided with a high strength steel vehicle frame having a resisting bending moment ("**FRAME RBM**") as given in the Data Table (paragraph 1.4)

3.6.1 **Suspension**

(a) The vehicle **must** be provided with a front leaf spring suspension and a rear air suspension;

(b) The suspension system **must** be provided with shock absorbers at each wheel station;

(c) The rear suspension system **must** be provided with immediate response, automatic height control valve;

(d) The rear suspension system **must** be provided with air pressure dump valve with indicator light, gauge and buzzer;

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- (e) The control for the dump valve **must** be mounted in the cab within easy reach of the driver; and
- (f) The rear suspension system **must** be provided with suspension stabilizers **or** Equivalent.

3.7 **Engine** - The vehicle **must** be provided with a diesel engine.

3.7.1 **Engine Components**

(a) **Engine Air Filter**

- i The engine air filter **must** be a replaceable dry-type with at least two stages; and
 - ii The vehicle air intake system **must** be provided with a filter restriction gauge, mounted inside the vehicle cab, **which** is visible from the driver's position.
- (b) The engine **must** be provided with an engine coolant for temperatures down to -40° C;
 - (c) The engine **must** be provided with an exhaust system;
 - (d) The exhaust system **must** have a vertical stack that clears the cab roofline; and
 - (e) The exhaust system **must** be provided with an exhaust elbow at the exhaust exit.

3.7.2 **Fuel Reservoir(s)**

- (a) The fuel tank(s) **must** have a total capacity of at least "FUEL CAPACITY" as given in the Data Table (paragraph 1.4);
- (b) The fuel tank filler areas **must** be marked to identify the required vehicle fuel; and
- (c) The caps for fuel tanks **must** be lockable.

3.7.3 **Engine Cold Weather Aids**

- (a) The engine **must** be provided with cold weather starting aids to enable the engine (operating with winter grade fuels/oils) to be started at temperatures down to -40° C. The engine starting aids may **include** but are **not limited to**: glow plug(s) and intake air grid heater;
- (b) The engine **must** be provided with 110-Volt AC powered engine cold start heaters (oil/coolant) with the capacity as recommended by the engine manufacturer **or** conforming to SAE J1310;
- (c) The battery **must** be provided with a 110-volt AC powered battery blanket; and
- (d) The engine **must** be provided with a heated, fuel filter/water separator to preheat diesel fuel prior to starting.

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

3.8 **Vehicle Driveline**

3.8.1 **Automatic Transmission**

- (a) The vehicle **must** be provided with an automatic transmission;
- (b) The transmission **must** have at least six (6) forward speeds and one reverse speed;
- (c) The transmission **must** be provided with a neutral start safety switch;
- (d) The transmission **must** be provided with an aperture **or** an **Equivalent** feature to provide an attachment/drive location for a power take-off (PTO); and
- (e) The vehicle **must** have an external transmission oil cooler.

3.8.2 **Axles**

- (a) The vehicle **must** be provided with an I-beam front axle;
- (b) The vehicle **must** be provided with a single rear drive axle;
- (c) The rear axle **must** be provided with a driver controlled differential lock **or** **Equivalent**. Automatic differential locks will be acceptable.

3.9 **Brake System**

- (a) The vehicle **must** be provided with full air actuated service brakes and spring actuated parking brakes;
- (b) The brake system **must** be provided with an anti-lock (ABS) brake system;
- (c) The brake system **must** be provided with air brakes with automatic slack adjusters;
- (d) The brake system **must** be provided with an air compressor with a capacity of at least 0.51 cubic metres per minute (18 cfm);
- (e) The brake system **must** be provided with a wet air reservoir with a quick connect fitting for the connection of an air-line;
- (f) The wet air reservoir **must** be provided with a pull type drain that is accessible from beside the vehicle;
- (g) The brake system **must** be provided with an automatic air dryer with a heated dump valve;
- (h) The brake system **must** be provided with dust shields at each wheel station;
- (i) The brake system **must** be provided with emergency brake chambers on all rear axles; and
- (j) The brake system **must** be provided with a trailer brake control mounted on **or** near the steering column.

