

FORM A: BID
(See B7)

1. Contract Title SUPPLY & DELIVERY OF A 60,000 LBS. WRECKER TRUCK

2. Bidder

Name of Bidder

Usual Business Name of Bidder as it appears on Invoice (if different from above)

Street

City

Province

Postal Code

(Mailing address if different)

Facsimile Number

Street or P.O. Box

City

Province

Postal Code

GST Registration Number (if applicable)

(Choose one)

The Bidder is:

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

The Bidder hereby authorizes the following contact person to represent the Bidder for purposes of the Bid.

Contact Person

Title

Telephone Number

Facsimile Number

Email Address

4. **Definitions** All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.
5. **Offer** The Bidder hereby offers to perform the Work in accordance with the Contract for the price(s), in Canadian funds, set out on Form B: Prices, appended hereto.
6. **Commencement of the Work** The Bidder agrees that no Work shall commence until he is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.
7. **Contract** The Bidder agrees that the Bid Opportunity in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Bid.
8. **Addenda** The Bidder certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:
- | No. | Dated |
|-------|-------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
9. **Time** This offer shall be open for acceptance, binding and irrevocable for a period of sixty (60) Calendar Days following the Submission Deadline.

The Bidder or the Bidder's authorized official or officials have signed this

_____ day of _____, 20____.

Signature of Bidder or
Bidder's Authorized Official or Officials

(Print here name and official capacity of individual whose signature appears above)

(Print here name and official capacity of individual whose signature appears above)

FORM B: PRICES
(See B8)

SUPPLY & DELIVERY OF A 60,000 LBS. WRECKER TRUCK

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1.	60,000 lbs. Wrecker Truck	11064	(Each)	(1)	\$ _____	\$ _____

TOTAL BID PRICE (GST and MRST extra) (in figures) \$ _____

(in words) _____

Name of Bidder

FORM N: DETAILED SPECIFICATIONS 11064

1.0 DESCRIPTION OF EQUIPMENT AND PERFORMANCE-

- 1.1 These specifications describe the Supply and Delivery of a 60,000 lbs. Wrecker Truck and other equipment and features as specified herein.
- 1.2 The 60,000 lbs. Wrecker Truck shall be a new 2012 model year or newer.
- 1.3 Shall be capable of consistent top performance for the wrecker application specifically Transit Bus Towing Recovery for the City of Winnipeg Transit Department.
- 1.4 The 60,000 lbs. Wrecker Truck and all other items/components shall be the manufacturer's latest models. The equipment shall be furnished complete and ready for operation. Any parts or accessories not specifically mentioned, but which are required to complete and place the equipment in successful operation shall be furnished as though specifically mentioned in these specifications. The complete 60,000 lbs. Wrecker Truck, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry. The following specifications describe the minimum requirements for one (1) 2012 40 ton hydraulic tow wrecker body with a 60,000 lbs. Tandem heavy-duty truck with a fully hydraulic under lift and heavy duty recovery boom system. Unless otherwise stated all specifications in this document shall be for the completed vehicle. The truck shall have a conventional cab with "sloped hood" and frame compatible with the installation of a 40-ton hydraulic wrecker with a low-rider under lift. The cab and chassis shall be fitted as specified hereinafter and as required for a complete functional vehicle that will meet the performance requirements outlined in this document. Any parts or accessories not specifically mentioned, but which are required to complete and place the equipment in successful operation shall be furnished as though specifically mentioned in these specifications and must meet all DOT requirements. The complete 60,000 lbs. Wrecker Truck, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry, so that a completed functional vehicle, that will meet the performance requirements outlined in this document.

2.0 OTHER SPECIFICATIONS AND STANDARDS-

- 2.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.2 The **60,000 lbs. Wrecker Truck** and all its components and attachments shall comply with the applicable regulations:

[Highway Traffic Act = http://web2.gov.mb.ca/laws/statutes/ccsm/h060e.php](http://web2.gov.mb.ca/laws/statutes/ccsm/h060e.php)

[Manitoba Motor Vehicle Act = http://www.tc.gc.ca/acts-regulations/GENERAL/M/mvsa/menu.htm](http://www.tc.gc.ca/acts-regulations/GENERAL/M/mvsa/menu.htm)

[Canadian Motor Vehicle Safety Standards, CMVSS = http://www.gnb.ca/0062/regs/83-163.htm](http://www.gnb.ca/0062/regs/83-163.htm)

[Transport Canada = http://laws.justice.gc.ca/en/notice/index.html?redirect=%2Fen%2FM-10.01%2F250448.html](http://laws.justice.gc.ca/en/notice/index.html?redirect=%2Fen%2FM-10.01%2F250448.html)

[National Safety Mark, NSM = http://www.tc.gc.ca/acts-regulations/GENERAL/M/mvsa/regulations/mvsrg/001/mvsr3-5.html](http://www.tc.gc.ca/acts-regulations/GENERAL/M/mvsa/regulations/mvsrg/001/mvsr3-5.html)

[Manitoba/Winnipeg Safety and Health Act, Parts 12, 22 =
http://web2.gov.mb.ca/laws/statutes/ccsm/w210e.php](http://web2.gov.mb.ca/laws/statutes/ccsm/w210e.php) and <http://www.gov.mb.ca/labour/safety/>

[Canadian Standards Association, CSA = http://www.csa.ca/about/Default.asp?language=english](http://www.csa.ca/about/Default.asp?language=english)

[Under Writers of Canada, U/L = http://www.ulc.ca/](http://www.ulc.ca/)

[Society of Automotive Engineers, SAE =
http://en.wikipedia.org/wiki/Society_of_Automotive_Engineers](http://en.wikipedia.org/wiki/Society_of_Automotive_Engineers)

- 2.3 It will be the responsibility of the Bidder to inform the City of any deficiencies in these specifications, for under this Contract the Contractor shall be held responsible for the design, performance, reliability and satisfactory operational function of the units.

3.0 SERVICE FACILITY-

- 3.1 For the purpose of warranty repairs, the supplier shall have an authorized service facility located within 10 kilometres of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

4.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS-

- 4.1 Each bid will be evaluated based on adherence to all terms, conditions and requirements outlined in the Bid Opportunity package.
- 4.2 All items in these specifications must be answered indicating compliance or non-compliance. **BIDDERS SHALL STATE "YES" FOR COMPLIANCE OR STATE DEVIATION**, or give reply where requested to do so. Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.
- 4.3 **EACH BIDDER IS REQUIRED TO FILL IN EVERY BLANK. FAILURE TO DO SO MAY BE USED AS A BASIS FOR REJECTION OF BID**

5.0 REFERENCE LIST-

- 5.1 **The bidder must provide five (5) Canadian references:**

1. _____
2. _____
3. _____
4. _____
5. _____

6.0 WEIGH SCALE TICKET-

6.2 **Weigh scale ticket** – The Contractor shall provide a certified weigh scale ticket upon delivery of the completed unit. The scale ticket shall include front and rear axle weights including two (2) operators, full of liquid, and all attachments.

