



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.

ANNEX B
PURCHASE DESCRIPTION
SELF-CONTAINED SNOW BLOWER

1. SCOPE

1.1 **Scope.** This specification covers the requirements for self-contained snow blowers.

1.2 **Instructions**

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

1.3 **Definitions**

- (a) “**Provided**” means “provided and installed”.
- (b) “**Equivalent**” means a standard, means, or component type that the **Technical Authority** has approved for this requirement as meeting the specified requirements for fit, form, function and performance.
- (c) “**Commercially Equipped**” means that the snow blower is provided in its standard commercial configuration with no additional government-specified requirements.
- (d) “**Bilingual**” means both official languages; English and French.

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2. APPLICABLE DOCUMENTS

2.1 Government Furnished Documents. NOT APPLICABLE

2.2 Other Publications. Canada will not supply reference documents. Effective documents are those in effect on the date of the manufacture of the snow blower. Information on the organization is supplied below.

- (a) Hazardous Products Act
Government of Canada / Department of Justice
<http://laws-lois.justice.gc.ca/eng/acts/H-3/>
- (b) SAE Standards
SAE World Headquarters
400 Commonwealth Dr.,
Warrendale, PA, 15096-0001
<http://www.sae.org>

3. REQUIREMENTS

3.1 Standard Design

- (a) The snow blower **must** be the latest model from a manufacturer who has demonstrated acceptability by selling, in North America, this type and size class of snow blower for at least three (3) years.
- (b) The snow blower **must** include all components, equipment and accessories normally supplied for this application, although they may not be specifically described in this Purchase Description.
- (c) The snow blower **must** have engineering certification available, upon request, for this application, from the original manufacturers of the major equipment, systems and assemblies.
- (d) The snow blower **must** conform to all applicable laws, regulations and industrial standards in effect in Canada at the time of manufacture. The regulatory areas may include but are not necessarily limited to manufacturing, health and safety, noise levels, environment and emissions.
- (e) The snow blower and accessories **must** operate in accordance with all original equipment manufacturers' (OEM) rated capacities and performance specifications.

3.2 Operating Conditions

3.2.1 Weather. The snow blower **must** operate under the extremes of weather conditions found in Northern Canada in temperatures ranging from -45° to 10°C.

3.3 Safety Standards

3.3.1 Hazardous Materials. The contractor **must** comply with the Hazardous Products Act of Canada with regards to the use of hazardous materials, ozone depleting substances, polychlorinated biphenyls, asbestos and heavy metals used in the manufacture and assembly of the product supplied.

3.4 Performance

- (a) The unit **must** be a self-contained, diesel engine powered, two stage, dual auger snow blower.
- (b) The snow blower **must** collect and cast snow in the amount of at least 2,700 metric tons per hour.
- (c) The self-contained snow blower **must** mate and be sized to operate within the rated capacities (without additional counterweights) of the following front end loader:

- i One 2013 Komatsu WA380-7 equipped with JRB 418 hydraulic coupler operated in Petawawa, ON.

3.5 **Equipment and Attachments.**

- (a) **JRB Quick Coupler.** The self-contained snow blower **must** be provided with the female half of a JRB 418 coupler.
- (c) **Chute**
 - i A remote controlled discharge chute **must** be provided.
 - ii The chute **must** have a horizontal rotation range measured from the forward facing centerline of at least 100 degrees to both sides.
 - iii The chute **must** be equipped with a telescopic extension adjustable from the operator's station for spot casting.
 - iv The chute with telescopic extension **must** have a height of at least 3,800mm.
- (d) **Casting**
 - i The snow blower **must** cast snow a distance of at least 40 meters.
 - ii The snow blower **must** spot cast to a distance of at least 10 meters.
 - iii A free-casting chute for left and right-hand casting **must** be provided.
- (e) **Notched Auger.** Notched augers **must** be provided.
- (f) **Steering Vanes.** Steering vanes with in-cab controls **must** be provided.
- (g) **Skates.** Metal skates with replaceable inserts made of carbide or wear resistant material **must** be provided.
- (h) **Cutting Edge.** Replaceable, bolt-on, bottom cutting edge(s) **must** be provided.
- (i) **Shear Pins.** Shear pins that are readily accessible for replacement, or an **Equivalent** torque-limiting device to protect the driveline, **must** be provided.
- (j) **Thermostatically Controlled Fan.** The snow blower engine **must** be provided with a thermostatically controlled fan.
- (k) **Air Filter Restriction Indicator.** The snow blower engine **must** be provided with an air filter restriction indicator.
- (l) **Radiator Cover.** The snow blower **must** be provided with a radiator cover.