3.10 **Steering**

- (a) The vehicle **must** be provided with a power assisted steering system; and
- (b) The steering system **must** be provided with a telescopic/steering column.

3.11 **Wheels and Tires**

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- (a) The front axle **must** be provided with single wheels;
- (b) The rear axle **must** be provided with dual wheels;
- (c) The front axle **must** be provided with tires with mud and snow treads;
- (d) The rear axle **must** be provided with tires with mud and snow treads;
- (e) All tires provided **must** be steel-belted, tubeless and radial;
- (f) All wheels provided **must** be hub piloted, disc wheels;
- (g) All wheel stations **must** be provided with loose wheel nut indicators;
- (h) The wheel assemblies **must** have a capacity equal to **or** greater than the load applied, at the top vehicle speed (paragraph 3.4 (a));
- (i) The wheel assemblies **must** be assembled in accordance with the tire and rim manufacturer's specifications;
- (j) The vehicle **must** be provided with a spare tire assembly with the same rim and tire as those mounted on the front axle;
- (k) A dedicated and secure storage location for the spare tire assembly **must** be provided on the vehicle; and
- (l) The vehicle **must** be provided with rear mud flaps mounted on angle type spring-loaded hangers **or** Equivalent.

3.12 **Controls** - The vehicle **must** be provided with a cruise control system with a fast idle feature.

3.13 **Instruments**

- (a) All dash board gauges and readouts **must** be in metric units; and
- (b) Gauges and readouts **which** show both metric and English units will be accepted.

3.14 **Electrical System**

- (a) The electrical system **must** be provided with an alternator with an output of at least 145 amperes;
- (b) The electrical system **must** be provided with maintenance-free batteries with a combined rating at least 2,500 cold cranking amperes (CCA);
- (c) The electrical system **must** be provided with a master disconnect switch to isolate the vehicle batteries from the system;
- (d) The vehicle **must** be provided with a light switch inside the cab to operate the spot/ flood lamps;
- (e) The wiring **must** be protected by insulating grommets where passing through metal; and
- (f) The electrical system **must** **include** a backup alarm to alert personnel when the vehicle transmission is placed in reverse.

3.15 **Lighting**

- (a) The vehicle **must** be provided with LED body lighting;
- (b) The vehicle **must** be provided with halogen headlights; and

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- (c) The vehicle **must** be provided with clearance lights, stop lights, turn signal lights, tail-lights and LED reverse lights.

3.15.1 Lighting Accessories

(a) **Beacon**

- i In addition to the standard lighting, the vehicle **must** be provided with two(2)omni-directional beacon;
- ii The beacon **must** be activated by a dash mounted control switch;
- iii The beacon **must** be mounted so as to provide maximum vehicle visibility;
- iv The beacon **must** be designed for 360 degrees visibility;
- v Each beacon must be mounted on the sides of the light pylon;
- vi The beacon **must** be LED; and
- vii The colour of the beacon **must** be amber.

3.16 Lubricants and Hydraulic Fluids

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

3.17 Paint

- (a) The vehicle **must** be painted using the manufacturer's commercial painting system;
- (b) The vehicle **must** be painted in white colour.

3.17.1 **Conspicuity** - Conspicuity tape **must** be provided in accordance with MVSA regulations.

3.17.2 **Corrosion Protection** - The vehicle **must** be provided with a rust protection treatment such as Krown Rust Control, Rust Check **or** an Equivalent.

3.18 **Identification** - The vehicle information (manufacturer's name, model, Vehicle Identification Number (VIN) and the GAWR, GVWR and GCWR ratings) **must** be permanently marked in conspicuous and protected locations.