7.0 WRECKER BODY SPECIFICATIONS-

7.1 **Boom-**

The recovery boom shall consist of four major components: Outer boom, inner boom, and two "Thru Center" side by side boom end swivels. The boom section shall be fabricated from high strength carbon steel plate to form a rectangle. The outer and inner boom shall have provisions for attachment of a double acting cylinder used for extending and retracting the inner recovery boom. The inner boom shall also have provisions for attachment of two "Thru Center" side by side boom end swivels. The "Thru Center" boom end swivels shall incorporate bronze bushed sheaves, cable guides and allow for 360 degree sheave rotation, permitting pulls to be made in any direction, even forward pulls over cab by raising boom slightly. Two double acting cylinders shall connect the recovery boom and wrecker frame to be used to raise and lower said boom. All hydraulic hoses shall be routed to provide maximum protection.

7.2 **Frame-**

The wrecker frame shall be heavy steel components welded into a single frame assembly with provisions for installation onto the sub frame. It shall incorporate provisions for mounting the recovery boom, hydraulic winches and hydraulic lift cylinders. The wrecker frame shall be capable of withstanding all imposed forces resulting from rated loads being applied to end of boom.

7.3 **Winch-**

The wrecker frame shall have dual variable speed 35,000lb planetary gear winches. The winches shall be hydraulically powered for winding the winch cables in and out under load. Winches shall have the capability of disengaging the cable drum "Air Free Spool" and cable tensioners to prevent "bird nesting" of winch cables. **State make and model-**

7.4 **Body Dimensions-**

Cab to Bogie shall be 200" CB, X 96" wide with a separate aluminum fender Extensions for tandem axle as requirements for a Vulcan V-70.

-State cab to bogie tandem axle body dimensions-

-State tool compartment assembly dimensions-

-State cubic volume of each compartment-

7.5 **Body Storage-**

All compartment doors shall be held in its open position by means of a stop or gas assisted springs or other means to secure door. Tool compartments shall be of welded construction using aluminum components. Each door opening shall have a rain channel and dust seal around the perimeter of the opening. All tool compartment doors shall be secured by key-locking latches W/Electric Radio Remote Door locks. Recessed area for stop turn, tail, back-up and clearance lights are provided in each tool compartment assembly. Each tool compartment shall be mounted to the wrecker sub-frame with four rubber mounts so tool box assemblies are completely isolated from deflection of chassis and wrecker structure. All tool compartment cavities shall have LED lights with all wiring run in flexible conduit. All wiring shall meet at a common junction box so many inline splices can be eliminated

7.6 **Wrecker Controls-**

Controls for the winches, boom, and hydraulic spades functions shall be located in rear most compartments of the modular body. Controls shall be provided in the left and right side of bodies. Control handles shall automatically return to their "Off" or neutral position when released. When handles are in neutral position, the hydraulic winches and all hydraulic cylinders shall automatically lock and hold their load, even when the "Power Take-Off" is disengaged or in the event of hydraulic malfunction. The operating speed of all hydraulic functions shall be controlled by the amount of handle movement. Controls are grouped by function to permit operation of two controls with one hand. Operation is finger-tip easy regardless of load. Control handles shall be connected to control valve by means of control rods not Cables. Provisions for proper adjustment of control handle positions shall be provided. Wireless remote required with wrecker controls.

7.7 **Remote Throttle-**

A remote throttle switch shall be provided for the operator to activate, if desired.

7.8 **Hydraulic Gauges-**

Hydraulic pressure gauges (two) shall be located in control panel, next to wrecker control. Each pressure gauge shall sense hydraulic system pressure on each hydraulic pump section. All pressure gauges must be glycerin filled.

7.9 **Hydraulic Lines Under Boom and At Valve Body-**

All hydraulic lines shall be rigged type piping where applicable and flexible hose inside the boom sections. All hose's and tubing shall have a part number tagged or stamped for ease of identification.

7.10 **Sub-frame-**

The wrecker sub-frame shall be one entity fabricated out of high strength carbon steel components welded into a single frame assembly with provisions for installation of the wrecker frame assembly and modular type wrecker bodies. The sub-frame shall be capable of withstanding all imposed forces resulting from a rated load being applied to end of boom or under-lift. Tailgate shall be forwardly off-set to provide clearance when towing a vehicle.

7.11 **Outrigger-**

The rear foot/spade system shall be fabricated out of high strength carbon steel components. The spade system shall be an integral part of the wrecker sub-frame assembly. Spades shall be fitted with multi-position spade feet that act as a pavement pad or a digger spade depending on their position. The spade system shall be capable of withstanding all imposed forces resulting from a rated load being applied to end of recovery boom. **State width down riggers size-**

7.12 **Mounting Body-**

Body mounting angles shall be provided and so designed that drilling will be done only through the side of the truck frame in accordance with truck manufacturer's warranty.

7.13 **Sub-Assemblies-**

Sub-assembly equipment will have badge to Identification identify the model and serial number and information to identify the manufacture.

7.14 **Wrecker Description-**

The wrecker shall consist of a recovery boom, wrecker frame, modular type body, and a sub-frame for mounting to chassis.

7.15 **Boom-**

The wrecker shall have a two stage recovery boom that is hydraulically powered for raising, lowering, extending and retracting under load.

7.16 **Frame-**

The wrecker frame shall provide a means of mounting dual hydraulic variable speed planetary gear winches and mounting of the recovery boom.

7.17 **Body Assembly-**

Modular type wrecker body assembly shall be a heavy duty aluminum body including a total of 5 driver's side tool/control compartments and (5) passenger side tool/control compartments. Tool compartments shall have ample room for storing equipment used in recovery and towing operation. All compartment interiors will be illuminated with LED lighting.

7.18 **Hydraulic pump-**

Hydraulic power shall be provided by means of hydraulic pumps mounted directly to a "Power Take-Off" attachment, and shall be driven by the truck engine. **State make and model-**

7.19 **Interior controls-**

A control shall be provided in the cab of the truck for engaging and disengaging the "Power Take-Off" attachment. This control shall be an "Air Shift" system or electric over air.

7.20 **Hydraulic Controls-**

Controls for operating hydraulic functions will be Manual enclosed in the rear most compartments.

7.21 **Lubrication-**

Lubrication fittings shall be provided where required to assure positive lubrication, except where self-lubricated journals may be used.

7.22 **Workmanship-**

Workmanship shall be consistent with first class manufacturing practice. Manufacturing shall be performed in a manner that ensures interchangeability of all parts and sub-assemblies

7.23 **Under-lift / Boom-**

The Wrecker Boom and Under-reach shall be integrated. Tilt and fold function shall be handled by the same cylinder

7.24 **Under lift/Frame-**

The wrecker frame shall be heavy steel components welded into a single frame assembly .The wrecker frame shall be capable of withstanding all imposed forces resulting from rated loads being applied to end of boom and under-lift

7.25 **Under-lift Description-**

The under reach shall be of a 3 stage construction, consisting of a main frame assembly, a floating stage, and a third and final stage that attaches to the cross bar. The second and third stage shall be of a modular construction (multiple plates welded together). The lift will feature tilt capabilities in both positive and negative directions. It will also be able to fold and stow in a vertical position.

7.26 **Pivot head-**

Will be of a low profile to allow it to slide under front axle (front axle clearance is 7inches on cab)

7.27 **External Lights-**

External Lights must meet all DOT requirements with reflex / Reflectors (FMVSS)

7.28 **Marker Lights-**

Pylon, In Body, and under-body lights shall be LED.