3.6 **Engine.** The manufacturer's standard diesel engine **must** be provided.

3.6.1 **Snow Blower Engine Cold Weather Aids**

- (a) The engine **must** be provided with cold weather aids to enable the engine (operating with winter grade fuels and oils) to be started at temperatures down to -45° C.
- (b) The engine **must** have one of the following systems: ether injection, glow plug(s), intake air preheat or **Equivalent**.
- (c) A heated fuel filter/water separator **must** be provided to preheat diesel fuel prior to starting.
- (d) One or more 110-Volt engine heaters that have a capacity as recommended by the engine manufacturer or conforming to SAE J1310 **must** be provided.
- (e) The engine **must** be provided with one or more 110-volt battery heaters that have a wattage matched to battery size to prevent battery damage due to overheating.

- (f) External electrical power for engine and battery heaters **must** be cover-protected plug(s), accessible by an operator standing beside the snow blower.
- (g) The external plug(s) **must** include or be accompanied by a light to indicate when power is being supplied to the 110 Volt components.
- (h) **Fuel-Fired Pre-Heater**
 - i An Original Equipment Manufacturer approved fuel-fired engine coolant preheat system **must** be provided.
 - ii The fuel-fired pre-heater **must** be provided with a programmable timer.
 - iii The fuel-fired pre-heater **must** draw its fuel from the snow blower fuel tank and operate without power from outside the snow blower.

3.7 **Snow Blower Controls**

- (a) The snow blower **must** be provided with a hard-wired, in-cab control unit, with installation kit for the front end loader model specified in paragraph 3.4.
- (b) The in-cab control unit **must** include controls for the throttle, the chute position and angle of discharge, declutching, starter, shut down, emergency shut-off and steering vanes.

3.8 **Instruments**. Commercially equipped.

3.9 **Electrical System**. Commercially equipped.

3.9.1 **Lighting**

- (a) A snow blower mounted manufacturer standard work light package that illuminates the front working area **must** be provided.
- (b) Chute lights that follow the direction of the chute discharge, **must** be provided.

3.10 **License Plate Holder**. The snow blower **must** be provided with its own license plate holder. Lighting of this license plate is not necessary.

3.11 **Lubricants and Hydraulic Fluids**

- (a) **Severe Cold Weather Lubricants and Hydraulic Fluids**. The snow blower **must** be provided with original equipment manufacturer recommended synthetic non-proprietary severe cold weather lubricants and hydraulic fluids.
- (b) Lubrication fittings **must** conform to SAE J534 or an **Equivalent** North American Standard.
- (c) A service label, affixed to the snow blower body, indicating the types of fluid and viscosity delivered with the snow blower **must** be provided.

3.12 **Labels**. All written warning and instruction labels **must** be in English and French.

3.13 **Snow Blower Delivery Condition**

- (a) If the snow blower requires assembly at destination, the contractor **must** be responsible for all manpower and equipment to perform assembly.
- (b) The space for assembly at destination will be provided, if required.
- (c) Fuel tank(s) **must** be half to three quarters full on delivery.