3.19 Warning and Instruction Plates

- (a) The vehicle **must** be provided with warning and operation instruction plates in accordance with SAE J115; and
- (b) The plates **must** use graphic symbols, as defined in SAE J1362 **or** be written in the two (2) official languages (English and French).

3.20 Equipment

(a) **Tow Hooks**

- i The vehicle **must** be provided with tow hooks mounted at the front and at the rear; and
- ii Tow hooks and mountings of sufficient strength to permit the recovery of the vehicle **must** be provided.

(b) **License Plate Holders**

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- i The vehicle **must** be provided with front and rear license plate holders; and
- ii The rear license plate **must** be illuminated.
- (c) **Filler Caps** - The vehicle **must** be provided with permanently marked filler caps, **which** identify the contents using international symbols **or** in writing using both French and English.
- (d) **Mud flaps** - The vehicle **must** be provided with front and rear mud flaps.
- (e) **Rubber Splash Guards** - The vehicle **must** be provided with at least 90 mm (3.5 inch) rubber splash guards on front fenders on all 4x4 chassis.

3.21 **Accessories**

3.21.1 (a) **Flat Tilt Bed Body**

- i The vehicle **must** be provided with a tilt platform mounted using "U" bolts **or** shear plates;
- ii The tilt platform **must** have a length of at least 7,300 mm(287 inches);
- iii The tilt platform **must** have a maximum width of no more than 2,590 mm(102 inches);
- iv The tilt platform width inside the side rails **must** have at least 2,489 mm(98 inches);
- v The tilt platform **must** be equipped with a positive lock-down device;
- vi Permanently wired weatherproof platform controls **must** be provided on the left and right rear sides of the platform;
- vii The flat tilt bed body **must** be provided with steel construction and the deck constructed of at least 4.8 mm (3/16-inch) steel checker plate with at least 152 mm (6 inches) T1 steel plate welded at the rear end of the deck;
- viii The flat tilt bed body **must** have cross-members of at least 305 mm (12 inches) centers;
- ix The flat tilt bed body **must** be equipped with removable side rails at least 152 mm (6 inches) provided on the left and right side of the deck;
- x The tilt platform **must** be mounted on plastic sliding surface (such as Nylatron) to facilitate the movement of the sliding deck;
- xi The flat tilt bed body **must** have a cab protector;
- xii The flat tilt bed body **must** have platform equipped with left and right chain trays located at the front of the deck;
- xiii The flat tilt bed body **must** have at least five chain slots per deck side;

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- xiv The flat tilt bed body **must** have at least four, winch binder sliding tracks on the side of the deck bed; and
- xv Winch binders straps of at least 76 mm x 9,000 mm (3 inches x 30 feet) **must** be provided.

(b) **Storage Compartment**

- i The vehicle **must** be provided with one (1) aluminum frame mounted storage compartment;
- ii The compartment located in a Technical Authority Approved location **must** have nominal dimensions of 1,830 mm x 610 mm x 610 mm (72 x 24 x 24 inches);
- iii Each compartment **must** have two (2) vertically hinged doors **which** do not interfere with access of operations;
- iv Each compartment **must** be equipped with flush-mounted slam action latches that can be locked with a padlock (s);
- v Each compartment **must** have a load capacity of at least 136 kg;
- vi The compartments **must** be of weatherproof construction with anti-return type drainage;
- vii The compartments **must** have the interior walls and floor sprayed with X-Box Liner, Line-X **or** Equivalent;
- viii A removable, perforated vinyl matting **must** be provided on the floor of each compartment; and
- ix The compartments **must** have interior LED lighting mounted in a protected location.

(c) **Body Lighting System**

- i The vehicle **must** be provided with a lighting system;
- ii All lights **must** be LED;
- iii A light pylon incorporating a chain rack **must** be provided;
- iv Two work lights mounted on top of the rear bumper **must** be provided;
- v Three marker lights on each side of the platform **must** be provided;
- vi Two-unit amber light **must** be provided;
- vii Deck lights mounted on each side of the winch **must** be provided; and
- viii Dash mounted and properly identified light switches **must** be provided.