7.29 **Work / Flood Lights-**

Winch area flood lighting, upper and lower hook up work lights, under lift work light, boom area lighting, Pylon work lights, extendable and adjustable area lighting. Removable Expanded metal covers over exposed work lights on the rear of the wrecker required.

7.30 **Light Bar-**

Premium LED Emergency light bar with multi-flash pattern, low profile with integrated rear facing take down lights to light wrecker deck. Also two wing premium LED emergency light Bars. **State make and model-**

7.31 **Emergency stop-**

Engine emergency stop on passenger and driver side control stations will be provide so the in an emergency the equipment can be shut off safely.

7.32 **Back-Up Alarm-**

Will be provide with suitable volume to warn others, **state dba-**

7.33 **Video Camera-**

Video Camera system with multiple cameras and LCD monitors for Under-lift, winches and Back-up operation. Shall be provided so these operation can be perform safely.

7.34 **Safety kit-**

Road safety kit and first aid kit will be provided. **State details of kit for approval**

7.35 **Decaling-**

All decaling will be provide for warning, Instructions, structural capacity and literature will be installed and meet industry standards.

7.36 **Boom Recovery**

Basic Recovery Boom 35 Tons (70,000 lbs) _____

Boom Structural Rating:

Retracted w/boom at 30° elevation (TEMA) 35 Tons (70,000 lbs) _____

Extended w/boom @ 30° elevation (TEMA) 14Tons (28,000 lbs) _____

Boom Maximum Elevation 35 degrees _____

Boom Reach Past Tailgate:

Retracted & Horizontal 26 Inches _____

Inner Stage Extended & Horizontal 130 Inches _____

Boom Working Height:

Lowest - Retracted w/boom @ 48°

Elevation above horizontal 233 Inches _____

Extension Cylinder:

Bore 4.0 Inches _____

Rod Diameter 3.0 Inches _____

Stroke 120 Inches _____

7.37 **Wrecker Frame-**

Two Elevation Cylinders:

Bore 7 Inches _____

Rod Diameter 3.5 Inches _____

Stroke 43 Inches _____

Winch:

Capacity 35,000 lbs. _____

Type Dual 2 speed Planetary Gear _____

Gear Ratio 40.96:1 _____

Drum Diameter 6 Inches _____

Drum Length 15 Inches _____

Flange Diameter 1 4.69 Inches _____

Provisions for Free Spooling Air Kick-Out _____

Brake Hydraulic Disc Brake _____

Line Speed (Brake Drum) 3 Ft/Min @ 25 GPM _____

Winch Motor:

Type Low Speed - High Torque _____

Displacement 9.6 Cubic Inches _____

Winch Cable:

Type 6 x 37 IWRC, XIPS _____

Diameter ¾ Inches _____

Length 200 Feet _____

Working Limit 14,600 lbs. _____

Breaking Limit 51,200 lbs. _____

7.38 **Wrecker Sub-frame**

Two Rear Outrigger/Spade Lift Cylinders:

Bore	4 Inches	_____
Rod Diameter	2 Inches	_____
Stroke	30 Inches	_____
Maximum System Pressure	3,000 PSI	_____
System Protection	Relief Valve	_____
Safety Provisions for Holding Load	Counterbalance Valve, Hydraulic Disc Brake	_____
Hydraulic Fluid	Texaco Rando HD46	_____

Hydraulic Pump:

Type	Tandem Gear	_____
Capacity (2) Sections	25 GPM @ 1,200 RPM Each Section	_____
Displacement	5.1 Cu. In Per Rev.	_____

Control Valve:

Capacity	25 GPM	_____
Number of Spools	(2) 3 Spool	_____
Spool Type	Metering, Spring Return to Neutral	_____

Hoses:

High Pressure	3,000 PSI Working Pressure	_____
Return	1,250 PSI Working Pressure	_____
Suction	SAE 100 R4	_____

Reservoir:

Capacity	44 Gallons	_____
System Capacity (Approx)	55 Gallons	_____
Hydraulic Filtering System	2) Return Line 10 Micron Filters	_____

7.39 **UNDERLIFT / Euro Lift Vulcan:**

Capacity Fully Extended To cl of forks	18,000 lbs @ 144"	_____
Capacity Fully Retracted To cl of forks	55,000 lbs @ 59.5"	_____
Undereach Tilt	12 deg pos, 6 deg Neg	_____
Crossbar Width	45"	_____

Extension Cylinder:

Bore (Piggyback)	4"	_____
Rod Diameter	1.25"	_____
Stroke	74.0"	_____

Fold Cylinder:

Bore	9.0"	_____
Rod Diameter	3.0"	_____

Tilting Cylinder: Same Cylinder as Fold

Bore	_____
Rod Diameter	_____
Stroke	_____

7.40 **Mandatory Options-**

<u>Part Number #</u>	<u>Description</u>
310205	Legend 8 Head LED Light Bar or equivalent _____
947590000	180" CT Tandem Axle Aluminum Body with Keyless Entry _____
129003011	Hot Shift PTO for Automatic Transmission _____
124004140	Strobe Power Unit for Marker Lights (Installed) _____
124002740	37" (Steel) HD Pylon Assy's _____
	Add Euro Stinger (Underlift- 144" Reach) _____
	2 Stage PTO _____
	1" airline coupler - rear most compartment of wrecker (left and right) _____
	½" airline coupler in right and left compartment boxes _____
	½ airline coupler at rear of wrecker _____
	12 Function Wireless Remote with Power Distribution Upgrade _____
124004455	VEC Display Kit (one in cab and one at control station) _____
124002722	Hella Underlift Lamps (pair) _____
124002723	Hella Rectangular Work Lamps for the Pylon (pair) _____
124002725	Hella Oval Work Lamps - TailBoard Mounted (Pair) with guard and mesh _____
124002263	Swivel Lamps (pair) _____
124002743	(2) LED Adjustable Shelves Lamp Kit (Pair) _____
124002587	Bus Lift Storage System - For 5"x 5" Crossbar _____
124004494	Wireless Tow Light Bar - 36" Wide _____
124004123	Safety Blocks - Tire Stand Kit _____
124004442	Dual Color Camera Kit Includes the color screen inside the cab. _____
124004132	Snatch Block Bar _____
124004446	Tunnel thru Wrecker _____
124004166	Aluminum 4 Drawer Cabinet _____
124002850	Flipper Foot Option _____

8.0 CHASSIS SPECIFICATIONS- **CHASSIS MUST BE SUPPLIED BY A LOCAL WINNIPEG TRUCK DEALER**

- | | | | |
|-----|----------------|--|-------|
| 8.1 | Total GVWR- | 60,000 lbs. GVWR | _____ |
| 8.2 | Front GVWR- | 20,000 lbs. GAWR | _____ |
| 8.3 | Rear GVWR- | 40,000 lbs. GAWR | _____ |
| 8.4 | Cab to Axle- | As required for a Vulcan Model V-70 W Euro Lift Retractable Boom wrecker body, Outside and above frame must be free from fuel tanks, exhaust components, DEF tanks, and air dryers. Air tanks should be below and under the rail, not flange mounted and not perpendicular mounted behind the cab. These dimensions must meet the requirements of the wrecker body supplier. State useable clear CA”- | _____ |
| 8.5 | Wheelbase | As required for a a Vulcan V-70 with Euro Lift 144” Retractable Boom Wrecker Body. State WB- | _____ |
| 8.6 | Turning radius | State turning radius- | _____ |