4. **INTEGRATED LOGISTICS SUPPORT (ILS)**

4.1 **Deliverables**

4.1.1 **General Requirements**

- (a) Sample ILS documents **must** be submitted to the **Technical Authority** prior to the delivery of the snow blower/equipment for each configuration/model and their accessories, for approval. Sample ILS documents will not be returned.
- (b) **Technical Authority** approval, request for additional documentation or request for amendments will be supplied within 15 working days of receipt.
- (c) The Contractor **must** supply the additional documentation or implement the changes as requested by the **Technical Authority**.
- (d) **Digital Documents**
 - i All digital copies **must** be supplied in searchable PDF format unless stated otherwise.
 - ii Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection.
 - iii Digital copies of manuals **must** be supplied on a CD or DVD (**USB sticks cannot be used on DND computers**).
 - iv Digital copies of other ILS documents **must** be provided by email to the TA or on CD or DVD.
 - v CD/DVD **must** be permanently and legibly marked with the equipment description and a list of contents.
- (e) **Paper Documents**. All paper copies of ILS documents delivered **must** have the same content as the digital copy approved by the **Technical Authority**.

4.1.2 **ILS Deliverables.** The following table indicates the ILS elements that the Contractor **must** deliver, including the medium (paper or digital), the expected means of delivery and the reference paragraph.

Element	Format/ Medium	Delivered to TA by E- mail for approval	Delivered to TA by mail/courier for approval	Supplied with each Snow blower/ equipment	Remarks	Reference Paragraph
Photograph and Line Drawing Package	Digital	X 30 days before delivery of snow blower	-	-	JPEG	4.2.1
Data Summary	Digital	X 30 days before delivery of snow blower	-	-	Microsoft Word	4.2.2
Initial Parts Kit List	Digital	X 30 days before delivery of snow blower	-		PDF	4.2.3
Initial Parts Kit				X	1 kit	4.2.3
Warranty Letter	Digital	X 30 days before delivery of snow blower	-	-	PDF	4.2.4
	Paper	-	-	X	-	
Safety Data Sheets Package	Digital	X 30 days before delivery of snow blower	-	-	PDF	4.2.5
	Paper	-	-	X	-	
Set of Manuals	Digital	-	X 30 days before delivery of snow blower	X	PDF - on CD/DVD*	4.2.6
	Paper	-	-	X	-	
Set of keys	-	-	-	X	2 sets	4.2.7

Note: * One CD/DVD should be used for all e-manuals covering a configuration/model and its accessories.

4.1.3 **Training deliverables.** The following table indicates the ILS Training elements that the Contractor **must** deliver, including the expected means of delivery and the reference paragraph.

Element	Format/ Medium	Delivered to TA by E- mail for approval	Remarks	Reference Paragraph
Course Syllabus	Digital	X 30 days before delivery of snow blower	-	4.3.1
Familiarization Training	-	-	Delivery in person, at the location specified in the contract. Approximately 30 days after delivery of equipment, to be coordinated with TA .	4.3.1
Proof of Training Certificate	Digital	X After training delivery is complete	TA will provide template	4.3.1

4.2 **ILS Elements Description**

4.2.1 **Photograph and Line Drawing Package**

- (a) DND requires photographs and line drawings for documentation and cataloguing purposes. The Photograph and Line Drawing Package **must** include:
- i Two (2) digital colour photographs, one (1) left-front three-quarter view, and one (1) right-rear three-quarter view of each configuration/model;
 - ii One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment; and
 - iii One (1) front-view and one (1) side-view line drawing showing dimensions of the snow blower/equipment. Brochure line drawings are acceptable.
- (b) Photographs **must** have a plain background and be in a JPEG (Joint Photographic Experts Group) format with a resolution of at least eight (8) Mega pixels.

4.2.2 **Data Summary**

- (a) The **Technical Authority** will supply a bilingual Data Summary Template (in Microsoft Word format) to the Contractor.
- (b) The data summary **must**:
- i Use the **Technical Authority** provided bilingual template;
 - ii Be a separate document for each configuration/model;
 - iii Include accessories and features; and
 - iv Be delivered in Microsoft Word format.