(d) **Body Electrical System**

- i A 7-pin electrical connector, and a tow light arrangement **must** be provided; and
- ii The electrical cord, complete with 7-pin plug and tow lights, **must** be long enough to allow the tow light

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

units to be mounted at the rear of a vehicle with a 7.3 meters (24 feet) long vehicle.

(e) **Hydraulic System**

- i The vehicle **must** be provided with a hydraulic system;
- ii The hydraulic system **must** be equipped with a 17-gpm hydraulic pump mounted directly to the Power Take Off (PTO);
- iii The hydraulic system **must** have a 20-gallon hydraulic tank equipped with a filter; and
- iv The hydraulic system **must** have a hydraulic five-spool main hydraulic valve bank.

(f) **Deck Hydraulic Winch**

- i A hydraulic winch mounted between the light pylons on car carrier deck **must** be provided;
- ii The winch **must** have a first layer capacity of at least 5,443 kg (12,000 lbs);
- iii The winch **must** have a winch cable of at least 23 meters (75 feet) long and a nominal 11 mm (7/16 inch) in diameter;
- iv The winch **must** have winch circuits equipped with a wireless remote control unit.
- v The remote control unit **must** operate the winch and the hydraulic under wheel lift;
- vi The winch **must** have a hydraulic pump equipped with an automatic overload bypass;
- vii The winch **must** be equipped with cable tensioners and air operated clutch releases;
- viii The winch **must** be provided with a removable roller guide at the center rear of the platform;
- ix The winch **must** be provided with a stabilizer grip system at the rear of the platform to stop the vehicle from sliding rearwards during winching operations;
- x The winch **must** have all components suitably protected to prevent damage; and
- xi The winch **must** have safety warning decals and yellow and black warning strips provided where required.

(g) **Hydraulic Under Axle Lift System**

- i The vehicle **must** be provided with a hydraulic under axle/wheel lift system;
- ii The system **must** be **able** to suspend tow a vehicle with an axle weight of at least 1,814 kg (4,000-lb) when fully extended;
- iii The system **must** have the lift system controls incorporated in the platform and remote control systems;

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- iv The system **must** be provided with one (1) trailer hitch and one (1) pintle hook adaptor;
- v The system **must** be provided with one (1) set of "V" chains;
- vi The system **must** be provided with one (1) set of tie-down chains and binders for the front; and
- vii The system **must** be provided with one (1) set of tie-down chains with "J" hooks.

(h) **Knuckle Boom Crane**

- i The vehicle **must** be provided with a knuckle boom crane;
- ii The knuckle boom crane **must** be mounted on the chassis behind the cab in accordance with the manufacturer's recommendations;
- iii The knuckle boom crane **must** have a non-continuous rotation of at least 360 degrees;
- iv The knuckle boom crane **must** stow itself across the vehicle by folding within a width of no more than 2,590 mm;
- v The knuckle boom crane **must** have a load moment rating of at least that given as "CRANE MOMENT" in the Data Table (paragraph 1.4);
- vi The load moment rating **must** be rated at the maximum load times the distance to the centre of the maximum load;
- vii The knuckle boom crane **must** have a rated load of at least that given as "CRANE LIFT" on the Data Table (paragraph 1.4);
- viii The knuckle boom crane **must** have a hydraulically powered horizontal reach to both sides of at least that given as "CRANE REACH" in the Data Table (paragraph 1.4);
- ix **Hook**
 - 1. The knuckle boom crane **must** be provided with a hook that can hold the maximum crane load; and
 - 2. The hook **must** be provided with a latch.
- x **Stabilizers**
 - 1. The knuckle boom crane **must** be provided with hydraulic stabilizers to support the maximum overturning moment of the knuckle boom crane;
 - 2. The stabilizers **must** lower to at least 300 mm below the vehicle ground level;
 - 3. The stabilizers **must** be self-stowing;
 - 4. The stabilizers **must** have a stowed road clearance of at least 200 mm;