9.0 ENGINE-

- | | | | |
|------|-------------------------|---|----------------------------------|
| 9.1 | Type | diesel Cummins ISX 15 500 hp/
1650 torque rating. It shall have a 500 hp or more with sufficient capacity to meet or exceed all performance requirements in this document. The engine shall be compliant with current model year emissions. The features of the engine ECM shall be programmed with -No load high idle 1700 RPM. Engine protection shut down shall be activated. The engine shall be equipped with a compression brake. Controls for the compression brake shall include two (2) dashboard mounted switches within easy reach of the driver. One switch shall be on/off. The second switch shall be a three-position switch controlling the amount of compression braking. When on, the compression brake shall activate with the brake application. | Engine must be a
_____ |
| 9.2 | Engine shut down | Low oil pressure / high water temperature | _____ |
| 9.3 | Anti-idling program | Required | _____ |
| 9.4 | Air intake warmer | Required | _____ |
| 9.5 | Fuel Shut-off | Electric solenoid type | _____ |
| 9.6 | Air intake | Suitable Tow/Wrecker application | _____ |
| 9.7 | Air cleaner | Dry type, suitable for Tow/Wrecker application | _____ |
| 9.8 | Air intake restriction. | Dash mounted air restriction indicator | _____ |
| 9.9 | Oil drain plug | Magnetic type | _____ |
| 9.10 | Oil filter | Full flow, spin-on type | _____ |

9.11	Fuel filter	Spin-on type	_____
9.12	Fuel/water separator	Heated, drainable, mounted under hood, located to be protected from road spray.	_____
9.13	Coolant	Heavy-Duty extended life antifreeze to -60F	_____
9.14	Coolant hoses	Premium or Gates Blue Stripe	_____
9.15	Fan Drive	Thermostatically controlled, automatic type	_____
9.16	Air compressor	Water cooled, pressure lubricated rated capacity 35-40 cfm @ 1250 RPM	_____
9.17	Air Dryer-	(2) CR Brakemaster Turbo 2000 model 65 Air Dryers with heaters or equivalent mounted In board on RH frame rail.	
9.18	Aux Air Tank	In addition to standard air tanks supplied by the Chassis manufacturer, (1) auxiliary air tank of 2770 or greater cubic inches capacity shall be mounted and plumbed inboard on the RH frame rail.	_____

10.0 COOLING SYSTEM

10.1	Cooling-	Shall include manufacturer's recommended radiator and transmission cooler for the wrecker towing application. The system shall be designed to meet the cooling requirements of the engine and transmission while operating with the anticipated load in the City of Winnipeg environment. The cooling fan shall be an automatic clutch type with a dash mounted over-ride switch. A "fan engaged" warning light shall be included with the driver's warning light cluster. The switch shall be within easy reach of the driver. The radiator shall have copper core fin construction. The delivered unit shall be furnished with antifreeze protection to - 60c. The coolant shall include additives as recommended by the engine and transmission manufactures. The cooling system shall be equipped with a coolant filter able to remove particles contamination. The filter shall be a spin on type and have no chemical pre charge. The filter coolant lines shall have ¼ turn ball type shut off valves on both sides of the filter- The type and size of the filter shall be in accordance with the engine manufacturer's specifications. Silicone hoses and constant torque hose clamps shall be used for all coolant hoses.	_____
------	----------	---	-------

11.0 FILTERS-

11.1	Filter details-	The fuel and engine oil filters shall be a spin-on design. The engine oil, coolant, transmission, and fuel filters shall be easily accessible for service. All filter locations shall be reviewed and approved by City of Winnipeg Transit Department.	_____
------	-----------------	--	-------

12.0 **BRAKES-**

12.1 Brake Type-

Brakes shall be Meritor/Wabco air operated S-cam design and shall be of sufficient capacity to meet or exceed all performance requirements of this document. The braking system shall be equipped with a Wabco ABS system. Haldex or approved equivalent automatic slack adjusters shall be installed on the vehicle.

The brake block material shall be made of a non-asbestos compound. The brakes shall be "extended life" design. The anticipated load will be busses Up to 60 feet long with weights of 50,000 pounds. In some cases the towed busses will not have braking. The braking capacity shall meet or exceed all local, provincial and federal regulations governing this type of vehicle for anticipated load.

A trailer brake control shall be mounted on the right side of the steering column. The trailer brake control shall be self-returning. Column-mounted controls shall be mounted in a manner that does not obscure instrument observation.

Haldex Gold seal longstroke spring parking brake chambers installed on drive axles. _____

13.0 **ELECTRICAL SYSTEM-**

13.1 Electrical connector's Plug-in, sealed type _____

13.2 Alternator 12V electrical system with 260 amp alternator,
State make & model- _____

13.4 Circuit breakers Manual reset, readily accessible _____

13.5 Batteries The preferred Battery will be an AGM (Absorbed Glass Mat) Batteries which will be of a size and equivalent to an lead acid battery that will would provide a total 2100 CCA combined. The batteries and box shall be mounted under the cab and/or sleeper in such a way that they do not protrude past the back of the sleeper. Batteries will be equipped shut off switch mounted to the battery box _____

13.6 Cab marker lights Cab marker lights shall be LED. _____

13.7 Wiring- All wiring is to be color coded and laser etched for I.D. purposes over its entire length. Wiring harness must include connections to the end of the frame for brake lights, turn signals, marker lights, reverse lights and auxiliary lights. _____

14.0 EXHAUST SYSTEM-

14.1 Configuration- The truck shall be equipped with two (2) polished stainless steel vertical stacks installed to accommodate installation of a flush mounted wrecker body behind the cab with elbows verses flapper caps. The top of the elbows shall be 5 1/2" inches above the cab of the vehicle. Heat shields shall be polished stainless steel. Further, the pipe(s) shall not be mounted along the side of the frame "aft" of the vehicle cab. The noise level in the cab and the wrecker-working environment shall not exceed 85 db. The Diesel particulate filter regeneration control switches shall be dashboard mounted, guarded switches within easy reach of the driver.

15.0 TRANSMISSION-

15.1 Model The transmission shall be an Allison World 4500 RDS or approved equivalent. The transmission shall be automatic and shall, when coupled to the engine selected, meet or exceed all performance requirements of this document. The transmission shall be arranged to accept a side mounted "PTO" pump. The transmission shall be equipped with six (6) speeds. Transmission fluid type must be synthetic(TES 295 Compliant).

15.2 Shift selector Digital push-button type, dash mounted

15.3 Cooling capacity Water to oil transmission cooler, as per manufacturer's recommendation for severe-duty cycle and wrecker body application.

15.4 Oil level dipstick Bayonet type with high and low level markings

15.5 Trans. drain plug Magnetic type

15.6 ECU- The transmission ECU shall be programmed to properly interface with the engine. The programming shall be such that:
-The downshift schedule is not altered during engine compression brake
-It shall be programmed for proper operation of the PTO.
-The transmission shall automatically shift to neutral when park brake applied.
-It shall not be possible to shift the transmission into gear while operating the wrecker
-The electronic oil level sensor function shall be activated.