4.2.3 **Initial Parts Kit**

- (a) An Initial Parts Kit List **must** be provided to the **Technical Authority** for approval.
- (b) The Initial Parts Kit List **must** include:
 - i A complete list of parts needed to perform preventive maintenance on one (1) snow blower/equipment for a period of one (1) year, in accordance with the maintenance manual, for each configuration/model;
 - ii A complete change of all filters and filter elements; and
 - iii The following elements for each part listed: part description; Original Equipment Manufacturer (OEM) Part number; suggested quantity; and, unit cost.
- (c) The Contractor **must** supply one (1) complete set of parts contained in the approved Initial Parts Kit List with each snow blower/equipment

4.2.4 **Warranty Letter**

- (a) The **Technical Authority** will supply a bilingual Warranty Letter Template (in PDF format) to the Contractor.
- (b) The Warranty Letter **must**:
 - i Use the **Technical Authority** provided bilingual template;
 - ii Contain a complete description of the warranty requested with the warranty terms and conditions;
 - iii Contain the complete warranty details on any system or sub system warranty that exceeds the minimum requested; and
 - iv Contain the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada.

4.2.5 **Safety Data Sheets Package**

- (a) The Safety Data Sheets Package **must** include:
 - i A bilingual (or a separate French and an English) list of all hazardous materials used on the snow blower/equipment; and
 - ii A complete bilingual set (or a set in French and a set in English), off all the safety data sheets for all hazardous materials in the list.
- (b) If there are no hazardous materials used, this **must** be stated on the list.

4.2.6 **Set of Manuals**

- (a) The set of manuals for each configuration/model **must** include:
 - i The French and English (or bilingual) operator manual(s);
 - ii The French and English (or bilingual) maintenance (shop repair) manual(s); and
 - iii The English or bilingual parts manual(s).
- (b) The set of manuals **must** include manuals (operator, maintenance (shop repair) and parts) for all major components, all attachments, accessories and features for the configuration/model supplied. Accessory manuals may be included as supplements to the snow blower manuals.

- 4.2.7 **Set of keys**. The Contractor **must** supply at least two (2) sets of keys with each snow blower/equipment.

4.3 **Training**

4.3.1 **Familiarization Training**

- (a) The Contractor **must** deliver one familiarization course optimized for trained operators and technicians per delivery destination.
- (b) The course **must** be delivered at the delivery destination, unless stated otherwise in the contract.
- (c) The course **must** be delivered in the official language (English or French) specified in the contract for that delivery destination.
- (d) The instructor **must** be an OEM Factory Certified Training Provider.
- (e) **Course Syllabus**
 - i The Contractor **must** provide the familiarization training course syllabus, in the same language as the course delivery, for review and approval by the **Technical Authority**.
 - ii The operator familiarization portion of the course **must** include, but is not limited to, safety precautions to be observed while operating and servicing, operating characteristics, calibration, pre-operating and pre-shutdown procedures and daily/weekly operator servicing procedures for the snow blower/equipment, attachments, features and accessories.
 - iii The technician familiarization portion of the course **must** include, but is not limited to, operation and maintenance safety precautions, overview of air, hydraulic and electrical systems (as applicable), preventive maintenance including servicing schedules, inspection and maintenance requirements, special tools and test equipment (as applicable), diagnostics, troubleshooting, testing and adjustments for the snow blower/equipment, attachments, features and accessories.
- (f) The familiarization course **must** have a minimum duration of four (4) hours for operators and four (4) hours for technicians.
- (g) The familiarization course **must** accommodate up to eight (8) people (4 operators and 4 technicians).
- (h) The date for the familiarization course **must** be coordinated with the **Technical Authority**.
- (i) After completion of the familiarization course, the Contractor **must** have the “**Proof of Training**” certificate signed by the senior course attendee.
- (j) The **Technical Authority** will supply the “**Proof of Training**” certificate template in a digital format.