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

5. The stabilizers **must** be provided with pivoting foot plates; and
6. Each foot plate **must** be provided with a load spreader plate.

xii **Load Spreader Plates**

1. The load spreader plates **must** be made from 50 mm wood **or** an **equivalent** light weight material;
2. The load spreader plates **must** spread the load over an area at least 500 mm by 500 mm;
3. The load spreader plates **must** be provided with a rope handle **or equivalent**; and
4. The load spreader plates **must** be allocated a storage location acceptable to the **Technical Authority**.

xiii The knuckle boom crane **must** be provided with an in-cab indicator to show when the crane **or** stabilizers are not properly stowed;

xiiii The knuckle boom crane **must** be provided with a set of control levers for the crane in a protected location accessible to an operator on the driver's side of the vehicle;

xiv Load charts for the knuckle boom crane **must** be displayed in a position visible when operating the control levers.

xv **Remote Control**

1. The knuckle boom crane **must** be provided with a remote control that can be operated **either** wireless **or** attached to the knuckle boom crane through a cable;
2. If the remote control is attached with a cable, the cable **must** have a **minimum** length of 10 metres;
3. The remote control **must** control all knuckle boom crane operations;
4. The remote control **must** allow the operator to control the crane while wearing winter apparel **including** work/winter gloves;
5. The remote control **must** be provided with an emergency stop button;
6. The remote control **must** be operable under all lighting conditions;
7. The remote control **must** be provided with a button to activate an alert horn; and
8. The remote control **must** be provided with a waist belt and a neck strap.

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

4. **Integrated Logistic Items**

4.1 **Contractor Documentation and Integrated Logistic Items**

4.1.1 **Documents supplied to the Technical Authority**

(a) **Manuals for Approval**

- i A set of manuals for the vehicle, in digital format, **including** the operator, parts and maintenance (shop repair) manuals **must** be supplied;
- ii The manuals for approval **must** be submitted 30 working days before the delivery of the vehicle;
- iii The set of manuals **must include** manuals for all the specified accessories and features for the vehicle. Accessory manuals may be included as supplements to the vehicle manuals;
- iv Digital copies **must** be functional without the requirement for a password **or** an auto-run installation procedure;
- v Manuals will not be returned; and
- vi Manual acceptance **or** comments will be supplied within 15 working days of receipt.

(b) **Photographs and Line Drawings**

- i Two (2) digital colour photographs, one left-front three-quarter view, and one right-rear three-quarter view of the vehicle **must** be supplied;
- 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 front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
- iv Photographs **must** an uncluttered background; and
- v Photographs **must** be in a JPEG (Joint Photographic Experts Group) format. Photographs **must** have a resolution of at least ten (10) Mega pixels; and
- vi The photographs **must** be supplied 15 working days before the delivery of the vehicle.

(c) **Data Summary**

- i A bilingual data summary **must** be supplied for the vehicle with data and a vehicle picture on the **Technical Authority** supplied form;
- ii The **Technical Authority** will supply a template of an approved data summary to the Contractor;
- iii The Contractor **must** supply the information requested for all accessories and features for the vehicle;

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- iv The Contractor **must** submit a digital copy (MS Word) of the completed data summary to the **Technical Authority** for approval 15 working days before the delivery of the vehicle; and
- v Data summary acceptance **or** comments will be supplied within 15 working days of receipt.

(d) **Warranty Letter**

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

- (e) **Rust Protection Warranty** - A copy of the warranty from the rust protection provider **must** be supplied, in digital format, to the **Technical Authority**.