16.0 FRONT AXLE-

16.1 Type- The front axle shall be a 20,000 lb capacity Meritor or approved equivalent with a "set-back" configuration. The front axle shall be sized to support the finished vehicle with a counterweight push bumper as described in this document. The axle shall meet or exceed the performance requirements set forth in this document. The turning radius curb to curb shall not exceed left-56 feet and right-51 feet. The axle set back shall not exceed 48.5 inches. The front axle shall be equipped with oil bath wheel bearings, visible oil hub caps and fill plug.

17.0 REAR AXLE-

17.1 Type- The rear axles shall be Meritor MT-40-14X or approved equivalent tandem drive with a 40,000 lb capacity. The capacity of the tandem rear axles shall meet or exceed the performance requirements of this document. The preferred rear axle ratio shall be 5:29. The rear axle shall be equipped with an air powered inter-axle differential lockup with a , dash-mounted control switch. The control shall be within easy reach of the driver. An "Inter-axle engaged" warning light shall be included with the driver's warning light cluster. The rear drive axle only shall be equipped with an inter-wheel lockup including a guarded, dash-mounted control switch. The control shall be within easy reach of the driver. A "rear axle locked" warning light shall be included with the driver's warning light cluster. The single speed rear axle gear ratio shall be such that the completed unit will meet or exceed the performance specifications of this document. The rear axle lube shall be synthetic 75W-90 gear oil.

18.0 DRIVELINE-

18.1 Type-1810HD Dana Spicer main driveline with full round yokes. The inter-axle driveline shall be a 1710 Dana Spicer inter-axle driveline with full round yokes. A driver controlled traction differential for both rear axles as well as inter-axle driver controlled differential lock for the forward and rear axle is to be provided. Indicator lights for each inter-axle lockout control must be provided. All driver operated differential controls and warning lights must be in easy view and reach of the driver.

19.0 HUBS & SEALS-

19.1 Type Oil lubricated front and rear
19.2 Axle Fluids Synthetic Fluids

20.0 FRONT SUSPENSION-

20.1 Type Multi-leaf spring suspension, 20,000 lbs. capacity. The front suspension shall be a 59-inch taper leaf spring design sufficient to meet the performance requirements set forth in this document. The front suspension capacity shall be 20,000 lbs. _____

21.0 REAR SUSPENSION-

21.1 Type Air suspension with shock absorbers. The rear suspension capacity shall be 46,000 lbs. _____

22.0 RIMS, WHEELS-

22.1 Front 22.5 x 12.25 aluminum, hub piloted _____

22.2 Rear 22.5 x 8.25 aluminum, hub piloted _____

23.0 TIRES, FRONT AND REAR

23.1 Front Make & Model Michelin **-state make & model of tires, suited for wrecker body application.** _____

23.2 Front Size 425/65R 22.5, 20-ply (rated for request GVWR) _____

23.3 Rear Make & Model Michelin-LRH On Road/Off Road, **state make & model of tires, suited for wrecker body application.**

23.4 Rear Size Rated for requested GVWR) _____

23.5 Lug nuts- Lug nuts with a polished stainless steel covers on each lug nut _____

23.6 Weight- The weight specification for the tire and wheels supplied shall meet or exceed anticipated loads. _____

24.0 FRAME-

24.1 Type- The frame shall be sized to accept installation of a 40-ton hydraulic recovery boom with an under-lift, and body as required to meet the performance requirements of this document. All frame cross members shall be secured with "huck" bolts or Grade 8 Threaded Hex Headed Frame Fasteners . The frame shall meet the specifications set forth by the recovery boom, under-lift and tow body manufacturers. These specifications shall include but not be limited to: the wheelbase, the frame size, the Gross Vehicle Weight (GVW), and the 3,000,000 RBM. After frame from center of rear

		axle 54" inches.	<hr/>
24.2	Frame Extension-	Integral Front Frame Extension required, length as Required by the body manufacturer. Bolt on front frame extension not acceptable., state length required-	<hr/>
25.0	<u>STEERING-</u>		
25.1	Type-	Heavy-duty power suitable for requested GVWR rating and wrecker body application. TRW TAS-85 dual gear, rated 20,000 lbs min with remote cooler and four quart reservoir. The steering limits shall be set to provide the maximum available turning radius.	<hr/>
26.0	<u>FUEL TANK-</u>		
26.1	Type-	Truck shall be equipped with a 60 gallon capacity diesel fuel tank. The tank shall be mounted forward under the door for improved weight distribution. A single fuel level indicator gauge shall be included with the dashboard instruments. The lower step shall be constructed of a self cleaning aluminum material matching the upper step and have a tread depth of 6 1/4 in.	<hr/>
27.0	<u>AIR SYSTEM</u>		
27.1	Plumbing	A shop airline coupler shall be installed at the left corner of the front bumper and at the rear of the tow body. The connector shall be installed in a manner that is easily accessible without opening the hood. In addition, the connector shall not obstruct the opening of the hood. The connector locations and installations shall be reviewed and approved by City of Winnipeg Transit Department. A 1/2" line shall supply the front and rear shop air connections. In both cases the lines shall be supplied from the accessory air tank. Each of the lines shall be equipped with a "ball type" shut off valve at the ends. And shall be equipped with 3/8 "Quick to Connect" fitting.	<hr/>
27.2	Hand Brake-	An air service line from the Hand Brake shall be installed to the rear of the Tow body by the shop air line supply and shall be equipped with a "ball type" shut off valve at the it's end at the tow body and shall be equipped with 3/8 "Quick to Connect" fitting.	<hr/>
28.0	<u>CAB-</u>		
28.1	Type-	Steel construction.	<hr/>
28.2	Construction	Galvanized steel construction meant for severe-duty wrecker body application.	<hr/>
28.3	Front axle to BOC	State-	<hr/>
28.4	Hood	Must have Rubber fender lips 2"- 3" width	<hr/>

28.5	Cab mounts	Air suspension	_____
28.6	Front grille	hood mounted	_____
28.7	Cab silencer package	Required for minimal decibel levels	_____
28.8	Hood/Firewall/Engine	Insulated hood liner, engine cover and firewall	_____
28.9	Floor covering	Rubber mat with under-padding	_____
28.10	Floor mats	Two (2), rubber mats	_____
28.11	Driver's seat	High back, air suspension w/foldable armrests, lumbar support, heavy-duty cloth upholstery. State material-	_____
28.12	Passenger seat	High back, air suspension with lumbar support, heavy-duty cloth upholstery. State material-	_____
28.13	Sun visors	Dual flip-up type	_____
28.14	Steering wheel	Tilt and telescopic type	_____
28.15	12-Volt power outlet	(2) two required with independent circuit Radio install kit (no radio)	_____
28.16	Starter switch	Key operated c/w (3) three sets of keys Door and ignition switch keyed the same with power door locks provided for the driver's and passenger's door.	_____
28.17	Interior light	Dome light with driver and passenger door switches	_____
28.18	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of -35°F (-37°C)	_____
28.19	Air conditioning	Required	_____
28.20	Horns	Dual Air Horns with single electric horn.	_____
28.21	Exterior mirrors	Dual polycarbonate unpainted aerodynamic or stainless steel mirrors with convex mirrors, heated, 4-way motorized adjustments (including heated convex mirrors), suitable for 102 in. equipment width	_____
28.22	Down-view mirror	Required over passenger door, 5" x 4" approx.	_____
28.23	Windows & windshield	Tinted	_____
28.24	Power windows	Required for driver and passenger side.	_____
28.25	Fresnel Windows	Passenger door, state-	_____
28.26	Windshield wipers	Electric, intermittent	_____
28.27	Wiper blades	Required	_____
28.28	Windshield washers	Electric, required with spray nozzles on wiper blades	_____
28.29	Grab handles	Driver & passenger side Anti-slip exterior	_____
28.30	Entrance steps	Dual each side, open grate / grip type	_____