4.1.2 **Items Supplied with Each Vehicle/Equipment**

(a) **Operator's Manual**

- i An operator's manual for the safe vehicle operation **including** all supplied attachments **must** be supplied;
- ii The operator's manual **must** be supplied in a bilingual format **or** as 2 manuals (one English, and one French) in a single binder;
- iii In addition to the paper copy of the operator's manual, a digital copy on a CD **or** DVD **must** be supplied;
- iv The CD **or** DVD **must** be permanently and legibly labeled with the list of contents; and
- v The digital copy **must** not require a password **or** an Internet connection to be functional.

b) **Warranty Letter**

- i A paper copy of the completed bilingual warranty letter in the approved format with each vehicle shipped **must** be supplied;
- ii The **Technical Authority** will supply a template of an approved warranty letter to the Contractor;
- iii The Contractor **must** supply a complete description of the warranty in the warranty letter with the requested warranty terms and **any** system **or** sub system warranty

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- that exceeds the **minimum** requested in the contractual documents;
- iv The warranty letter **must include** the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada; and
 - v Designated warranty providers **must** honour the warranty letter.
- (c) **Rust Protection Warranty** - A copy of the warranty from the rust protection provider **must** accompany each vehicle;
- (d) **Line Setting Ticket**
- i The Contractor **must** provide a line setting ticket, **or Equivalent**, describing the components supplied on the cab and chassis;
 - ii One copy of the line setting ticket **must** accompany each completed vehicle to the final delivery point; and
 - iii The Contractor **must** produce a supplement listing for all non-production line components and systems included.

4.1.3 **Maintenance and Parts Manuals - English**

- (a) The Contractor **must** supply the approved maintenance and parts manuals required for the vehicle/equipment, features and accessories;
- (b) The contractor **must** supply the manuals in paper **or** digital format; and
- (c) One copy of maintenance and parts manuals **must** be supplied for each destination.

4.2 **Training**

- (a) **Training - Familiarization - English**
- i The Contractor **must** supply a familiarization course in English;
 - ii The course instructor **must** be a Training Provider with full knowledge of the vehicle;
 - iii The familiarization course **must include** operation and maintenance segments demonstrating, all safety measures required for safe vehicle use, instructions on the use of all features and accessories provided and maintenance;
 - iv The instructor **must** supply responses to questions;
 - v The familiarization course **must** have a **minimum** duration of eight (8) hours of training;
 - vi The familiarization course **must** accommodate **up to** eight (8) personnel;
 - vii The familiarization course **must** be supplied at the delivery destination;

Purchase Description
Truck Flat Tilt Bed, 4x2, With Heavy Duty Crane

- viii The date for the maintenance training course **must** be arranged with the **Technical Authority**;
- ix After completion of the familiarization course, the Contractor **must** have the "PROOF OF FAMILIARIZATION" certificate signed by the senior course attendee; and
- x The **Technical Authority** will supply the "PROOF OF FAMILIARIZATION" document template in a digital format.

(b) **Training - Familiarization - French**

- i The Contractor **must** supply a familiarization course in French, when requested by the **Technical Authority**;
- ii The course instructor **must** be a Training Provider with full knowledge of the vehicle;
- iii The familiarization course **must** include operation and maintenance segments demonstrating, all safety measures required for safe vehicle use, instructions on the use of all features and accessories provided and maintenance;
- iv The instructor **must** supply responses to questions;
- v The familiarization course **must** have a minimum duration of eight (8) hours of training;
- vi The familiarization course **must** accommodate up to eight (8) personnel;
- vii The familiarization course **must** be supplied at the delivery destination;
- viii The date for the maintenance training course **must** be arranged with the **Technical Authority**;
- ix After completion of the familiarization course, the Contractor **must** have the "PROOF OF FAMILIARIZATION" certificate signed by the senior course attendee; and
- x The **Technical Authority** will supply the "PROOF OF FAMILIARIZATION" document template in a digital format.