- 28.31 Dimensions
- Interior cab shall accommodate a man 6' 6" tall to sit comfortable in the seat _____
 - Center of fuel pedal to seat base 23" or greater _____
 - Distance between seat backs at mid back Level 31" or greater. _____
 - “A” pillar to “A” Pillar upper measurement at head Liner 67.5" or greater/ _____
 - “A” pillar to “A” Pillar lower measurement at dash 72" or greater/ _____
 - Cab width at shoulder level 79" or greater _____
 - Cab width at hip level 76" or greater _____
 - “B” pillar to “B” Pillar at mid level (top of dash) 70" or greater. _____

- 28.32 Sleeper-
- 40 "flat roof sleeper. All under the cab and/or sleeper components should be mounted in such a way that they do not protrude past the back of the sleeper. (1) Shelving unit on left upper inside sleeper wall is required. A coat hook on RH side wall of the sleeper cab shall be provided.

- 28.33 Radio Prep Package-
- Radio prep package shall include 12V wiring and Antenna for standard AM/FM/CD radio, (4) speakers Mounted in cab. (radio to be customer furnished and Installed) _____

29.0 INSTRUMENTATION-

- 29.1 Oil pressure Gauge _____
- 29.2 Coolant temperature Gauge _____
- 29.3 LOP/HWT Warning light and buzzer _____
- 29.4 Voltmeter Gauge _____
- 29.5 Air reservoir pressure Gauge with LAP warning light and buzzer _____
- 29.6 Engine hour-meter Required, non-reset able type _____

30.0 FRONT BUMPER-

- 30.1 Basic bumper for transportation purposes. Front bumper shall be mounted to Integral frame extensions only. **(Bolt on front frame extensions not acceptable)** _____

31.0 LIGHTING

- 31.1 Headlight shall be a Halogen either two (2) or Four (4) lamp system. All other lamps and auxiliary lamp shall be LED unless not available then incandescent light will be acceptable. _____

32.0 COLOUR-

- 32.1 Exterior Cab, hood, sleeper and wrecker body shall be primed and painted white with a high quality paint

finish with the option of having the upper deck, pylons, booms and associated hardware primed and painted a contrasting color. To be reviewed and approved by the City of Winnipeg Transit Department.

- 32.2 Interior Grey color upgraded to premium interior trim

- 32.3 Frame & suspension Primed and finished with black Imron 5000 paint

33.0 WRECKER BODY AND CHASSIS WARRANTY-

- 33.1 Complete Wrecker **State-**

- 33.2 Basic chassis **State-**

- 33.3 Batteries **State-**

- 33.4 Drive train **State-**

- 33.5 Cab structure/
corrosion **State-**

- 33.6 Frame & cross
Members Chassis **State-**

- 33.7 Cab paint **State-**

- 33.8 Engine **State-**

- 33.9 Transmission **State-**

- 33.10 Axles, front & rear **State-**

34.0 PERFORMANCE RELIABILITY-

- 34.1 The responsibility for the design of the **Wrecker Truck**, its performance and reliability shall rest upon the Contractor.

- 34.2 The term “repeated failures” as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the vehicle inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, subassembly, of assembly. Minor items or ordinary service adjustments are not included, or considered under the scope of “repeated failures”, as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance, service and lubrication attention by not following the manufacturer’s preventative maintenance schedule.

- 34.3 Where the **Wrecker Truck** develops “repeated failures” in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.

35.0 TRAINING-

35.1 The Contractor shall be required to provide training (at the Contractor's expense) for the City of Winnipeg maintenance and operating personnel. The training shall be divided into two separate sessions, one for maintenance personnel and one for operating personnel. The training shall be conducted in separate or combined sessions for each group of personnel.

The duration of the sessions shall be as long as required for adequate familiarization and orientation of the equipment to the satisfaction of the Contract Administrator.

The training shall be conducted within (4) four calendar weeks from the date of delivery and shall be coordinated through the Contract Administrator.

The training shall be conducted in Winnipeg at a time and location designated by the Contract Administrator.

Pricing should be based on two (2) business days for maintenance personnel and two (2) business days for operating personnel.

Note: The first payment of the contract on the equipment will not be issued until successful completion of training has been conducted to the satisfaction of the Contract Administrator.

35.2 Training Aides:
a) On the type of equipment being offered, **state if CD Rom training aides or on-line training are available-**

35.3 What is the recommended minimum training duration for:

Primary unit-

For major attachments (if applicable):

35.4 State what other training aids are available (videos, CDs).

For the primary unit-

For major attachments (if applicable):

35.5 Training Materials and applicable manuals or on-line training material information must be provided as earliest possible opportunity, no later than (4) weeks prior to delivery, when supplying vehicles, equipment and related attachments. Send these materials, preferably in both electronic format and hard copy (training videos are to be supplied on either CD or DVD) to the Contract Administrator.

36.0 TECHNICAL SERVICE/PARTS MANUALS & OWNERS MANUALS-

36.1 **Two (2) sets** of technical service, parts manuals and owners manuals are required,
CD preferred

37.0 DELIVERY-

37.1 **Delivery Point-** The equipment shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid to the Fleet Management Agency, Equipment Inspections Office, 770 Ross Avenue, Winnipeg, Manitoba. The Contractor shall contact the Contract Administrator (tel: 204-986-8273) prior to delivery of the equipment.

37.2 **Delivery Time-** Equipment shall be delivered between 8:00 am and 3:00 pm on Business Days, **state delivery time -**

37.3 **Delivery Contact-** The Contractor shall contact the Contract Administrator prior to delivery of the equipment.

37.4 **P.D.I.-** A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list

FORM O-PREVENTATIVE MAINTENANCE SCHEDULE

Make: _____

Model: _____

Year: _____

Service/Parts Contact info: _____

PM Checklist and Adjustments

Please fill in all applicable areas and add any missing service intervals or component part numbers that are applicable to the supplied unit.

All items required to maintain warranties must be listed.

Description:	Capacity:	Type:	Description:	Capacity:	Type:
Engine Oil	Litres		Transmission	Litres	
Cooling System	Litres		Transfer Case	Litres	
Hydraulic Tank	Litres		Hydraulic System	Litres	
A/C Refrigerant	Lbs	R-134a	Brake Reservoir	Litres	
Fuel System	Litres		Differential (Front)	Litres	
Final Drives	Litres		Differential (Rear)	Litres	

Type of Filter:	OEM:	Wix:	Purolator:	Fram:	Baldwin:	Fleetguard:
Engine Oil						
Air Primary						
Air Secondary						
Primary Fuel						
Secondary Fuel Filter						
Cab Air Filter						
Hydraulic (pressure)						
Hydraulic (return)						
Transmission						
A/C Belt						
Alt Belt						
Water Pump Belt						
Serpentine Belt						

Make _____

Model: _____

Year: _____

Item	Recommended Service Intervals. Kms/Hours	Comments
List any one time services		
List any one time adjustments		
List regular Adjustments		
Initial Oil and Filter Change		
Engine Valve Lash and Fuel Injector, Timing Check.		
Engine Oil and Filter Changes and/or Oil Sample Intervals		
Lubrication Points and Intervals		
Transmission Filter/Screens- Replace/Clean and/or Obtain Oil Sample		
Primary Fuel Filter (Replace)		
Secondary Fuel Filter (Replace)		
Differential Oil Sample (Front)		
Final Drive Oil Sample (front)		
Hydraulic Filter (Replace and Obtain Oil Sample)		
Front Differential Fluid (Change)		
Rear Differential Fluid (Change)		
Differential Vents		
Transmission Oil (Change)		
Clean Transmission Magnetic Screen		

Make _____

Model:

Year:

Item	Recommended Service Intervals Kms/Hours	Comments
Change Final Drive Oil (Front)		
Clean Engine Crankcase Breather		
Hydraulic System Oil (Change)		
Engine Valve Lash and Fuel Inj. Timing (Check)		
Cooling system Water Temperature Regulator (Replace)		
Cooling System Coolant Extender (ELC)-Add		
Cooling System		
Wheel nut Torque and Intervals		
Check wheel Nut torque At Every service interval		
Refrigerant dryer (Replace)		

FORM P-DATA COLLECTION SHEET FOR W.F.M.A

UNIT NUMBER		
--------------------	--	--

ITEMS		DETAILS FROM VENDOR
MAKE/MANUFACTURER	(e.g. Ford, Volvo, etc.)	
MODEL	Enter model (e.g. F-350)	
YEAR	(Enter model year)	
DISCRIPTION/TYPE	(e.g. Truck, snow blower, mower, tractor)	
FUEL TYPE	(e.g. gas, diesel, hybrid, propane)	
RATED FUEL CONSUMPTION	(L/100 km, L/hr, etc.)	
GVWR	(In pounds [lbs.] and kilograms)	
GAWR FRONT		
GAWR REAR		
GCWR		
DIMENSION HEIGHT	(Overall height m)	
DIMENSION LENGTH	(Overall length m)	
DIMENSION WIDTH	(Overall width m)	
WHEELBASE		
DELIVERY DATE	(Confirmed date)	
SUPPLIER/DEALER	(Name, phone number, and contact person)	
ODOMETER/HOUR METER	(Upon delivery)	
V.I.N. NUMBER		
SERIAL NUMBER (if applicable)		
CAB CONFIGURATION	(Regular, Extended, Crew)	
M.G.I NUMBER (if applicable)		
KEY DOOR NUM		
KEY IGNITION NUM		
PAINT CODE	(Exterior colour)	
PAINT COLOUR	(Exterior colour)	
PAINT TRIM CODE	(Interior code #/colour)	
ITEMS	SERVICE ITEMS	DETAILS FROM VENDOR
ENGINE MAKE		
ENGINE MODEL		
ENGINE SERIAL NUMBER		
ENGINE HORSE POWER	(Enter as xxx H.P. @ xxxx RPM)	

ENGINE DISPLACEMENT	(In cubic inches and litres)	
CPL NUMBER		
ENGINE CYLINDERS	(Number of cylinders)	
ENGINE OIL CAPACITY	(Capacity with filter, in litres)	
ENGINE OIL FILTER PART NUMBER	(Number of filters and part numbers)	
ENGINE OIL TYPE	(e.g. 15W40, regular or synthetic)	
ENGINE AIR FILTER (PRI)	(Make, part number, quantity)	
ENGINE AIR FILTER (SEC)	(Make, part number, quantity)	
CAB FILTER	(Part number and location)	
FUEL TANK CAPACITY	(In litres)	
FUEL FILTER # PRIMARY	(Make, part number, and quantity)	
FUEL FILTER # SECONDARY	(Make, part number, and quantity)	
FUEL SEPARATOR	(Make, part number, and quantity)	
COOLANT TYPE	(Heavy-duty, extended life, or regular)	
COOLANT CAPACITY	(In litres)	
COOLANT FILTER NUMBER	(Part number)	
TRANSMISSION		DETAILS FROM VENDOR
TRANSMISSION MAKE	(Enter make & model)	
TRANSMISSION SERIAL NUMBER		
TRANSMISSION TYPE	(Hydrostatic, standard, automatic)	
TRANSMISSION FLUID CAPACITY	(in litres)	
TRANSMISSION FLUID TYPE	(Dextron III, synthetic, weight, etc.)	
TRANSMISSION FILTER(S)	(# of filters and part numbers; internal and external filters)	
TRANSMISSION FILTER KITS	(Gasket, o-ring, secondary filters etc.)	
TRANSMISSION COOLER	(Make and part number if applicable)	
FRONT DIFFERENTIAL		DETAILS FROM VENDOR
DIFFERENTIAL MAKE		
DIFFERENTIAL MODEL		
DIFFERENTIAL SERIAL #		
DIFFERENTIAL OIL TYPE	(e.g. 80W90, synthetic)	
DIFFERENTIAL CAPACITY	(In litres)	
REAR DIFFERENTIAL		DETAILS FROM VENDOR
DIFFERENTIAL MAKE		

DIFFERENTIAL MODEL		
DIFFERENTIAL SERIAL #		
DIFFERENTIAL OIL TYPE	(e.g. 80W90, synthetic)	
DIFFERENTIAL CAPACITY	(In litres)	
TIRES/WHEELS/ETC.		DETAILS FROM VENDOR
TIRE MANUFACTURER & BRAND		
TIRE SIZE FRONT		
TIRE SIZE REAR		
WHEEL NUT TORQUE	(lb-ft)	
WHEEL NUT RE-TORQUE INTERVAL		
FINAL DRIVE/HUB	(Oil type and capacity)	
WHEEL SPINDLES OIL CAPACITY	(In litres)	
WHEEL SPINDLES FLUID TYPE	(e.g. 80w90, Dextron, synthetic)	
POWER STEERING CAPACITY	(In litres)	
POWER STEERING FLUID TYPE	(e.g. ATF or synthetic)	
POWER STEERING FILTER #	(Make, part number, quantity)	
BRAKE FLUID	(Type)	
BRAKE TYPE	(Hydraulic/air)	
MISC. ITEMS		DETAILS FROM VENDOR
ALTERNATOR	(Enter make, model, part #)	
ALTERNATOR AMPS	Integers only (e.g. 105, 125, etc.)	
BATTERY MAKE		
BATTERY MODEL		
BATTERY CCA		
BATTERY QTY.		
BATTERY VOLTAGE		
BELT A/C PART #	(Enter make and part number)	
BELT COMPRESSOR PART #		
BELT FAN PART #		
BELT ALTERNATOR PART #		
BELT STEERING	(V-belt or serpentine, quantity)	
BELT STEERING PART #		
BELTS OTHER		

COMPRESSOR CFM	(e.g. 13.2, 15, 18)	
COMPRESSOR MODEL	(Enter make and model)	
COMPRESSOR PART #		
AIR DRYER	(Enter make and model)	
AIR DRYER PART/SERIAL #		
AIR DRYER DESCRIANT		
AIR DRYER FILTER	(part number)	
AUX. HEATER TYPE	(Diesel, electric, etc.)	
AUX. HEATER MAKE		
AUX. HEATER MODEL		
AIR CONDITIONING	(Type, 113 etc.)	
AIR CONDITIONING CAPACITY	(lbs)	
A/C RECEIVER DRYER PART #	(part, number)	
ATTACHMENT ITEMS	(Construction equipment)	DETAILS FROM VENDOR
SKID SHOE	(part number)	
STINGER BLADES	(part number)	
STINGER TEETH	(Quantity and part number)	
BUCKET TEETH	(Quantity and part number)	
CUTTING TOOTH		
CLAM BUCKET BLADE	(Dimensions and part number)	
UTILITY BUCKET BLADE	(Dimensions and part number)	
BOX SCRAPER BLADE	(Dimensions and part number)	
BUCKET CAPACITY		
BUCKET BLADES AND SIDES	(Quantity and part number)	
GRADER BLADES	(part number)	
GRADER ICE BLADES	(Part number)	
WING BLADES	(Part number)	
BODY UNIT ITEMS		DETAILS FROM VENDOR
BODY SUPPLIER	(Name and contact number)	
BODY TYPE		
BODY MAKE		
BODY MODEL		
BODY SERIAL NUMBER		
BOX SIZE	(Length and/or capacity)	

HYDRAULICS		DETAILS FROM VENDOR
HYDRAULIC PUMP	(Make, model and capacity)	
PTO	(Make, model and shift type)	
HYDRAULIC TANK CAPACITY	(In litres)	
HYDRAULIC FILTER NUMBER	(Filter number and screen numbers)	
HYDRAULIC FLUID TYPE	(e.g. N22, synthetic)	
HYDRAULIC FILTER	(Make, quantity and part number)	
HYDRAULIC SCREEN	(Make, quantity and part number)	
HYDRAULIC BREATHER	(Make, quantity and part number)	
HYDRAULIC SPINNER		
HYDRAULIC SPINNER MAKE		
HYDRAULIC SPINNER MODEL		
HYDRAULIC SPINNER SERIAL #		
CONVEYOR MOTOR MAKE		
CONVEYOR MOTOR MODEL		
CONVEYOR MOTOR SERIAL #		
CYCLE TIME DOWN		
CYCLE TIME UP		
SANDER/DUMP CONTROLS:		DETAILS FROM VENDOR
CONTROL SYSTEM MAKE		
CONTROL SYSTEM MODEL		
CONTROL SYSTEM SERIAL #		
CONTROL SYSTEM PART #		
CONVEYOR CHAIN	(Length and part #)	
SENSORS	(Part #s)	
CALCIUM PUMP MAKE		
CALCIUM PUMP MODEL		
CALCIUM PUMP SERIAL #		
CALCIUM PUMP CAPACITY		
UNIT ITEMS	ATTACHMENT(S)	DETAILS FROM VENDOR
TYPE	(e.g. snow blower, mower, spreader, etc.)	
MAKE/ MANUFACTURER	(e.g. John Deere, Colpron, etc.)	
MODEL		

YEAR	(Enter year manufactured)	
AUX. ENGINE	(Make and model)	
AUX. ENGINE DISPLACEMENT	(In cubic inches and litres)	
AUX. ENGINE SERIAL #		
SUPPLIER/DEALER	(Name, phone number, and contact person)	
FUEL TYPE	(e.g. gas, diesel, propane)	
ODOMETER/HOUR METER		
AUX. ENGINE HORSE POWER	(Enter as xxx H.P. @ xxxx RPM)	
AUX. ENGINE CYLINDERS	(Number of cylinders)	
AUX. ENGINE OIL CAPACITY	(Capacity with filter, in litres)	
AUX. ENGINE OIL FILTER PART #	(Number of filters and part number)	
AUX. ENGINE OIL TYPE	(e.g. 15W40, regular or synthetic)	
AUX. ENGINE AIR FILTER (PRI)	(Make, part number, quantity)	
AUX. ENGINE AIR FILTER (SEC)	(Make, part number, quantity)	
HYDRAULICS	ATTACHMENT(S)	DETAILS FROM VENDOR
HYDRAULIC DRIVE MAKE	(Enter make & model)	
HYDRAULIC DRIVE MODEL		
HYDRAULIC DRIVE SERIAL #		
HYDRAULIC DRIVE TYPE	(Hydrostatic, standard, automatic)	
HYDRAULIC DRIVE FLUID CAPACITY	(in litres)	
HYDRAULIC DRIVE FLUID TYPE	(Dextron III, synthetic, etc.)	
HYDRAULIC DRIVE FILTER(S)	(# of filters and part numbers; internal and external filters where applicable)	
HYDRAULIC DRIVE COOLER	(Part number if applicable)	
HYDRAULIC BREATHER CAP	(Part number if applicable)	
SWEEPER		DETAILS FROM VENDOR
BROOM SEGMENTS	(part #)	
WATER FILTER	(part #)	
WEAR PLATES	(part #)	
ROLLERS	(part #)	
SKID SHOES	(part #)	

FORM Q-SUSTAINABILITY QUESTIONNAIRE

Product Information

(Yes/No)

Product Sustainability: High Quality, Small Ecological Footprint

1. Have you employed environmentally innovative best practices and/or technologies in the goods you are supplying in this Bid Opportunity as compared to similar goods? If yes, please describe them below.

Describe:

2. Have you obtained 3rd party environmental certifications for any of the products that you are supplying in this Bid Opportunity?

Describe:

3. Have you performed a life cycle assessment of the goods you are supplying in this Bid Opportunity? If yes, please describe below.

Describe:

4. Are there any other environmentally innovative best practices and/or technologies in the goods you are supplying in this Bid Opportunity that we could have specified in this tender, but have not? If yes, please describe them below.

Describe:

Company Information

Energy and Climate: Reducing Energy Costs and Greenhouse Gas Emissions

1. Have you measured your corporate greenhouse gas emissions? If yes, please report your total annual greenhouse gas emissions reported in the most recent year measured?

Describe:

2. Have you set publicly available greenhouse gas reduction targets? If yes, what are those targets?

Describe:

Material Efficiency: Reducing Waste and Enhancing Quality

1. Do you measure the total amount of solid waste generated from the facilities that produce your product(s) for this Bid Opportunity? If yes, please report for the most recent year measured.

Describe:

2. Have you set publicly available solid waste reduction targets? If yes, what are those targets?

Describe:

3. Do you measure the total water use from facilities that produce your product(s) for this Bid Opportunity? If yes, please report for the most recent year measured.

Describe:

4. Have you set publicly available water use reduction targets? If yes, what are those targets?

Describe:

Natural Resources: Responsibly Sourced Raw Materials

1. Have you established publicly available sustainability purchasing guidelines for your direct suppliers that address issues such as environmental compliance, employment practices and product safety?

Describe:

Social Responsibility: Ensuring Responsible and Ethical Production

1. Do you have a process for managing social compliance at the manufacturing level?

Describe:

2. Do you work with your supply base to resolve issues found during social compliance evaluations and also document specific corrections and improvements?

Describe:

3. Do you invest in community development activities in the markets you source from and/or operate within? _____

Describe:
