



**CITY OF SAN ANTONIO**  
**PURCHASING AND GENERAL SERVICES DEPARTMENT**

FORMAL INVITATION FOR BID ("IFB") NO.: 6100005971

**PURCHASE OF HEAVY EQUIPMENT II**

Date Issued: JULY 20, 2015

**BIDS MUST BE RECEIVED NO LATER THAN:**  
**2:00 PM (CENTRAL TIME) AUGUST 5, 2015**

Bids may be submitted by any of the following means:  
Electronic submission through the Portal  
Hard copy in person or by mail

**ORIGINAL**

Address for hard copy responses:

Physical Address:

City Clerk's Office  
100 Military Plaza  
2<sup>nd</sup> Floor, City Hall  
San Antonio, Texas 78205

Mailing Address:

City Clerk's Office  
P.O. Box 839966  
San Antonio, Texas 78283-3966

For Hard Copy Submissions, Mark Envelope

"PURCHASE OF HEAVY EQUIPMENT II"

Bid Due Date: 2:00 p.m. central time, AUGUST 5, 2015

Bid No.: 6100005971

Bidder's Name and Address

Bid Bond:                      Performance Bond:                      Payment Bond:                      Other:

See Supplemental Terms & Conditions for information on these requirements.

Affirmative Procurement Initiative:

DBE / ACDBE Requirements:

See Instructions for Bidders and Attachments sections for more information on these requirements.

Pre-Submittal Conference \* YES

\* If YES, the Pre-Submittal conference will be held on JULY 23, 2015 at 2:00 at the BUILDING & EQUIPMENT SERVICES, FLEET TRAINING ROOM, 329 S. Frio St, San Antonio, TX 78207

Staff Contact Person: LD MCGARITY, PROCUREMENT SPECIALIST II, P.O. Box 839966, San Antonio, TX 78283-3966.

Email: [ld.mcgarity@sanantonio.gov](mailto:ld.mcgarity@sanantonio.gov)

PHONE: 210-207-2078

FAX: 210-207-2078

### 003 - INSTRUCTIONS FOR BIDDERS

#### Submission of Bids.

Submission of Hard Copy Bids. Submit one original bid, signed in ink, and two copies of the bid enclosed in a sealed envelope addressed to the City Clerk at the address and by the due date provided on the Cover Page. The name and address of Bidder, the date and hour of the bid opening, bid number and title of the bid solicitation shall be marked on the outside of the envelope(s). All times stated herein are Central Time. Any bid or modification received after the time and date stated on the Cover Page shall be rejected.

Submission of Electronic Bids. Submit one bid electronically by the due date provided on the Cover Page. All times stated herein are Central Time. Any bid or modification received after the time and date stated on the Cover Page shall be rejected. All forms in this solicitation which require a signature must have a signature affixed thereto, either by manually signing the document, prior to scanning it and uploading it with your submission, or affixing it electronically.

Bids sent to City by facsimile or email shall be rejected.

Modified Bids. Bids may be modified provided such modifications are received prior to the time and date set for submission of bids, and submitted in the same manner as original bids. For hard copy bids, provide a cover letter with the bid, indicating it is a modified bid and that the Original bid is being withdrawn. For electronic bids, a modified bid will automatically replace a prior bid submission. See below for information on submitting Alternate Bids.

City shall not be responsible for lost or misdirected bids or modifications.

Bidders must sign the Signature Page on hard copy bids and return the IFB document to City. For electronic bids, Bidder's electronic submission, with accompanying affirmations, constitutes a binding signature for all purposes.

Bidders are cautioned that they are responsible for the security of their log on ID and password, since unauthorized use could result in Bidder's being held liable for the submission.

Certified Vendor Registration Form. If Bidder has not completed City's Certified Vendor Registration (CVR) Form, Bidder is required to do so prior to the due date for submission of bids. The CVR form may be accessed at: <http://www.sanantonio.gov/purchasing/>. Bidders must identify the correct name of the entity that will be providing the goods and/or services under the contract. No nicknames, abbreviations (unless part of the legal title), shortened or short-hand names will be accepted in place of the full, true and correct legal name of the entity.

Alternate Bids. Alternate bids may be allowed at the sole discretion of City.

Hard Copy Alternate Bids. Alternate bids must be submitted in separate sealed envelopes in the same manner as submission of other bids. Alternate bids must be marked consecutively on the envelope as Alternate Bid No. 1, 2, etc. Failure to submit alternate bids in separate envelopes may result in rejection of a bid.

Electronic Alternate Bids Submitted Through the Portal. All alternate bids are recorded with original bids when submitted electronically.

Catalog Pricing. (This section applies to bids using catalog pricing.)

The bid will be based on manufacturer's latest dated price list(s). Said price list(s) must denote the manufacturer, latest effective date and price schedule.

Bidders shall be responsible for providing one copy of the manufacturer's catalog for each manufacturer for which a bid is submitted. Bidder shall provide said catalog at the time of submission of its bid. Manufacturers' catalogs may be submitted in any of the following formats: paper copy or CD ROM for bids submitted on paper, or PDF file for bids submitted electronically.

Bidders may submit price lists other than the manufacturer's price list. Said price list(s) must denote the company name, effective date and price schedule. These price lists are subject to approval of City Purchasing & General Services Department.

until the bid due date. City will assume that all bids received are based on the final version of the IFB as it exists on the day bids are due.

No oral statement of any person shall modify or otherwise change or affect the terms, conditions or specifications stated in the IFB.

#### Preparation of Bids.

All information required by the IFB must be furnished or the bid may be deemed non-responsive and rejected. Any ambiguity in the bid as a result of omission, error, unintelligible or illegible wording shall be construed in the favor of City.

Correct Legal Name. If Bidder is found to have incorrectly or incompletely stated the name of the entity that will provide goods and/or services, the bid may be rejected.

Line Item Bids. Any bid that is considered for award by each unit or line item, must include a price for each unit or line item for which Bidder wishes to be considered. All bids are awarded on the basis of low line item, low total line items, or in any other combination that serves the best interest of City, unless City designates this solicitation as an "all or none" bid in the Supplemental Terms & Conditions.

All or None Bids. Any bid that is considered for award on an "all or none" basis must include a price for all units or line items. In an "All or None" bid, a unit price left blank shall result in the bid being deemed nonresponsive and disqualified from consideration. An "All or None" bid is one in which City will award the entire contract to one bidder only.

Delivery Dates. Proposed delivery dates must be shown in the bid form where required and shall include weekends and holidays, unless specified otherwise in this IFB. Proposed delivery times must be specific. Phrases such as "as required", "as soon as possible" or "prompt" may result in disqualification of the bid. Special delivery instructions, if any, may be found in the Specifications / Scope of Services section of this document, or in the Purchase Order.

Tax Exemption. The City of San Antonio is exempt from payment of federal taxes, and State of Texas limited sales excise and use taxes. Bidders must not include such taxes in bid prices. An exemption certificate will be signed by City where applicable upon request by Bidder after contract award.

#### Description of Supplies.

Any brand names, catalog or manufacturer's reference used in describing an item is merely descriptive, and not restrictive, unless otherwise noted, and is used only to indicate quality and capability desired.

Bids submitted for comparable items must clearly identify the proposed product, model, and type, as applicable, and shall include manufacturer specification sheet(s) for each proposed item with bid response. Product specifications shall be the most current available and be sufficiently detailed and descriptive so as to permit City to determine the item's suitability and compliance with bid specifications. City shall be the sole judge of equality and suitability of comparable items.

Pro-rata adjustments to packaging and pricing may be allowed at the sole discretion of City.

Samples, Demonstrations and Pre-award Testing. If requested by City, Bidder shall provide product samples, demonstrations, and/or testing of items bid to ensure compliance with specifications prior to award of the contract. Samples, demonstrations and/or testing must be provided within 7 calendar days of City's request. Failure to comply with City's request may result in rejection of a bid. All samples (including return thereof), demonstrations, and/or testing shall be at Bidder's expense. Samples will be returned upon written request. Requests for return of samples must be made in writing at the time the samples are provided. Otherwise, samples will become property of City at no cost to City. Samples that are consumed or destroyed during demonstrations or testing will not be returned.

#### Estimated Quantities for Annual Contracts.

Designation as an "annual" contract is found in the contract's title on the Cover Page of this document. The quantities stated are estimates only and are in no way binding upon City. Estimated quantities are used for the purpose of evaluation. City may increase or decrease quantities as needed. Where a contract is awarded on a unit price basis, payment shall be based on the actual quantities supplied.

Per Section §252.043 of the Texas Local Government Code, the contract will be awarded to the lowest responsible bidder. The Purchasing Division evaluates bids for responsiveness and the responsibility of the bidder, and makes a recommendation to the City Council. The City Council makes the final determination regarding award.

City reserves the right to make an award on the basis of low line item, low total line items, or in any other combination that serves the best interest of City, unless City designates this solicitation as an "all or none" bid in the Supplemental Terms & Conditions.

A written award of acceptance (manifested by a City Ordinance) and Purchase Order furnished to Bidder results in a binding contract without further action by either party. Vendor must have the Purchase Order before making any delivery.

City reserves the right to utilize historical usage data as a basis for evaluation of bids when future usages are unable to be determined.

Breaking of tie bids shall be in accordance with the Texas Local Government Code §271.901.

City reserves the right to delete items prior to the awarding of the contract, and purchase said items by other means.

#### Inspection of Facilities/Equipment

Depending on the nature of the IFB, Bidders' facilities and equipment may be a determining factor in making the bid award. All bidders may be subject to inspection of their facilities and equipment.

Prospective bidders must prove beyond any doubt to City Purchasing Administrator that they are qualified and capable of performing the contract's requirements.

#### Prompt Payment Discount

Provided Bidder meets the requirements stated herein, City shall take Bidder's offered prompt payment discount into consideration. The evaluation will not be based on the discount percentage alone, but rather the net price as determined by applying the discount to the bid price, either per line item or total bid amount. However, City reserves the right to reject a discount if the percentage is too low to be of value to City, all things considered. City may also reject a discount if the percentage is so high as to create an overly large disparity between the price City would pay if it is able to take advantage of the discount and the price City would pay if it were unable to pay within the discount period. City may always reject the discount and pay within the 30 day period, at City's sole option.

City will not consider discounts that provide fewer than 10 days to pay in order to receive the discount.

For example, payment terms of 2% 5, Net 30 will NOT be considered in bid evaluations or in the payment of invoices. However, payment terms of 2% 10, Net 30 will result in a two percent reduction in the bid price during bid evaluation, and City will take the 2% discount if the invoice is paid within the 10 day time period.

Tabulations. The Purchasing Division will post preliminary tabulations within 7 days of the advertised bid opening. The information on these tabulations will be posted for informational purposes only, and will be posted as read during the bid opening. This tabulation is not a notice of award of the contract. All bids are subject to review for completeness, accuracy and compliance with the terms set forth in the bid documents.

#### Bid Protest Procedures.

Any bidder who is adversely affected in connection with the solicitation, evaluation, or proposed award of a contract may file a protest with the Director and appeal any adverse decision to the City Manager of the City of San Antonio.

Bidder must deliver a written notice of protest to the Director within 7 calendar days of the posting of the intent to award. If Bidder does not file a written notice within this time, Bidder will have waived all rights to formally protest the intent to award. It is Bidder's responsibility to check the City's website posting.

Debriefing. Debriefing of contract award is available upon request and after award of the Contract.

Prohibited Financial Interest. The Charter of the City of San Antonio and its Ethics Code prohibit a City officer or employee, as those terms are defined in the Ethics Code, from having a financial interest in any contract with City or any

## 004 - SPECIFICATIONS / SCOPE OF SERVICES

- 4.1 SCOPE:** The City of San Antonio is soliciting bids to provide heavy equipment which include forklifts, tracked dozers, excavator, pneumatic roller, trailer mounted pressure washer, asphalt distributors, wheel loaders, trailer mounted self feeding brush trailer, and a 32' show trailer in accordance with the Building and Equipment Services Department specifications listed herein. This equipment will be utilized by the following departments; Transportation & Capital Improvements, Parks & Recreation, and Convention Center & Facilities, Aviation and Solid Waste Management for various construction and/or repair projects across the City.
- 4.2 GENERAL CONDITIONS:** The following general conditions will apply to all items within this bid unless specifically excluded within any item.
- 4.2.1** Equipment shall be manufacturer's latest design, standard production model and shall have been manufactured within the last 12 months from the date of delivery to City. All components shall be installed new, unused, and shall be manufacturer's standard equipment unless otherwise specified or replaced herein. Equipment is to be inspected, serviced, and adjusted in accordance with manufacturer's recommended pre-delivery checklist, and ready for operation upon delivery. Manufacturer's Statement of Origin (MSO) showing manufacture within the last 12 calendar months, and completed pre-delivery checklists will be required at delivery. Equipment offered under the below listed specifications will be considered unacceptable if, for any reason, the equipment's, or major component's, long term availability on the U.S. market, or in the local area, is in doubt.
- 4.2.2** Equipment must include the maximum standard manufacturer's warranty on all components, with parts and service included. All components, parts and service shall include, as a minimum, a one year unlimited mileage/hours warranty. All warranty times shall start the date the vehicle is placed in service as determined by the City, not on the delivery date. The dealer will be notified by letter of the in-service date of each vehicle by serial number. Bidder shall fully explain the warranty by attaching separate, authenticated correspondence or entering such information in the remarks section of this bid. Warranty, reliability, and replacement captive parts costs and availability shall be a consideration in award of this bid. Warranty parts and service must be available within 50 mile radius of San Antonio City Hall from and by a factory-authorized dealer (NO EXCEPTIONS). In the event that a unit purchased from a vendor requires transportation outside of Bexar County for a repair covered under warranty, that vendor shall be responsible for paying for all cost associated with the transportation to and from the warranty repair facility. If the vendor chooses to travel to inspect the unit to determine if the repair needed is covered under warranty, all expenses shall be paid for by the vendor. All warranty repairs must be completed within three (3) business days from the date equipment is delivered to the vendor unless otherwise approved by the appropriate City of San Antonio BESD Fleet Operations Manager or designate. Bidders must certify that all repairs needed after the warranty period will be available within 50 mile radius of San Antonio City Hall.
- 4.2.3** Delivery - All deliveries are to be made inside the City limits of San Antonio. Vendor must deliver equipment to the following address:
- Vendor must deliver equipment to:
- City of San Antonio,  
Northeast Service Center,  
10303 Tool Yard, Bldg #2,  
San Antonio, TX 78233  
Attn: Acquisitions
- Delivery to a non-specified location will result in non-acceptance of the equipment by the City. All deliveries must be pre-arranged with a minimum 24-hour notification, NO EXCEPTIONS. Vehicles will be accepted 8:00 A.M. to 3:00 P.M. central time. Vehicles with more than 3000 miles accumulated on the odometer will not be accepted. All vehicles are required to have a full tank(s) when delivered to City specified location.
- 4.2.4** Equipment Manuals – Successful bidder shall furnish one set of operator manuals covering all major components of the vehicle for each unit delivered. Successful bidder shall also provide two (2) complete sets of repair and parts manuals or CDs for each item bid, to include all major components, or prepaid 8-year subscription to manufacturer's maintenance/parts web site at no cost to the City. If, applicable, successful bidder shall provide a minimum (2) diagnostic software licenses and or software updates if diagnostic software is already currently being used by the City for a minimum (5) years after date of delivery.

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**8K Propane Forklift**

- 4.3.1 **ENGINE:** Minimum, 80 SAE HP at recommended manufacture RPM, LPG power engine with electronic governor and automatic engine protection, shutdown system. Must be EPA complaint fuel system and U.L. classified type LP.
- 4.3.2 **TRANSMISSION:** Power shift automatic torque converter type with minimum one (1) forward and one (1) reverse gear. All configurations to have neutral safety start switch and single lever control for reversing directions.
- 4.3.3 **LOAD CAPACITY:** The forklift shall have a minimum lift capacity of 8,000 lb (12,000 lb maximum) at 24 inch load center
- 4.3.4 **MAST:** Mast will need to be of triple stage D
- 4.3.5 **FORKS:** Class III pallet forks. Max fork height must be a minimum of 180 inches. Forks must be a minimum 1.5 inch thick and 4.5 inches wide X 42 inches long. ITA class III side shift capability with minimum 38 inch fork spread and 5 inch total side shift.
- 4.3.6 **ACCESSORIES:** Power steering, audible back-up alarm, low LPG fuel warning light, amber strobe light mounted to top of OHG, dual (2) OHG mounted adjustable headlights, tail lights and turn signals, cowl mounted control levers, tilt steering wheel, minimum one (1) rear view convex mirror and hour meter. Minimum two (2) keys shall be provided. Unit is to rear wheel steering with lift points, a shovel attachment, and a rain guard.
- 4.3.7 **FUEL TANK(S):** Unit shall include two (2) LPG tanks, size will be #43. One shall be delivered installed on the unit and filled to capacity and the other will be a filled spare
- 4.3.8 **TIRES:** Tires must be solid pneumatic, non-marking type.

4.4	ITEM	QUANTITY	DESCRIPTION
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**Diesel Dozer Construction Tracked Excavator**

- 4.4.1 **UPPERSTRUCTURE ENGINE:** Engine minimum Tier IV Interim diesel, 4 cycle, inline 4 cylinder, liquid cooled, electronic controlled, vertical canister style lube filter attached to engine. Remote mount primary fuel/water separator.
- 4.4.2 **GROSS RATING:** Minimum 173HP @2200 RPM, 498 ft. lb. Torque @1050-1600 RPM.
- 4.4.3 **MINIMUM NET RATINGS:**
- 4.4.3.1 173 HP @ 2200.RPM
- 4.4.3.2 Maximum slope: 30 degree
- 4.4.3.3 24 volt starter, 100 amp alternator, two SAE #C31-S 1000 CCA batteries, two-stage dry type air cleaner with centrifugal pre-cleaner and safety element. Evacuator valve and service indicator.
- 4.4.4 **HYDRAULIC SYSTEM:**
- 4.4.4.1 **PUMPS:** One load-sensing, axial piston pump; oil flow 0-100 GPM (0-378 L/min). One gear pump, pilot, 6GPM (00L/min).
- 4.4.4.2 **SYSTEM MONITOR:** Electronic monitor in cab indicates low hydraulic fluid level, high hydraulic fluid temperature, system working pressure, system pilot pressure.
- 4.4.5 **SYSTEM SPECIFICATIONS:**

#### 4.4.20 FUNCTION FORCE:

4.4.20.1 RATED BOOM FORCE: minimum 22,075 lb (98.2 kN).

4.4.20.2 RATED BUCKET BREAKOUT FORCE: minimum 19,300 lb (86 kN).

4.4. BUCKET SPECIFICATIONS: 66" Ditching Bucket (Acceptable model Gradall Part# 8065-6006).

4.5	ITEM	QUANTITY	DESCRIPTION
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3	1	Diesel Dozer Construction Tracked Excavator
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4.5.1 UPPERSTRUCTURE ENGINE: Engine minimum Tier IV Interim diesel, 4 cycle, inline 4 cylinder, liquid cooled, electronic controlled, Vertical canister style lube filter attached to engine. Remote **mount primary fuel/water separator**.

4.5.2 GROSS RATING: Minimum 173HP @ 2200 RPM (129kw) 498 ft. lb. Torque @1050-1600 RPM.

#### 4.5.3 NET RATING:

4.5.3.1 173 HP @ 2200.RPM

4.5.3.2 Maximum slope: 30 degrees

4.5.3.3 24 volt starter, 100 amp alternator, two SAE #C31-S 1000 CCA batteries, two-stage dry type air cleaner with centrifugal pre-cleaner and safety element. Evacuator valve and service indicator.

#### 4.5.4 HYDRAULIC SYSTEM:

4.5.4.1 PUMPS: One load-sensing, axial piston pump; oil flow 0-100 GPM (0-378 L/min). One gear pump, pilot, 6GPM (00L/min).

4.5.4.2 SYSTEM MONITOR: Electronic monitor in cab indicates low hydraulic fluid level, high hydraulic fluid temperature, system working pressure, system pilot pressure.

#### 4.5.5 SYSTEM SPECIFICATIONS:

4.5.5.1 FOUR CYLINDERS: 1 tool: 4.25" ID, 3.0" rod (108 mm x 76 mm), 25.9" (658 mm) stroke. 2 hoist: 3.50" ID, 2.559" rod (121 mm x 85 mm), 31.0" (787 mm) stroke. 1 telescope: 3.75" ID, 2.75" rod (95 mm x 70 mm), 14' (4.27 m) stroke.

4.5.5.2 FOUR HYDRAULIC MOTORS: Swing, 64hp (48 kW); tilt, 21 hp (16 kW); 2 propel motors, 120 hp (89 kW) each.

4.5.6 FUEL CAPACITY: Minimum 90 gallons, Diesel.

#### 4.5.7 OPERATING PRESSURES:

4.5.7.1 Hoist: 4,900 psi

4.5.7.2 Tilt: 2,500 psi

4.5.7.3 Swing: 3,000 psi

4.5.7.4 Tool : 4,900 psi

4.5.7.5 Telescope: 4,900 psi

4.5.7.6 Propel : 4,900 psi

4.5.7.7 Pilot System : 550 psi

4.5.8 OIL CAPACITY: Reservoir system 65 gallons (246 L). Pressurized reservoir with visual oil level gauges.

4.5.9 FILTRATION SYSTEM: 10 micron return filter, 10 micron pilot filter. Fin and tube-type oil cooler with thermal by-pass and relief valves. Pressure-compensated, load-sensing valves with circuit reliefs in all circuits.

- 4.7.2 TRANSMISSION: Hydrostatic or Countershaft or planetary type transmission, single stage and torque converter driven. Minimum of three (3) speeds forward and three (3) reverse or infinitely variable. Must have replaceable full flow filters and a suction line screen.
- 4.7.3 STEERING: Foot or hand operated (combination of hand or foot acceptable) with multiple disc or contracting band type brake system controlling each track separately.
- 4.7.4 FINAL DRIVE: Double reduction with pinion/ bull gear arrangement or planetary. A sprocket inner bearing seal trash guard will be provided on each side. High drive acceptable.
- 4.7.5 UNDERCARRIAGE: Box section track frame construction with a minimum of seven (7) lower rollers and one (1) idler (carrier) rollers on each side, tracks and rollers all sealed and permanently lubricated. Sprocket and idler will be protected by (inner and outer) rock guards. Track frame covers and sprocket guards will be provided. Hydraulic track adjusters. Full length, heavy duty, bottom/drive train protection with pull/tow hook. Track guides required front and rear. Track shoes, minimum 28 inches wide, full heavy duty grousers. Track gauge, minimum 70 inches. Maximum ground pressure 5.0 PSI. Track rails to be abrasion resistant, sealed and lubricated (SALT).
- 4.7.6 POWER TILT / ANGLE BLADE: Straight blade, width 120 to 135 inches, height minimum 42 inches minimum, 3.4 cu yard, hydraulically actuated and equipped with hydraulic tilt and angle controls.
- 4.7.7 DRAWBAR: Ridged, heaviest duty available, with pin.
- 4.7.8 COOLING SYSTEM: Heavy duty grill and brush screen, anti-sand blast or armored core radiator. Reversible fan. System to be protected to -20° F.
- 4.7.9 OPERATIONG WEIGHT: Minimum basic operating weight 25,000 lbs.
- 4.7.10 CAB: All weather pressurized OSHA Standard ROPS/FOPS cab with air conditioning and filters (roof mounted air conditioning is not acceptable). Adjustable high back, fabric suspension seat, windows and windshield to be tinted safety glass, neutral start mechanism, seat belts. Two (2) front and two (2) rear floodlights, front and rear LED strobe lights mounted in protected areas, AM /FM radio, dash lighting, parking brake, hot water heater with defroster.
- 4.7.11 ELECTRICAL & INSTRUMENTATION: 24-volts, minimum 100 amp alternator, engine oil temperature and pressure gauge, hydraulic oil temperature gauge, hour meter, tachometer, ammeter, torque converter temperature and pressure gauge.
- 4.7.12 ACCESSORIES: Full vandalism protection to include keyed alike locks for doors, engine side panels, filler caps and covers. Three sets of keys will be provided with unit.

4.8	ITEM	DESCRIPTION	DESCRIPTION
	6	1	3 Cubic Yard Wheel Loader w/ Attachments
4.8.1	ENGINE: Type to be industrial, minimum Tier IV Interim certified diesel, liquid cooled with a minimum 152HP engine. Engine to have a dual element dry type air cleaner, 110 volt minimum block heater, key type ignition, OEM engine protection/ idle-down or shutdown system, permanent antifreeze with coolant recovery system, OEM oil pressure, water temperature, fuel, volt, hour gauges/meters, and tachometer or electronic display. Acceptable model: John Deere Power Tech PVX 6068 or proven equal.		
4.8.2	ELECTRICAL: Unit to be equipped with a 24 volt, 60-amp alternator and two (2) 12 volt 650 CCA batteries.		
4.8.3	GVWR: 27,500 minimum operating weight (excluding wheel weights).		
4.8.4	CAB: Fully enclosed, OSHA approved ROPS and FOPS cab. Unit to be 133, maximum overall cab height and to be equipped with the following (minimums):		
	4.8.4.1	Electric horn	
	4.8.4.2	OEM Air Conditioning, heater, and defroster	



Fill points to allow ease of filling and daily fluid checks. Unit offered shall meet current EPA minimum Tier IV Interim exhaust emission standard.

- 4.9.2 **TRANSMISSION:** Hydrostatic drive with wheel motors mounted directly to the drive wheels, a single electric displacement control lever to control direction, speed and braking. **NO CHAIN DRIVES.** Ground speed to be a minimum of 0 to 12 mph.
- 4.9.3 **BRAKES:** Service braking to be dynamic through the hydrostatic transmission. Parking brake to be spring applied, hydraulically released. Parking brake interlock to be wired into the hydrostatic control so no propel torque is applied when the brake switch is on.
- 4.9.4 **WHEELS:** Rollers to have minimum eight (8) wheels, minimum four (4) on the front and four (4) on the rear. The four (4) on the rear are to be drive wheels. All wheels to oscillate, individually or in pairs. Rollers to be equipped with 7:50 X 15, 14 ply smooth radial compactor type tires.
- 4.9.5 **CONTROLS:** Full hydraulic powered articulated frame steering through orbital control. The operator's compartment will have a single swivel seat with minimum 180 degree rotation or non-rotating sliding seat to allow driver to have more visibility.
- 4.9.6 **INSTRUMENTATION:** To be equipped with an instrument panel with the following gauges or warning lights; fuel level, hours of operation, engine speed, oil pressure, water temperature and volt meter. A dual hydraulic sight level and temperature gauge. Vandal cover for the instrument panel and all accessible fluid tanks.
- 4.9.7 **SPRINKLER SYSTEM:** To be equipped with a minimum 100 gallon water tank with spray nozzles and mats for each individual tire. Tank will be equipped with a 70 mesh filler screen and 100 mesh in line filter. The water system to turn on automatically when the roller is placed in motion and turn off when stopped.
- 4.9.8 **BALLAST COMPARTMENTS:** Unit to have minimum of two (2) ballast compartments or a removable steel weight system. Weights or ballast compartment must be sufficient to provide a minimum of 24,000 lb. roller operating weight.
- 4.9.9 **ACCESSORIES:** Unit to be equipped with ROPS and FOPS with a sun shade. Seat belt, back up alarm, LED where available strobe light, tail lights (2), work lights (2 front, 2 rear), directional lights (2 front, 2 rear).
- 4.9.10 **SAFETY:** Designed to accommodate chains for safe loading and hauling.

4.10	ITEM	QUANTITY	DESCRIPTION
	8	1 Each	Trailer Mounted Pressure Washer

#### SPECIFICATIONS:

- 4.10.1 **ENGINE:** Minimum 13 HP gasoline engine with diesel fired burner. Unit shall have electric start with pull start back up and hour meter. Unit shall include a 12V deep cycle battery for electric starter.
- 4.10.2 **EQUIPMENT:** Unit shall be capable of producing a minimum 3.8 GPM @3500 PSI. Unit shall have a chemical injection system with pressure and temperature control device capable up to 240 degrees. Unit shall have a minimum 50'ft, 3/4" supply garden hose with reel that shall fill tank. Unit shall have heavy duty hose reel capable of holding up to a minimum 100' of 3/8 inch high-pressure hose. Unit shall have a minimum 225 polyethylene tank with D.O.T. bands and over fill protection. Water shall be heated via a 12 Volt diesel burner. Burner fuel tank capacity shall be a minimum of 10 gallons.
- 4.10.3 **CHASSIS:** Unit shall be mounted on a minimum 10' ft long trailer with 3,500 lb capacity axle. Unit shall have a minimum 12" inch wheels, lights, fenders, and jack casters.

#### 4.11 DELETED:

4.12	ITEM	QUANTITY	DESCRIPTION
	10	3	25K Asphalt Distributor

#### 4.12.15 ASPHALT DISTRIBUTOR SPECIFICATIONS:

- 4.12.15.1 Hydraulic Pump mounted on live PTO off transmission. Variable control piston pump with Hydraulic drive motor powering the asphalt pump.
- 4.12.15.2 Asphalt Pump – To be rated at a minimum 200 gallons per minute and hydraulic motor driven with a built-in-relief valve for safety. Electric analog gallons per minute asphalt tachometer shall be included.
- 4.12.15.3 Tank – Minimum 1000 gallon capacity with steel shell and full section surge plates. The tank shall have 2" fiberglass insulation or equal and be covered with aluminum jacketing. There shall be a 20" manhole with a spill collar, rollover protection and a basket type strainer. A pencil type thermometer with a 50 to 400 degree range and include a dipstick to indicate flue coverage. The tank gauge shall be float type in maximum 100 gallon increments. Include a minimum 3" dial thermometer and a 12' X 3" flex steel or rubber load hose with coupling. Ladder for manhole access.
- 4.12.15.4 Circulating System – System to include a manual suction valve, removable strainer in pump suction line and a 20 gallon flushing oil tank with a line to the asphalt pump. Unit to include all valves for loading, circulating in the tank, hand spraying and unloading, and a suck back system including the spray bar. Unit to include power wash down system.
- 4.12.15.5 Heating System – minimum single heating U-type flue with fuel oil burner of at least 500,000 BTU. System to include electric driven fuel pump and blower with auto ignition or continuous ignition system and thermostatically controlled out fire protection.
- 4.12.15.6 Spray Bar – Minimum 12 foot full circulating spray bar with 8 foot center section and two 2-foot folding non-removable sections with breakaway features. Height adjustable shifting with manual wing fold, electric hydraulic gang on/off with manual flip valve control every 4 inches. Unit to include a spray bar on/off switch in cab of the truck. There shall be a 25' rubber hand spray hose with cold handle type gun with three nozzles and a valve to control flow

<b>4.13</b>	<b>ITEM</b>	<b>QUANTITY</b>	<b>DESCRIPTION</b>
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<b>11</b>	<b>2</b>	<b>3 Cubic Yard Wheel Loader</b>
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- 4.13.1 ENGINE: Type to be industrial, minimum Tier IV Interim certified diesel, liquid cooled with a minimum 152HP engine. Engine to have a dual element dry type air cleaner, 110 volt minimum block heater, key type ignition, OEM engine protection/ idle-down or shutdown system, permanent antifreeze with coolant recovery system, OEM oil pressure, water temperature, fuel, volt, hour gauges/meters, and tachometer or electronic display. Acceptable model: John Deere Power Tech PVX 6068 or proven equal.
- 4.13.2 ELECTRICAL: Unit to be equipped with a 24 volt, 60-amp alternator and two (2) 12 volt 650 CCA batteries.
- 4.13.3 GVWR: 27,500 minimum operating weight (excluding wheel weights).
- 4.13.4 CAB: Fully enclosed, OSHA approved ROPS and FOPS cab. Unit to be 133, maximum overall cab height and to be equipped with the following (minimums):
  - 4.13.4.1 Electric horn
  - 4.13.4.2 OEM Air Conditioning, heater, and defroster
  - 4.13.4.3 Front and rear electric windshield wipers with washers
  - 4.13.4.4 Adjustable sun visor(s) and/or sun strip in windshield
  - 4.13.4.5 Full back with armrests, foam cushioned operator's seat with adjustable suspension
  - 4.13.4.6 Fully hydraulic operating controls with single (1) lever loader control

4.14.8 FEED/ DISCHARGE SYSTEM:

- 4.14.8.1 In-feed throat/feed capacity: Minimum 15" x 20".
- 4.14.8.2 In-feed opening: Minimum 52" x 32".
- 4.14.8.3 In-feed table length: Minimum 30".
- 4.14.8.4 In-feed table height: 27" Minimum.
- 4.14.8.5 Feed roller style: Twin vertical.

4.14.9 SAFETY LIGHTING: Unit shall have LED brakes, turn, tail, license, and side indicators lights. All lighting to be a 12V and self adjusting.

4.15	ITEM	QUANTITY	DESCRIPTION
	13	1	32' Show Master Trailer

4.15.1 STAGE SIZE: Minimum 14' x 32'.

4.15.2 POWERED STAGE DECK: all-weather folding stage deck that is equal in length to the main rear stage deck.

4.15.3 SELF-CONTAINED HYDRAULIC SYSTEM: Unit to be equipped with a remote control pendant, deep-cycle batteries, and battery charger, for fast, easy, one-person set up.

4.15.4 POWERED PROTECTIVE CANOPY: Canopy to extend beyond the front edge and sides of the stage for full coverage, includes automatic mechanical and hydraulic dual-safety canopy locking systems.

4.15.5 HIGHWAY TIRES: Highway rated tires with electric brakes on six (6) wheels. Minimum 12.00R16.5LT or better.

4.15.6 HEAVY-DUTY TRI AXLE: Equalizer system allows towing over curbs and rough ground.

4.15.7 PINTLE TOWING COUPLER: Rugged lunette ring coupler.

4.15.8 HEAVY-DUTY TONGUE JACK: Mounted on trailer tongue.

4.15.9 RUGGED SUPPORT FRAME: Dual 18" deep steel-channel backbone main-frame.

4.15.10 INTERMEDIATE SUPPORT JACKS: Additional frame mounted support jacks are provided approximately at the midpoint of the main frame, distributing stage loads over more surfaces for less impact on soft surfaces.

4.15.11 LOCKING MECHANICAL & ELECTRICAL COMPARTMENTS: Two curb-side frame-mounted aluminum compartments house the mechanical and electrical components, providing easy access for service, plus security.

4.15.12 CRANK LEVELING / SUPPORT JACKS: Four (4) 25,000lb capacity, corner jacks pivot for extra ground clearance during towing and reduced cranking during setup.

4.15.13 BREAKER PANEL: 125 amp capacity, (3) 20 amp breakers, 50ft of 10/3 W cable, receptacles at each inside end of stage, and in mechanical compartment.

4.15.14 FLOURECENT STAGE LIGHTING: Two rows of dual-tube fluorescent lights mounted at front edge of canopy and at the canopy hinge line providing maximum stage and performer illumination.

4.15.15 STORAGE LOCKERS: Two curb-side compartments with locking hardware for equipment and systems security.

- 4.16.4 **FRAMEWORK:** The rear wheel shall be a heavy the basic frame shall be constructed of tubular steel and able to support the active weight of the machine fully loaded, equal to at least 650 pounds. Welding of all components shall have good penetration, good fusion, and good appearance, without evidence of cracks or undercutting, in the best manner of the trade.
- 4.16.5 **DIMENSIONS:** Overall length of the applicator, without pointer extended, is to be 48 inches. Width from side to side to be 30 inches. Overall height, excluding pointer in the up position, is to be 39 inches. Empty weight is to be 240 pounds.
- 4.16.6 **WHEELS:** The rear wheel shall be a heavy-duty swivel caster with a foot actuated straight track locking mechanism. Rear wheel swivel bearing shall be heavy duty with a minimum load capacity of 500 lbs. The unit shall be capable of easy drag-free propulsion by a single operator. The frame is to be supported by two 10" in diameter airless type front wheels. Tires and wheels shall bolt to heavy-duty hubs with precision races and minimum 1" Timken bearings. Hubs shall have heavy-duty grease fittings with dust caps and shall be mounted on a minimum 1" axle.
- 4.16.7 **POINTER GUIDE:** The applicator shall be equipped with a front mounted pointer guide adjustable for each die size to be used. The guide shall be made of plated steel to prevent rusting.
- 4.16.8 **CONTROLS:** The applicator will have adjustable steel handles convenient for the operator to operate and maneuver the applicator. Aluminum control handles will not be accepted. Regulator, the die control also located convenient to the operator will be the shut-off valve on the propane bottle, the LP gas handle, the control for the thermoplastic material gate, bead control lever for drop-on beads, and material agitator.
- 4.16.9 **PROPANE SYSTEM:** The propane system shall consist of a 20 pound cylinder (furnished), a system regulator, and related hoses rated for use with LPG systems. The system shall provide propane fuel to the main burner and the stainless steel jet burners on the applicator and extrusion dies.
- 4.16.10 **HEATING SYSTEM:** The unit shall operate from a high pressure LP fuel system.
- 4.16.10.1 Minimum operating pressure shall be adjustable from 4-7 PSI.
- 4.16.10.2 The temperature of the molten thermoplastic shall be heated in the holding tank by a replaceable brass main burner with a minimum rating of 25,000 BTU to provide rapid heating of thermoplastic material.
- 4.16.10.3 The LPG heating system shall be furnished with all necessary safety features, connections, fuel lines, regulators, etc. for connection to a propane cylinder.
- 4.16.10.4 An inspection door in the material tank shall allow for safe lighting of the burners via a hand held torch supplied with the applicator for operator safety.
- 4.16.10.5 Stainless steel jet burners shall be fitted at all material transfer valves and on each application die to assure proper operation of all functions. Units that heat general areas with the use of radiant heat will not be accepted.
- 4.16.11 **HOLDING TANK:** The machine shall have a thermoplastic storage capacity of 220 pounds in a vertical, air jacketed, all steel construction material tank. The top shall have two hinged lids for material loading and inspection with a safety locking mechanism to prevent potential for splashing out of molten material. The tank will be designed to allow rapid, safe, easy removal of the tank for changing of material colors or cleaning. The tank shall have a recessed opening at the bottom to transfer hot plastic to the extrusion die for application. This opening is recessed to allow complete depletion of all thermoplastic material in the holding tank thereby preventing build up of material. Material outlet valve shall be a precision adjustable slide gate. A molasses-type valve will not be acceptable. A removable filter screen shall be provided to allow for filtering of foreign matter from hot molten material during loading from a thermoplastic melting kettle.
- 4.16.12 **MIXER:** Material agitation shall be provided by one mixer paddle. This mixer paddle shall be fabricated to prevent glass beads from settling out of the thermoplastic and to prevent scorching.
- 4.16.13 **BEAD HOPPER & HOSE:** A separate all steel construction glass bead hopper with a capacity of at least 50 pounds of glass spheres shall be mounted on rear of the applicator. The hopper shall be connected to the bead dispenser with a see through flexible bead hose to monitor bead flow and a positive on off cut off valve.

- 4.16.21 **HEATING SYSTEM:** The temperature of the molten thermoplastic shall be maintained in the pre-melting tanks by a thermostatically controlled LPG heating system. The LPG heating system shall be furnished with all necessary safety features, connections, fuel lines, and regulators, etc. for connection to a propane cylinder.
- 4.16.22 **GAS THERMOSTAT:** The heating system main burners shall be controlled by a thermostat with adjustable range from 100 to 500 degrees F. The thermostat will be linked by thermocouple to the hot thermoplastic in the holding tank.
- 4.16.23 **SYSTEM MAIN BURNER:** The system shall have one main burner, with a minimum rating of 180,000 BTU to provide rapid heating for thermoplastic material. For safety and ease of maintenance, burner shall be mounted onto a slide-out rack that will detach tool free from the unit with a hand knob and quick connect gas fittings.
- 4.16.24 **AUTOMATIC IGNITION SYSTEM:** The System Main Burner shall be equipped with an electronic Automatic Ignition System for remotely lighting Main Burners. Automatic Ignition System shall be solid-state components and housed in a weatherproof enclosure. Enclosure shall be secured by key and lock mechanism. System will automatically shut off gas supply to the burners should the fire accidentally blow out. Gas flow to the burner shall be controlled by heavy-duty solenoid providing an absolute on/off type gas flow system to ensure temperature accuracy and operator safety. The use of a hand torch for burner ignition is not allowed.
- 4.16.25 **PROPANE SYSTEM:** Four steel bottle racks accommodating two 100 lb. And two 20 lb. propane bottles are to be mounted on the trailer. The two 100 lb. bottles are to be plumbed so as to provide fuel to the pre-melter burner. The bottle racks shall be integrated into the trailer; bolt-on racks are not acceptable.
- 4.16.25 **HYDRAULIC AGITATION SYSTEM:** The pre-melter cylinder shall be equipped with a hydraulically driven agitation system to continuously mix the molten plastic granules. The system shall consist of one set of agitator paddles with steel barbs for puncturing and shredding the thermoplastic bags for uniform dispersion of material. The agitator paddles shall be attached to a one (1") steel shaft driven by a hydraulic pump mounted on the top of the pre-melter cylinder. Chain driven agitator motors shall not be accepted.
- 4.16.26 **HYDRAULIC POWER SUPPLY:** The hydraulic power shall be powered by a minimum 8.5 horsepower, electric start, propane fired engine. The power supply shall be fitted with a steel protective cover and mounted to the tongue of the trailer.
- 4.16.27 **DISCHARGE SYSTEM:** The pre-melter cylinder shall be equipped with a material discharge valve of proper design to function satisfactory when discharging liquid plastic at temperatures upward of 475 degrees F. A detachable discharge chute of proper length and angle to facilitate the loading of the thermoplastic applicator shall be supplied. Discharge valve shall be of a knife gate design and easily operated from the ground. Discharge valve shall be interchangeable from the rear of the trailer to the sides of the trailer.
- 4.16.28 **TRAILER:** The trailer shall be a minimum of 6' wide x 16' long, constructed of heavy gauge structural steel, double welded at all frame cross member contact points with a rating of 14,000 pounds. 3/16th diamond plate decking shall be used. Trailer deck shall be coated with a two-part epoxy type non-skid coating to offer secure footing for operator safety.
  - 4.16.28.1 For operator safety and ease of access, trailer deck height from the ground shall be a maximum of 28". A step on each side shall provide operator access to the trailer deck storage area. An additional raised deck of 12" high shall provide ease of loading pre-melting kettle. A safety rail approximately 36" high shall surround the deck storage area. Each side of the trailer shall have removable gates for material loading.
  - 4.16.28.2 Dual trailer axles shall be spring mounted with a minimum rating of 7,000 pounds each. Trailer wheels shall be a minimum 16", eight (8) lug solid wheels with a minimum of 16" load range E tires. Spare tire and wheel of same specification shall be supplied and mounted to the front of the trailer.
  - 4.16.28.3 The trailer shall be equipped with dual brakes on both axles as well as a pintel type hitch with safety chains.
  - 4.16.28.4 The trailer shall be equipped with rigid piping under the deck to be part of the hydraulic and LP gas systems. The pipes shall be located in such a way that the remainder of the hydraulic and LP gas plumbing minimizes the use of flexible hose.

## 005 - SUPPLEMENTAL TERMS & CONDITIONS

### Original Contract Term.

This contract shall begin upon the effective date of the ordinance awarding the contract, or date specified in the award letter if this contract does not exceed \$50,000. This contract shall terminate upon completion of all work described herein or delivery of all goods ordered, as applicable.

### Liquidated Damages for Delay:

The parties agree that the actual damages that might be sustained by the City by reason of the breach by Vendor of its covenant to make delivery within the time specified herein, is uncertain and would be difficult of ascertainment, and that the sum of \$100.00 per day per unit for each day that delivery is late would be a reasonable compensation for such breach. Vendor hereby promises to pay, and City hereby agrees to accept, such sum as liquidated damages, and not as a penalty, in the event of such breach. Furthermore, the parties agree that City may withhold said liquidated damages from any payments due to Vendor hereunder. If Vendor's delay exceeds 30 days, City may, at its option, elect to terminate this contract in whole or in part. In such event, City may pursue actual damages, rather than applying this liquidated damages provision.

### Change Orders.

Notwithstanding anything stated to the contrary in Section 006 – General Terms & Conditions, in order to comply with Texas law governing purchases made by municipalities, the following rules shall govern all change orders made under this contract.

Any change orders that become necessary during the term of this contract as a result of changes in plans, specifications, quantity of work to be performed, materials, equipment or supplies to be furnished must be in writing and conform to the requirements of City Ordinance 2011-12-08-1014, as hereafter amended.

Any other change will require approval of the City Council, City of San Antonio.

Changes that do not involve an increase in contract price may be made by the Director.

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated herein.

### Insurance.

Prior to the commencement of any work under this Agreement, Vendor shall furnish copies of all required endorsements and completed Certificate(s) of Insurance to the City's Finance Department-Purchasing Division, which shall be clearly labeled "PURCHASE OF HEAVY EQUIPMENT II" in the Description of Operations block of the Certificate. The Certificate(s) shall be completed by an agent and signed by a person authorized by that insurer to bind coverage on its behalf. City will not accept a Memorandum of Insurance or Binder as proof of insurance. The certificate(s) must have the agent's signature and phone number, and be mailed, with copies of all applicable endorsements, directly from the insurer's authorized representative to City. City shall have no duty to pay or perform under this Agreement until such certificate and endorsements have been received and approved by City's Finance Department-Purchasing Division. No officer or employee, other than City's Risk Manager, shall have authority to waive this requirement.

City reserves the right to review the insurance requirements of this Article during the effective period of this Agreement and any extension or renewal hereof and to modify insurance coverages and their limits when deemed necessary and prudent by City's Risk Manager based upon changes in statutory law, court decisions, or circumstances surrounding this Agreement. In no instance will City allow modification whereby City may incur increased risk.

A Vendor's financial integrity is of interest to City; therefore, subject to Vendor's right to maintain reasonable deductibles in such amounts as are approved by City, Vendor shall obtain and maintain in full force and effect for the duration of this Agreement, and any extension here of, at Vendor's sole expense, insurance coverage written on an occurrence basis, unless otherwise indicated, by companies authorized to do business in the State of Texas and with an A.M Best's rating of no less than A- (VII), in the following types and for an amount not less than the amount listed below:

In addition to any other remedies City may have upon Vendor's failure to provide and maintain any insurance or policy endorsements to the extent and within the time herein required, City shall have the right to order Vendor to stop work hereunder, and/ or withhold any payment(s) which become due to Vendor hereunder until Vendor demonstrates compliance with the requirements hereof.

Nothing herein contained shall be construed as limiting in any way the extent to which Vendor may be held responsible for payment of damages to persons or property resulting from Vendor's or its subcontractors' performance of the work covered under this Agreement.

It is agreed that Vendor's insurance shall be deemed primary and non-contributory with respect to any insurance or self insurance carried by City for liability arising out of operations under this Agreement.

It is understood and agreed that the insurance required is in addition to and separate from any other obligation contained in this Agreement and that no claim or action by or on behalf of City shall be limited to insurance coverage provided.

Vendor and any subcontractors are responsible for all damage to their own equipment and/or property.

#### Incorporation of Attachments.

Each of the attachments listed below is an essential part of this contract, which governs the rights and duties of the parties, incorporated herein by reference, and shall be interpreted in the order of priority as appears below, with this document taking priority over all attachments:

Attachment A – Price Schedule

Attachment B – City of San Antonio Local Preference Program Forms

Attachment C – Supplemental Information Related to the State of Texas Conflict of Interest Requirement

Attachment D – Nondiscrimination Clause

Attachment E – Veteran-Owned Small Business Preference Program Tracking Form

Attachment F – Exhibit 1 - The Inspection Check List

based on list prices basis, then the list prices, the percentage discount or percentage surcharge, net unit prices, extensions and net total prices must be shown. Prompt payment discounts offered shall be shown separately on the invoice.

#### Payment by City.

In accordance with the Texas Prompt Payment Act, City shall have not less than 30 days to pay for goods or services. Time for payment, including payment under discount terms, will be computed from the later of: (1) the date City receives conforming goods under the contract; (2) the date performance of the service under the contract is completed; or (3) the date City receives a correct and valid invoice for the goods or services. Payment is deemed to be made on the date of mailing of the check. Payment is made in US dollars only.

This provision shall not apply where there is a bona fide dispute between City and Vendor about the goods delivered or the service performed that causes the payment to be late, or where the invoice is not mailed to the address provided herein.

The payment amount due on invoices may not be manually altered by City personnel. Once disputed items are reconciled, Vendor must submit a corrected invoice or a credit memorandum for the disputed amount. City will not make partial payments on an invoice where there is a dispute.

**NECESSITY OF TIMELY INVOICE / WAIVER OF PAYMENT.** NOTWITHSTANDING THE FORGOING, THE CITY CANNOT PAY FOR ANY GOODS OR SERVICES WITHOUT AN INVOICE. VENDOR MUST INVOICE CITY NO LATER THAN 90 CALENDAR DAYS FROM THE DATE GOODS ARE DELIVERED OR SERVICES RENDERED. FAILURE TO SUBMIT AN INVOICE WITHIN SAID 90 DAYS SHALL NEGATE ANY LIABILITY ON THE PART OF CITY AND CONSTITUTE A **WAIVER** BY VENDOR OF ANY AND ALL RIGHT OR CLAIMS TO COLLECT MONEYS THAT VENDOR MAY RIGHTFULLY BE OTHERWISE ENTITLED TO FOR GOODS OR SERVICES PERFORMED.

The total price for all goods and/or services is shown on the Price Schedule. No additional fees or expenses of Vendor shall be charged by Vendor nor be payable by City. The parties hereby agree that all compensable expenses of Vendor are shown on the Price Schedule. If there is a discrepancy on the Price Schedule between the unit price for an item, and the extended price, the unit price shall govern.

Change Orders. In order to comply with Texas law governing purchases made by municipalities, the following rules shall govern all change orders made under this contract.

Any change orders that become necessary during the term of this contract as a result of changes in plans, specifications, quantity of work to be performed, materials, equipment or supplies to be furnished may be approved by the Director, provided that such change orders:

- are made in writing, signed by the Director;
- do not involve an increase or decrease in contract price of more than \$25,000; and
- sufficient funds have already been allocated by City or are available to the Director to cover any increase in contract price.

Any other change will require approval of the City Council, City of San Antonio.

Changes that do not involve an increase in contract price may, however, be made by the Director.

No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated herein.

#### Termination.

Termination-Breach. Should Vendor fail to fulfill in a timely and proper manner, as determined solely by the Director, its material obligations under this contract, or violate any of the material terms of this contract, City shall have the right to immediately terminate the contract in whole or in part. Notice of termination shall be provided in writing to Vendor, effective upon the date set forth in the notice. City may, in City's sole discretion, provide an opportunity for Vendor to cure the default. If City elects to offer an opportunity to cure, City shall provide notice to Vendor specifying the matters in default and the cure period. If Vendor fails to cure the default within the cure period, City shall have the right, without further notice, to terminate the contract in whole or in part. Such termination shall not relieve Vendor of any liability to the City for damages sustained by virtue of any breach by Vendor.



established herein, for purposes of audit, inspection, examination, and making excerpts or copies of same by City and any of its authorized representatives.

Vendor shall retain any and all Documents produced as a result of services provided hereunder for a period of four years ("Retention Period") from the date of termination of the contract. If, at the end of the Retention Period, there is litigation or other questions arising from, involving or concerning these Documents or the services provided hereunder, Vendor shall retain the records until the resolution of such litigation or other such questions. Vendor acknowledges and agrees that City shall have access to any and all such Documents at any and all times, as deemed necessary by City, during said Retention Period. City may, at its election, require Vendor to return the documents to City at Vendor's expense prior to or at the conclusion of the Retention Period. In such event, Vendor may retain a copy of the documents.

Vendor shall notify City, immediately, in the event Vendor receives any requests for information from a third party, which pertain to the Documents referenced herein. Vendor understands and agrees that City will process and handle all such requests.

**Severability.** If any clause or provision of this contract is held invalid, illegal or unenforceable under present or future federal, state or local laws, including but not limited to the City Charter, City Code, or ordinances of the City of San Antonio, Texas, then and in that event it is the intention of the parties hereto that such invalidity, illegality or unenforceability shall not affect any other clause or provision hereof and that the remainder of this contract shall be construed as if such invalid, illegal or unenforceable clause or provision was never contained herein. It is also the intention of the parties hereto that in lieu of each clause or provision of this contract that is invalid, illegal, or unenforceable, there be added as a part of the contract a clause or provision as similar in terms to such invalid, illegal or unenforceable clause or provision as may be possible, legal, valid and enforceable.

**Compliance with Law.** Vendor shall provide and perform all services required under this Agreement in compliance with all applicable federal, state and local laws, rules and regulations.

**Certifications.** Vendor warrants and certifies that Vendor and any other person designated to provide services hereunder has the requisite training, license and/or certification to provide said services, and meets all competence standards promulgated by all other authoritative bodies, as applicable to the services provided herein.

**Non-waiver of Performance.** Unless otherwise specifically provided for in this Agreement, a waiver by either Party of a breach of any of the terms, conditions, covenants or guarantees of this Agreement shall not be construed or held to be a waiver of any succeeding or preceding breach of the same or any other term, condition, covenant or guarantee herein contained. Further, any failure of either Party to insist in any one or more cases upon the strict performance of any of the covenants of this Agreement, or to exercise any option herein contained, shall in no event be construed as a waiver or relinquishment for the future of such covenant or option. In fact, no waiver, change, modification or discharge by either party hereto of any provision of this Agreement shall be deemed to have been made or shall be effective unless expressed in writing and signed by the party to be charged. No act or omission by a Party shall in any manner impair or prejudice any right, power, privilege, or remedy available to that Party hereunder or by law or in equity, such rights, powers, privileges, or remedies to be always specifically preserved hereby.

**Venue.** **Venue of any court action brought directly or indirectly by reason of this contract shall be in Bexar County, Texas. This contract is made and is to be performed in Bexar County, Texas, and is governed by the laws of the State of Texas.**

**Non-discrimination.** As a condition of entering into this agreement, Vendor represents and warrants that it will comply with City's Commercial Nondiscrimination Policy, as described under Section IILC.1 of the SBEDA Ordinance. As part of such compliance, Vendor shall not discriminate on the basis of race, color, religion, ancestry or national origin, sex, age, marital status, sexual orientation, or on the basis of disability or other unlawful forms of discrimination in the solicitation, selection, hiring or commercial treatment of subcontractors, vendors, suppliers, or commercial customers, nor shall Vendor retaliate against any person for reporting instances of such discrimination. Vendor shall provide equal opportunity for subcontractors, vendors and suppliers to participate in all of its public sector and private sector subcontracting and supply opportunities, provided that nothing contained in this clause shall prohibit or limit otherwise lawful efforts to remedy the effects of marketplace discrimination that have occurred or are occurring in the City's Relevant Marketplace. Vendor understands and agrees that a material violation of this clause shall be considered a material breach of this agreement and may result in termination of this agreement, disqualification of Vendor from participating in City contracts, or other sanctions. This clause is not enforceable by or for the benefit of, and creates no obligation to, any third party. Vendor shall include this nondiscrimination clause in all subcontracts for the performance of this contract.

007 - SIGNATURE PAGE

By submitting a bid, whether electronically or by paper, Bidder represents that:

(s)he is authorized to bind Bidder to fully comply with the terms and conditions of City's Invitation for Bid for the prices stated therein;

(s)he has read the entire document, including the final version issued by City, and agreed to the terms therein;

Bidder is in good standing with the Texas State Comptroller's Office; and

to the best of his/her knowledge, all information is true and correct.

If submitting your bid by paper, complete the following and sign on the signature line below. Failure to sign and submit this Signature Page will result in rejection of your bid.

Bidder Information  
Please Print or Type

Vendor ID No.: V10000795

Signer's Name: Stephen W. Whitley

Name of Business: H & V Equipment Services

Street Address: 3307 SE Loop 410

City, State, Zip Code: SAN ANTONIO TEXAS 78222

Email Address: SWhitley@hvequipment.com

Telephone No.: 210-6485885

Fax No.: 210-648-7611

City's Solicitation No.: 6100005971

Stephen W. Whitley  
Signature of Person Authorized to Sign Bid

Performance Deposit - security provided by the contractor to protect the City against loss due to the contractor's inability or unwillingness to complete the contract as agreed.

Pre-Submittal Conference - a meeting conducted by the City, held in order to allow bidders to ask questions about the proposed contract and particularly, the contract specifications.

Purchase Order - a validly issued order placed by an authorized City department for the purchase of goods or services, written on the City's standard purchase order form, and which is Vendor's authority to deliver to and invoice the City for the goods or services specified in an IFB for the price stated in Vendor's bid.

Responsible Bidder - a bidder who is known to have the necessary competence and qualifications to perform and provide all requirements of an intended contract.

Responsive Bidder - a bidder who tenders a bid which meets all requirements of the invitation to bid and is a responsible bidder.

Sealed Bid - a bid submitted as a sealed document, whether hard copy or electronic, by a prescribed time to the location indicated in the IFB. The contents of the bid will not be made public prior to the bid opening.

Specifications - a description of what the City requires and what the bidder must offer; a description of the physical or functional characteristics of a product or material, or the nature of a service or construction item.

Subcontractor - a person, firm or entity providing goods or services to a vendor to be used in the performance of the Vendor's obligations under the contract with the City.

Supplier - the bidder whose bid is accepted by the City and is, therefore, the person, firm or entity providing goods or services to the City under a contract.

Vendor - the bidder whose bid is accepted by the City and is, therefore, the person, firm or entity providing goods or services to the City under a contract.

Waiver of Irregularity - noting, but disregarding an immaterial variance within a bid.

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
2	2	Diesel Dozer Construction Tracked Excavator

PRICE EACH: \$ NO Bid

TOTAL: \$ \_\_\_\_\_

YEAR, MAKE & MODEL OFFERED:

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

WARRANTY:

WARRANTY SERVICE PROVIDER NAME:

WARRANTY FACILITY ADDRESS:

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM QUANTITY DESCRIPTION

5 1 Dozer Crawler

PRICE EACH: \$ NO Bid.

TOTAL: \$ \_\_\_\_\_

YEAR, MAKE & MODEL OFFERED:

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

WARRANTY:

WARRANTY SERVICE PROVIDER NAME:

WARRANTY FACILITY ADDRESS:

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_

ITEM	DESCRIPTION	DESCRIPTION
6	1	3 Cubic Yard Wheel Loader w/ Attachments

PRICE EACH: \$ 122,027<sup>00</sup>

TOTAL: \$ 122,027<sup>00</sup>

YEAR, MAKE & MODEL OFFERED:

WARRANTY FACILITY ADDRESS:

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
8	1 Each	Trailer Mounted Pressure Washer

PRICE EACH: \$ NO Bid

TOTAL: \$ \_\_\_\_\_

YEAR, MAKE & MODEL OFFERED:

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

WARRANTY:

WARRANTY SERVICE PROVIDER NAME:

WARRANTY FACILITY ADDRESS:

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
11	2	3 Cubic Yard Wheel Loader

PRICE EACH: \$ 115,634<sup>00</sup>

TOTAL: \$ 231,308<sup>00</sup>

YEAR, MAKE & MODEL OFFERED:

2015 DOOSAN DL220-3

SPECIFIC MAKE & MODEL OF ENGINE OFFERED (INCLUDE SAE NET HP):

DOOSAN DL06 160hp @ 2100 / Net NA  
3 years total

WARRANTY:

Standard 12/1500 hrs Extended 3 years / 5000 hrs Powertrain & Major Hyd.

WARRANTY SERVICE PROVIDER NAME:

H & V Equipment Services / DOOSAN UFG

WARRANTY FACILITY ADDRESS:

3307 SE Loop 410  
SAN ANTONIO TX 78222

DELIVERY WILL BE MADE WITHIN 90 CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: 8-15-15 subject to availability

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: 8-15-15

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? NO

ITEM	QUANTITY	DESCRIPTION
12	2	Trailer Mounted Self feeding Brush Chipper

PRICE EACH: \$ NO Bid

WARRANTY SERVICE PROVIDER NAME:

\_\_\_\_\_  
\_\_\_\_\_

WARRANTY FACILITY ADDRESS:

\_\_\_\_\_  
\_\_\_\_\_

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_

INDICATE THE LAST DAY THAT THE CITY CAN PLACE ORDERS UNDER THIS CONTRACT WITHOUT MISSING THE PRODUCTION CUT OFF DATE: \_\_\_\_\_.

BID PRICES SHALL REMAIN FIRM FOR ALL ORDERS PLACED PRIOR TO THIS CUT OFF DATE. IN THE EVENT THAT CITY DOES NOT AWARD A CONTRACT PRIOR TO PRODUCTION CUT OFF DATE, CAN BIDDER PROVIDE BID ITEMS, AT THE BID PRICE SUBMITTED, AFTER THE PRODUCTION CUT OFF DATE? \_\_\_\_\_.

ITEM	QUANTITY	DESCRIPTION
14	1	Trailer Mounted Paint Striper

PRICE EACH: \$ \_\_\_\_\_ *NO Bid*

TOTAL: \$ \_\_\_\_\_

YEAR, MAKE & MODEL OFFERED:

\_\_\_\_\_

WARRANTY:

\_\_\_\_\_

WARRANTY SERVICE PROVIDER NAME:

\_\_\_\_\_

\_\_\_\_\_

WARRANTY FACILITY ADDRESS:

\_\_\_\_\_

\_\_\_\_\_

DELIVERY WILL BE MADE WITHIN \_\_\_\_\_ CALENDER DAYS AFTER ISSUANCE OF PURCHASE ORDER.

PRODUCTION CUT-OFF DATE: \_\_\_\_\_



**City of San Antonio**  
**Finance Department - Purchasing Division**  
**Local Preference Program Identification Form**

---

The City of San Antonio Local Preference Program, described in the San Antonio City Code Chapter 2, Article XII, establishes a local preference for specific contracting categories. Each time a bidder or respondent submits a bid for a solicitation, this Local Preference Program Identification Form must be completed and turned in with the solicitation response in order to be identified as a City Business and receive the preference described below. The City will not rely on Local Preference Program Identification Forms submitted with prior or contemporaneous bids or proposals.

The Local Preference Program allows the City to grant a preference to a business meeting the definition of *City Business* in the award of the following types of contracts, when selection is made based on price alone:

- Personal Property (Goods / Supplies): The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 or more;
- Non-professional Services: The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 to under \$500,000;
- Construction Services: The local bidder's price must be within 3% of the price of the lowest non-local bidder for contracts of \$50,000 to under \$100,000, excluding contracts awarded using alternative delivery methods.

The Local Preference Program also allows the award of additional points, when multiple evaluation criteria are used in the award of professional service contracts, where the selection process is not governed by statute and in revenue generating and concession contracts. A business meeting the definition of *City Business* stated below may be awarded 10 points for being headquartered within the city, or 5 points for having a local office within the city.

Moreover, the program recognizes joint venture agreements and allows for apportioning of points based upon the percentage of ownership of joint ventures by *City Businesses* responding to solicitations for which discretionary points are applied. For solicitations where selection is made based on price alone, all members of a joint venture must be *City Businesses* for the preference to be applied.

***City Business*** is defined as a business headquartered within the incorporated San Antonio city limits for one year or more OR one that meets the following conditions:

- Has an established place of business for one year or more in the incorporated limits of the City:
  - (a) from which at least 100 of its employees OR at least 20% of its total full-time, part-time and contract employees are regularly based; and
  - (b) from which a substantial role in the business' performance of a commercially useful function or a substantial part of its operations is conducted by those employees.

A location utilized solely as a post office box, mail drop or telephone message center or any similar combination, with no other substantial work function, is not a *City Business*.

For the purposes of this program, Headquartered is defined as the place where a business entity's officers direct, control, and coordinate the entity's activities.

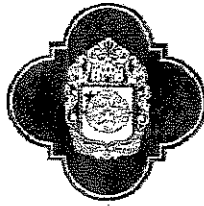
NOTE: Bidders / Respondents are required to submit documentation to substantiate that the requirements of a City Business have been met. Examples of documentation may include, but are not limited to the following:

1. Existence of local headquarters or office: For corporations, Texas Comptroller's listing of names/addresses of officers and directors. For partnerships, partnership agreement and any documents identifying the current managing partners and their current work addresses
2. Evidence of local headquarters or office in existence for one year or more: Utility bills, real property lease agreements, equipment leases, personal property taxes, real property taxes
3. Evidence of number of employees: Organizational charts, payroll records by location

**City of San Antonio**  
**Finance Department - Purchasing Division**  
**Local Preference Program Identification Form**

**PROVIDE THE FOLLOWING INFORMATION REGARDING BIDDER'S / RESPONDENT'S LOCAL OFFICE (IF APPLICABLE):**

Name of Business:	H&V Equipment Services, LLC	
Physical Address:	3307 SE Loop 410	
City, State, Zip Code:	SAN ANTONIO TX 78222	
Phone Number:	210 648 5885	
Email Address:	www.hvequipment.com	
Provide the total number of full-time, part-time, and contract personnel employed by Bidder / Respondent in the local office:	11	
Is the business located in the incorporated San Antonio city limits? (circle one)	<input checked="" type="radio"/> Yes	No
Has the business been located in the incorporated San Antonio city limits for one year or more? (circle one)	<input checked="" type="radio"/> Yes	No
Are at least 100 full-time, part-time or contract employees regularly based in the San Antonio office? (circle one)	<input checked="" type="radio"/> Yes	<input checked="" type="radio"/> No
Are at least 20% of the business' total full-time, part-time or contract employees regularly based in the San Antonio office? (circle one)	<input checked="" type="radio"/> Yes	No
Do the employees in the San Antonio office perform a substantial role in the business' performance of a commercially useful function or are a substantial part of the business' operations conducted in the San Antonio office? (circle one)	<input checked="" type="radio"/> Yes	No



## City of San Antonio

### ADDENDUM I

**SUBJECT:** Formal Invitation For Bid (IFB) 6100005971 PURCHASE OF HEAVY EQUIPMENT II scheduled to open Wednesday, August 5, 2015 date of issue July 20, 2015.

**DATE:** July 29, 2015

**THE ABOVE MENTIONED INVITATION FOR BID (IFB) IS HEREBY AMENDED AS FOLLOWS:**

- 1. THE BID OPENING REMAINS WEDNESDAY, AUGUST 5, 2015, 2:00 P.M. CENTRAL TIME.**
- 2. IFB Document Section 004 – Specifications / Scope of Services, General Conditions:**

Changed to read:

- 4.2.3 Delivery - All deliveries are to be made inside the City limits of San Antonio. Vendor must deliver equipment to the following address:**

Vendor must deliver equipment to:

City of San Antonio,  
Northeast Service Center,  
10303 Tool Yard, Bldg #2,  
San Antonio, TX 78233  
Attn: Acquisitions

Delivery to a non-specified location will result in non-acceptance of the equipment by the City. All deliveries must be pre-arranged with a minimum 24-hour notification, NO EXCEPTIONS. Vehicles will be accepted 8:00 A.M. to 3:00 P.M. central time. Vehicles with more than 3000 miles accumulated on the odometer will not be accepted. All vehicles are required to have a full tank(s) when delivered to City specified location.

Changed to read:

<b>4.4</b>	<b>ITEM</b>	<b>QUANTITY</b>	<b>DESCRIPTION</b>
	2	2	Diesel Dozer Construction Tracked Excavator

Changed to read:

- 4.4.2 GROSS RATING: Minimum 173HP @ 2200 RPM (129kw) 498 ft. lb. Torque @1050-1600 RPM.**

Changed to read:

4.8.2 **ELECTRICAL:** Unit to be equipped with a 24 volt, 60-amp alternator and two (2) 12 volt 650 CCA batteries.

Changed to read:

4.8.5 **STEERING:** Power steering to be fully hydraulic with an articulation angle of 80 degrees (40 degrees each direction) and a turning radius of a maximum of 20ft.

Changed to read:

4.8.6 **TIRES/WHEELS:** 20.5 R25 Tires must have a tread width of 76.00 inches. (Michelin 1 Star L-3 or equivalent).

Changed to read:

4.8.7 **TRANSMISSION:** Countershaft-type power shift or hydrostatic drive.

Changed to read:

4.8.10 **PERFORMANCE:** Unit will have a minimum Rated Operating Capacity of **28,000 lbs.** Standard braking system and safety features will be included.

Changed to read:

4.8.11 **FUEL SYSTEM:** Fuel tank must be a minimum of 45 gallons and DEF tank must be a minimum of 5 gallons if equipped.

4.9	ITEM	QUANTITY	DESCRIPTION
	7	1 Each	Pneumatic, Articulated Tired Roller

Changed to read:

4.9.4 **WHEELS:** Rollers to have minimum eight (8) wheels, minimum four (4) on the front and four (4) on the rear. The four (4) on the rear are to be drive wheels. All wheels to oscillate, individually or in pairs. Rollers to be equipped with 7:50 X 15, 14 ply smooth radial compactor type tires.

Changed to read:

4.9.5 **CONTROLS:** Full hydraulic powered articulated frame steering through orbital control. The operator's compartment will have a single swivel seat with minimum 180 degree rotation or non-rotating sliding seat to allow driver to have more visibility.

**DELETED:**

4.11	ITEM	QUANTITY	DESCRIPTION
	9	1 Each	Wheeled Loader

4.12	ITEM	QUANTITY	DESCRIPTION
	10	3	25K Asphalt Distributor

Changed to read:

on/off with manual flip valve control every 4 inches. Unit to include a spray bar on/off switch in cab of the truck. There shall be a 25' rubber hand spray hose with cold handle type gun with three nozzles and a valve to control flow

4.13	ITEM	QUANTITY	DESCRIPTION
	11	2	3 Cubic Yard Wheel Loader

**Change specification in its entirety to read:**

- 4.13.1 **ENGINE:** Type to be industrial, minimum Tier IV Interim certified diesel, liquid cooled with a minimum 152HP engine. Engine to have a dual element dry type air cleaner, 110 volt minimum block heater, key type ignition, OEM engine protection/ idle-down or shutdown system, permanent antifreeze with coolant recovery system, OEM oil pressure, water temperature, fuel, volt, hour gauges/meters, and tachometer or electronic display. Acceptable model: John Deere Power Tech PVX 6068 or proven equal.
- 4.13.2 **ELECTRICAL:** Unit to be equipped with a 24 volt, 60-amp alternator and two (2) 12 volt 650 CCA batteries.
- 4.13.3 **GVWR:** 27,500 minimum operating weight (excluding wheel weights).
- 4.13.4 **CAB:** Fully enclosed, OSHA approved ROPS and FOPS cab. Unit to be 133, maximum overall cab height and to be equipped with the following (minimums):
  - 4.13.4.1 Electric horn
  - 4.13.4.2 OEM Air Conditioning, heater, and defroster
  - 4.13.4.3 Front and rear electric windshield wipers with washers
  - 4.13.4.4 Adjustable sun visor(s) and/or sun strip in windshield
  - 4.13.4.5 Full back with armrests, foam cushioned operator's seat with adjustable suspension
  - 4.13.4.6 Fully hydraulic operating controls with single (1) lever loader control
  - 4.13.4.7 Left and right rear view windows
  - 4.13.7.8 Dome light
- 4.13.5 **STEERING:** Power steering to be fully hydraulic with an articulation angle of 80 degrees (40 degrees each direction) and a turning radius of a maximum of 20ft.
- 4.13.6 **TIRES/WHEELS:** 20.5 R25 Tires must have a tread width of 76.00 inches. (Michelin 1 Star L-3 or equivalent).
- 4.13.7 **TRANSMISSION:** Countershaft-type power shift or hydrostatic drive.
- 4.13.8 **HYDRAULIC SYSTEM:** Unit will have a system relief at quick couplers of 3500psi minimum. An auxiliary standard flow of 23 gpm and a auxiliary high flow of 36.6 gpm are the minimum mandatory requirements.
- 4.13.9 **AXLES:** Unit to be equipped with planetary reduction drive axles.

**PRICE SCHEDULE:**

The following items were changed or deleted from the Price Schedule.

Changed to read:

ITEM	QUANTITY	DESCRIPTION
2	2	Diesel Dozer Construction Tracked Excavator

DELETED:

ITEM	QUANTITY	DESCRIPTION
4	1	Tracked Excavator

DELETED:

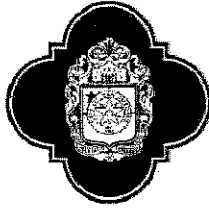
ITEM	QUANTITY	DESCRIPTION
9	1 Each	Wheeled Loader

Changed to read:

ITEM	QUANTITY	DESCRIPTION
11	2	3 Cubic Yard Wheel Loader

*Manuel J. Calapa for*  
Paul J. Calapa  
Purchasing Administrator  
Finance Department, Purchasing Division

Date: 08-05-2015  
Company Name: H&V Equipment Services LLC  
Address: 3307 SE Loop 410  
City/State/Zip Code: SAN ANTONIO TX 78222  
Signature: *Stephen W. Wiggins*



## City of San Antonio

### ADVERTISEMENT INFORMATION ONLY

Solicitation Type and Name: **Formal Invitation for Bid (IFB)**

### **PURCHASE OF HEAVY EQUIPMENT II**

Solicitation Number: **6100005971**

The City of San Antonio is soliciting bids to provide heavy equipment which include forklifts, tracked dozers, excavator, pneumatic roller, trailer mounted pressure washer, asphalt distributors, wheel loaders, trailer mounted self feeding brush trailer, and a 32' show trailer in accordance with the Building and Equipment Services Department specifications. This equipment will be utilized by the following departments; Transportation & Capital Improvements, Parks & Recreation, and Convention Center & Facilities, Aviation and Solid Waste Management for various construction and/or repair projects across the City

Applicable Product Categories: 02004, 02204, 36550, 54526, 56075, 75510, 75543, 75565, 76033, 76042, 76050, 76051, 76075 76090 and 76583

Date Issued: July 20, 2015

*Friday August 7, 2015 2:00 P.M.*

~~Bid Due Date & Time: August 5, 2015, 2:00 PM (CENTRAL TIME)~~

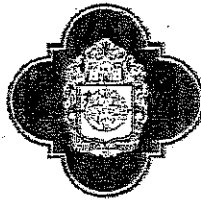
Staff Contact Person: LD McGarity, Procurement Specialist II, email:  
[ld.mcgarity@sanantonio.gov](mailto:ld.mcgarity@sanantonio.gov)

Pre-Submittal conference will be held on July 23, 2015 at 2:00 PM (CT) at BUILDING & EQUIPMENT SERVICES, FLEET TRAINING ROOM, 329 S. Frio St, San Antonio, TX 78207

**To view this solicitation**, go to <https://supplierservice.sanantonio.gov/iri/portal>. If you have not completed the City's SAeP Vendor Registration, you must do so in order to view the solicitation and submit a response.

**TO REGISTER:** You will need to complete the vendor registration by accessing the SAeP Vendor Registration at <http://www.sanantonio.gov/purchasing/SAePS.aspx>. Questions regarding registration may be submitted to the SAePS Hotline at: (210) 207-0118 or by email at: [vendors@sanantonio.gov](mailto:vendors@sanantonio.gov).

**Note:** After you have successfully registered, you will need to send an email to the staff contact person requesting to be added to the solicitation vendor distribution list.



## City of San Antonio

### ADDENDUM II

**SUBJECT:** Formal Invitation For Bid (IFB) 6100005971 PURCHASE OF HEAVY EQUIPMENT II scheduled to open Wednesday, August 5, 2015 date of issue July 20, 2015.

**DATE:** July 29, 2015

**THE ABOVE MENTIONED INVITATION FOR BID (IFB) IS HEREBY AMENDED AS FOLLOWS:**

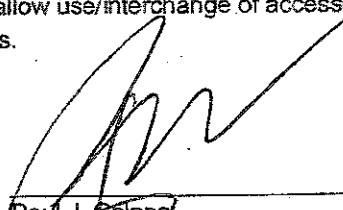
1. **THE BID OPENING IS HEREBY EXTENDED TO FRIDAY, AUGUST 7, 2015, 2:00 P.M. CENTRAL TIME.**

2. IFB Document Section 004 – Specifications / Scope of Services, General Conditions:

4.8	ITEM	DESCRIPTION	DESCRIPTION
	6	1	3 Cubic Yard Wheel Loader w/ Attachments

Changed to read:

4.8.13.1 FORK: Replaces bucket on utility loaders for handling palletized material. A quick-change assembly to allow use/interchange of accessory of minimum 5' 0" long lifting forks.

  
Paul J. Calape  
Purchasing Administrator  
Finance Department, Purchasing Division



7CHANGES	DETAILS	DATE	WRITTEN	APPROVED

# DL 220-3

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MODEL	DL220-3	DOCUMENT No		1/24
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# 1. GENERAL SPECIFICATION

ITEMS		UNIT	STD	OPT
OPERATING WEIGHT		kg(lb)	12,600 (26,460)	12,800 (26,900)
ENGINE (SAE J1995)	RATED POWER (Gross)	kW(hp)/rpm	119(160)/2,100	
	MAX. POWER (Gross)	kW(hp)/rpm	119(160)/2,100	
	MAX. TORQUE (Gross)	N.m(lbf.ft)/rpm	735(542)/1,400	
SYSTEM PRESSURE (WORK/STEER)		bar(psi)	250(3,626)/250(3,626)	
TRAVEL SPEED	FORWARD (1/2/3/4)	km/h (MPH)	7.1/12.8/24.3/38.0 (4.4/8.0/15.1/23.6)	
	REVERSE (1/2/3)	km/h (MPH)	7.5/13.5/25.5 (4.7/8.4/15.8)	
FRONT SPEED (RAISE/DUMP/LOWER)		sec	5.6/1.1/3.5	
GRADEABILITY		%( °)	58 (30)	
TIRE SIZE		-	20.5-25 16PR	20.5R25
WORKING RANGE	BUCKET CAPACITY (SAE HEAPED)	m <sup>3</sup> (yd <sup>3</sup> )	2.3(3.0) BOC	2.2(2.9) BOT
	DUMP HEIGHT AT 45° <b>H</b>	mm(ft in)	2,825 (9'3")	2,755 (9')
	DUMP REACH AT 45° <b>I</b>	mm(ft in)	1,065 (3'6")	1,130 (3'8")
	MAX. DUMP ANGLE (fully raised) <b>L</b>	deg	48°	←
	MAX. TILT ANGLE (on ground)	deg	42°	←
	MAX. TILT ANGLE (fully raised) <b>M</b>	deg	59°	←
	MAX. TILT ANGLE (at carry) <b>K</b>	deg	48°	←
	BUCKET HINGE HEIGHT <b>J</b>	mm(ft in)	3,875 (12'9")	3,860 (12'8")
	DIGGING DEPTH (0° level)	mm(ft in)	75 (3")	90 (4")
TRAVEL DIMENSION	OVERALL LENGTH <b>A</b>	mm(ft in)	7,285 (24'7")	7,580 (24'10")
	OVERALL WIDTH (bucket) <b>B</b>	mm(ft in)	2,550 (8'4")	←
	OVERALL HEIGHT <b>C</b>	mm(ft in)	3,295 (10'10")	3,280 (10'9")
	GROUND CLEARANCE <b>G</b>	mm(ft in)	450 (1'6")	435 (1'5")
	WHEEL BASE <b>E</b>	mm(ft in)	←	←
	TREAD <b>F</b>	mm(ft in)	←	←
BREAKOUT FORCE		kN(lbf)	105.2 (23,650)	105.4 (23,700)
MAX. STEERING ANGLE		deg	40°	
TURNING RADIUS (Tire edge/ Bucket edge) <b>O/P</b>		mm(ft in)	5,245/5,785 (17'2"/19'12")	5,245/5,815 (17'2"/19')
SOUND LEVEL in CAB (ISO 6396)		dB(A)	72 LpA	
EXTERNAL SOUND LEVEL(ISO6395, 2000/14/EC)		dB(A)	103 LwA	
FUEL TANK CAPACITY		Liter(USgal)	235(62)	
· OPT : (STD) + LIS + EMR + Rear View Camera + Under Cover				
· STD includes Add. Counterweight.				
· ROPS/FOPS Cabin is Standard.				
· Every dimensions, weights, and performance data based on SAE J732C and SAE742B.				

MODEL	DL220-3	DOCUMENT No		2/24
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## 2. SPECIFICATION COMPARISON

ITEMS		UNIT	CAT 930K	J/DEERE 544K	VOLVO L70G
OPERATING WEIGHT		ton	13.53	13	13.29
ENGINE (SAE J1995)	MODEL	-	C6.6 ACERT	PVX6068	D6H
	EMISSION CONTROL	-	TIER 4i	TIER 3	TIER 4i
	FUEL CONTROL	-	ELEC.	ELEC.	ELEC.
	Displacement	Liter	6.6	6.8	5.7
	RATED POWER (Gross)	kW/rpm	119/1800	121/1,800 (net)	126 (1,400~1,700)
	MAX. TORQUE (Gross)	N.m	775	683	860
SYSTEM PRESSURE (WORK/STEER)		bar	260/241	251/251	260/260
TRAVEL SPEED	FORWARD	km/h	1-13/13/27/40	7.2/11.9/22.8/35.7	8/15/29/46
	REVERSE (1/2/3)	km/h	1-13/13/27	7.2/12.6/24.1	8/15/29/46
FRONT SPEED (RAISE/DUMP/LOWER)		sec	5.1/1.5/2.7	5.8/1.2/3.2	5.1/1.3/2.7
TIRE SIZE		-	20.5 R25	20.5 R25	20.5 R25
BREAKOUT FORCE		kN	119.2	99	94.6
WORKING RANGE	BUCKET CAPACITY (SAE HEAPED)	m <sup>3</sup>	2.3 BOC	2.3 BOC	2.3 BOC
	DUMP HEIGHT AT 45°	mm	2,807	2,760	2,800
	DUMP REACH AT 45°	mm	1,070	990	1,090
	MAX. DUMP ANGLE (fully raised)	deg	50	49	46
	MAX. TILT ANGLE (on ground)	deg			42
	MAX. TILT ANGLE (fully raised)	deg	54	55	56
	MAX. TILT ANGLE (at carry)	deg	45	42	45
	BUCKET HINGE HEIGHT	mm	3,907	3,820	3,870
	DIGGING DEPTH (0° level)	mm	100	95	102
TRAVEL DIMENSION	OVERALL LENGTH	mm	7,551	7,430	7,420
	OVERALL WIDTH (bucket)	mm	2,550	2,540	2,550
	OVERALL HEIGHT	mm	3,340	3,240	3,280
	GROUND CLEARANCE	mm	400	400	450
	WHEEL BASE	mm	3,000	2,930	3,000
	TREAD	mm	1,930	1,950	1,930
MAX. STEERING ANGLE		deg	40	40	40
TURNING RADIUS (Tire edge/ Bucket edge)		mm	5,402/5,924	-	5,350/
SOUND LEVEL in CAB (ISO 6396)		dB(A)	68	-	68
EXTERNAL SOUND LEVEL(ISO6395, 2000/14/EC)		dB(A)	-	-	104
FUEL TANK CAPACITY		Liter	195	325	219

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### 3. ENGINE SYSTEM

#### 1) ENGINE

EMISSION	U.S. EPA TIER 4 (EU STAGE-III B)
MAKER & MODEL	Doosan DL06
MAX POWER at SAEJ1995 gross	119 kW ( 160 hp) / 2,100 RPM
MAX TORQUE at SAEJ1995 gross	735 N.m ( 542 lb.f) / 1,400 RPM
FUEL CONSUMPTION (min. ~ rated)	152~168 g/ps.hr
TYPE	TURBO CHARGED, AIR TO AIR INTERCOOLED, DIRECT INJECTION
INJECTION SYSTEM	COMMON RAIL
AFTER TREATMENT	EGR+DPF
DISPLACEMENT	5.9 liter (360 in <sup>3</sup> )
No. OF CYLINDER	6
BORE DIA. & STROKE	Φ100 x 125 mm
HIGH IDLE SPEED	2300 ± 50 rpm
LOW IDLE SPEED	800 rpm
STARTING MOTOR	24 V x 6 kW

#### 2) ALTERNATOR

VOLTAGE	24 V
RATING AMPERES	60 A

#### 3) BATTERY

SYSTEM VOLTAGE	24 V
QUANTITY	12 V x 2
CAPACITY (AMP)	100
COLD CRANKING AMPERES	1050 CCA

#### 4) AIR CLEANER

TYPE	DRY, DOUBLE ELEMENT
FILTRATION AREA	9 m <sup>2</sup> (7.6 + 1.4)
SIZE (WIDTH X HEIGHT)	208.5mm x 489.5mm
INITIAL AIR RESTRICTION	200mm H <sub>2</sub> O at 12.5m <sup>3</sup> /min AIR FLOW

#### 5) PRE CLEANER

AIR RESTRICTION RATE	90 H <sub>2</sub> O at 25.8 m <sup>3</sup> /mm <sup>2</sup>
AIR CONTAMINANTS	84% (A.C COARSE DUST)

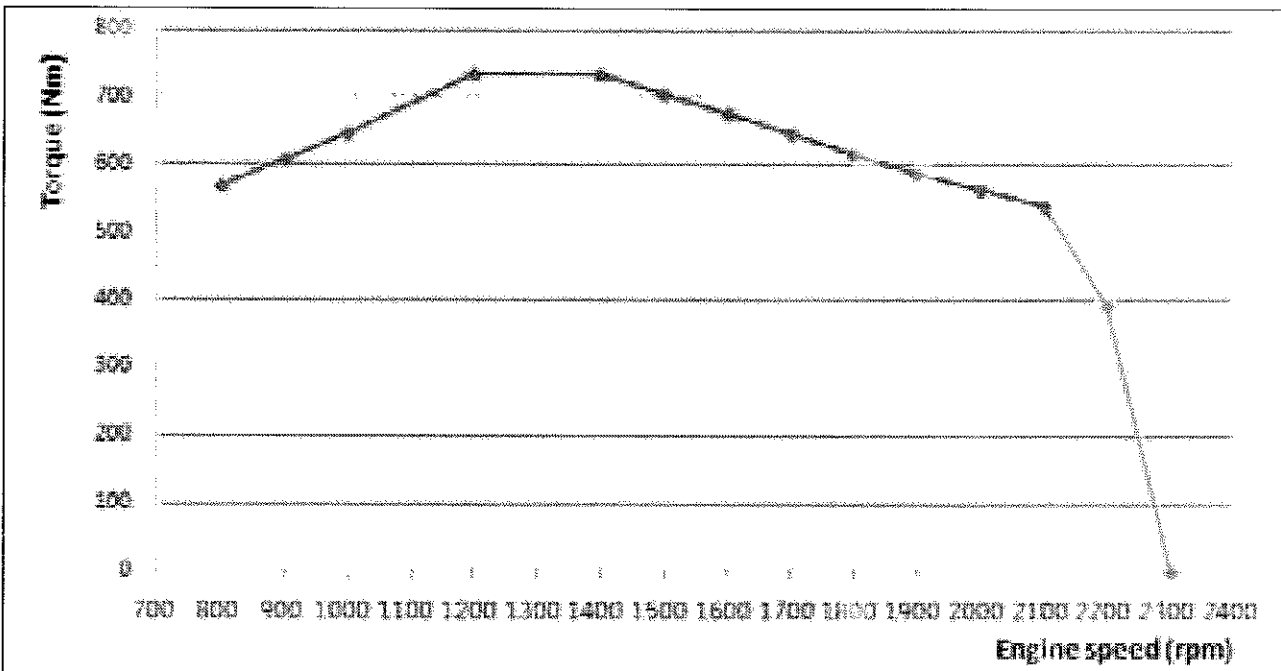
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#### 6) FAN (Driven by hydraulic motor)

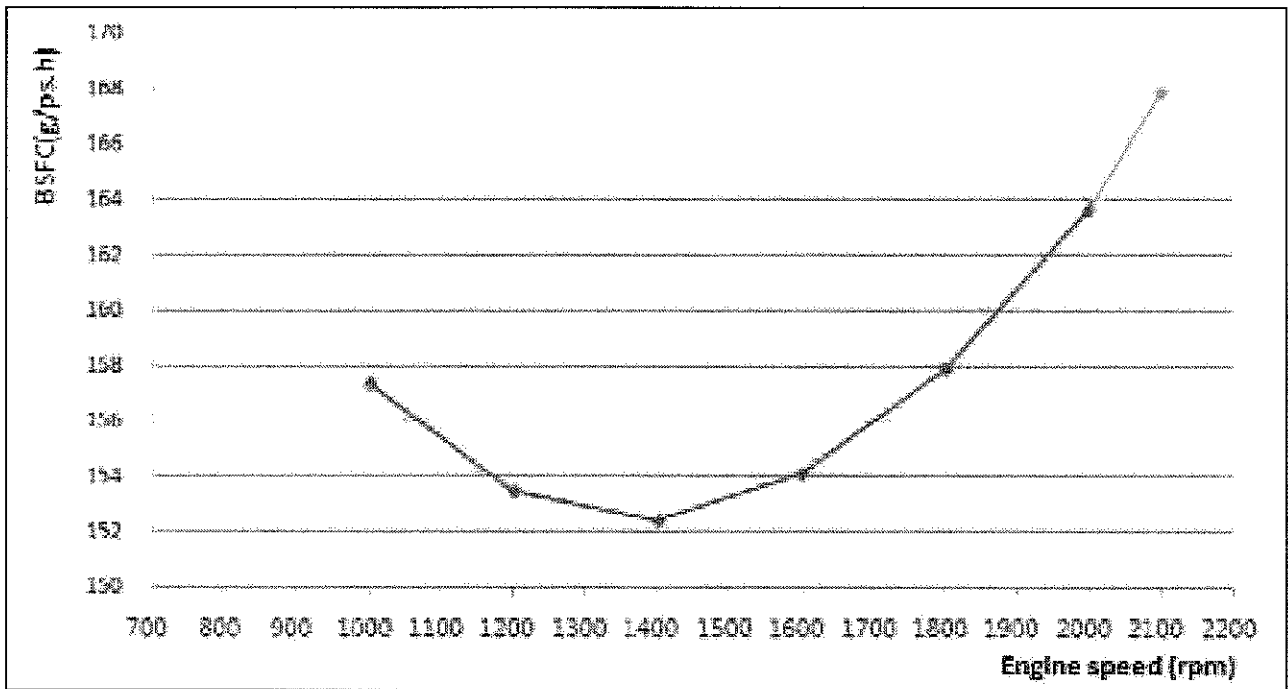
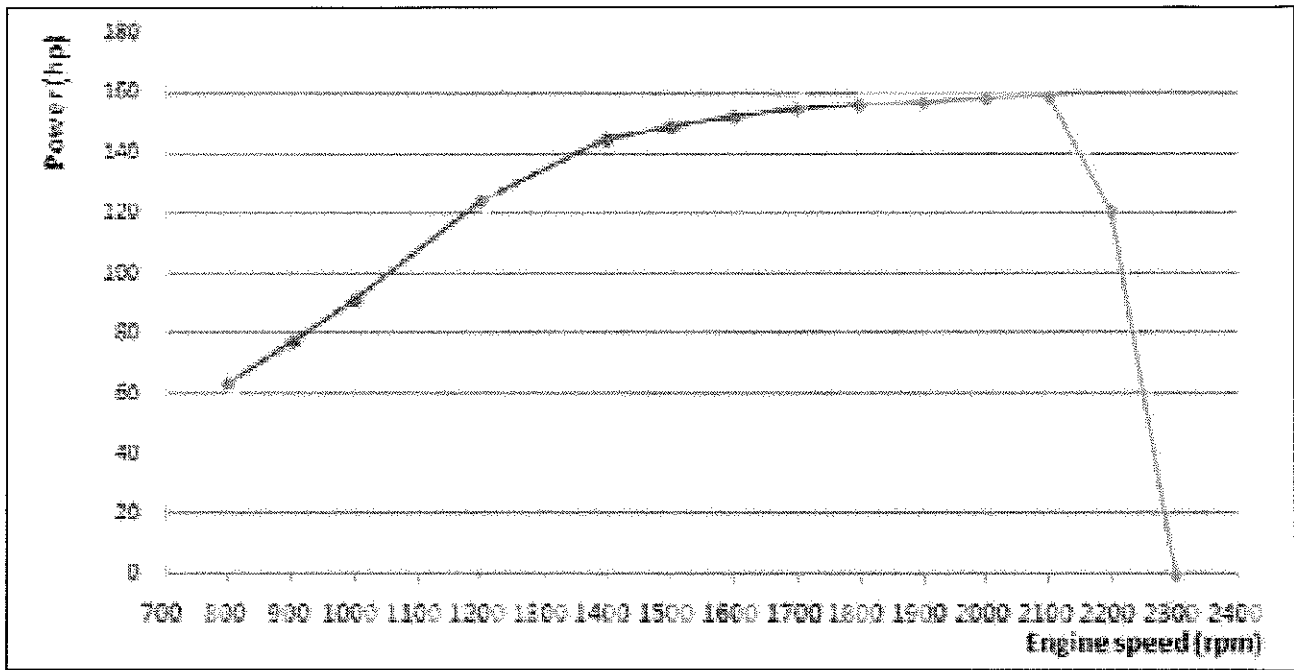
TYPE	SUCKER, 8 BLADE, PLASTIC
SIZE	Φ711mm (28inch)
RPM AT RATED ENGINE RPM	500~1,500 MAX. (CONTINUOUS)

#### 6) ENGINE PERFORMANCE CUREVE

CONDITION(SAE J1995)	SPECIFICATION
ATMOSPHERIC PRESSURE	758 mmHg (25.7°C)
WARMING UP	SUFFICIENT
COOLING FAN	NOT INSTALLED
ALTERNATOR	NOT INSTALLED
AIR CLEANER	INSTALLED
MUFFLER	INSTALLED



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## 4. HYDRAULIC SYSTEM

### 1) MAIN PUMP

TYPE	VARIABLE DISPLACEMENT AXIAL PISTON PUMP
QUANTITY	1
DISPLACEMENT	74 cc/rev
MAX. FLOW RATE	160 L/min ( 42.3 GPM)
TANK PRESSURIZING DEVICE	SEMI PRESSURIZED (AIR BREATHER)
PUMP CUT-OFF PRESSURE	250±5 bar (3,626 psi)

### 2) CONTROL VALVE

TYPE	CLOSED-CENTER(LS) HYDRAULIC SYSTEMS WITH VARIABLE PUMPS, PILOT CONTROL w/ FLOAT SPOOL
QUANTITY OF SPOOLS	2
SPOOL ARRANGEMENT	ARM - BUCKET
OVERLOAD RELIEF OF BUCKET	280 bar (4,061 psi)
OVERLOAD RELIEF OF ARM	310 bar (4,496 psi)

### 3) REMOTE CONTROL VALVE (STD)

TYPE	PILOT OPERATED JOYSTICK WITH 3rd LEVER VALVE, FNR SWITCH (DETENT COILS- ARM RAISE/FLOAT, BUCKET CROWD)
PRESSURE	16.7 bar AT 7.5mm ( 242 psi AT 0.295 inch)
STROKE CHARACTER	30 bar ( 435 psi) AT DETENT

### 4) REMOTE CONTROL VALVE (OPT)

TYPE	PILOT OPERATED FINGER TIP LEVER (2 or 3 LEVER) WITH FNR SWITCH (DETENT COILS- ARM RAISE/FLOAT, BUCKET CROWD)
PRESSURE	16.5 bar AT 7.5 mm ( 239 psi AT 0.295 inch)
STROKE CHARACTER	30 bar ( 435 psi) AT DETENT

### 5) BRAKE & PILOT & FAN MOTOR SUPPLY VALVE

BRAKE CHARGING	120 ~ 140 bar (1,740 ~ 2,030 psi)
PILOT REDUCING PRESSURE	MAX. 30 bar ( 435 psi)
SOLENOID VALVE Q'TY	PILOT CUT-OFF-1
SOLENOID VOLTAGE	DC 24V

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#### 6) ACC. BLOCK

SOLENOID VALVE Q'TY	PARKING -1
SOLENOID VOLTAGE	DC 24V

#### 7) HYDRAULIC FAN MOTOR

DISPLACEMENT	19 cc/rev
MAX. PRESSURE	160 ± 10 bar (2320 ± 145 psi)
COOLING FAN RPM	500 ~ 1,500 RPM

#### 8) AIR BREATHER

RELIEF PRESSURE	0.46±0.04 bar (6.7psi)
VACUUM RELIEF	0.04 ~ 0.05 bar (0.6 ~ 0.7psi)

#### 9) ACCUMULATOR ; BRAKE

TYPE	BLADDER (cc OIL IS FILLED WITH NITROGEN GAS)
CHARGE PRESSURE, VOLUME (Service)	30±1bar, 0.75 L ( 435 psi, 0.2 USgal)
CHARGE PRESSURE, VOLUME (Parking)	35±1bar, 0.16 L ( 507 psi, 0.04 USgal)

#### 10) ACCUMULATOR ; PILOT

TYPE	BLADDER
CHARGE PRESSURE, VOLUME	15±1 bar, 0.32 L ( 217.6psi, 0.1 USgal)

#### 11) ACCUMULATOR ; LIS

TYPE	PISTON TYPE
CHARGE PRESSURE, VOLUME	15±1 bar, 3 L ( 217.6psi, 0.8USgal)

#### 12) FILTERS ; RETURN

TYPE	GLASS FIBER
FILTRATION	10 µ

#### 13) DC MOTOR-PUMP ; EMERGENCY STEER

##### 13-1) PUMP

TYPE	GEAR, BUILT IN CHECK & RELIEF
THEORETICAL DISPLACEMENT	16 cc/rev
RELIEF PRESSURE	62 bar ( 899psi)
ALLOWABLE SPEED	3000 rpm

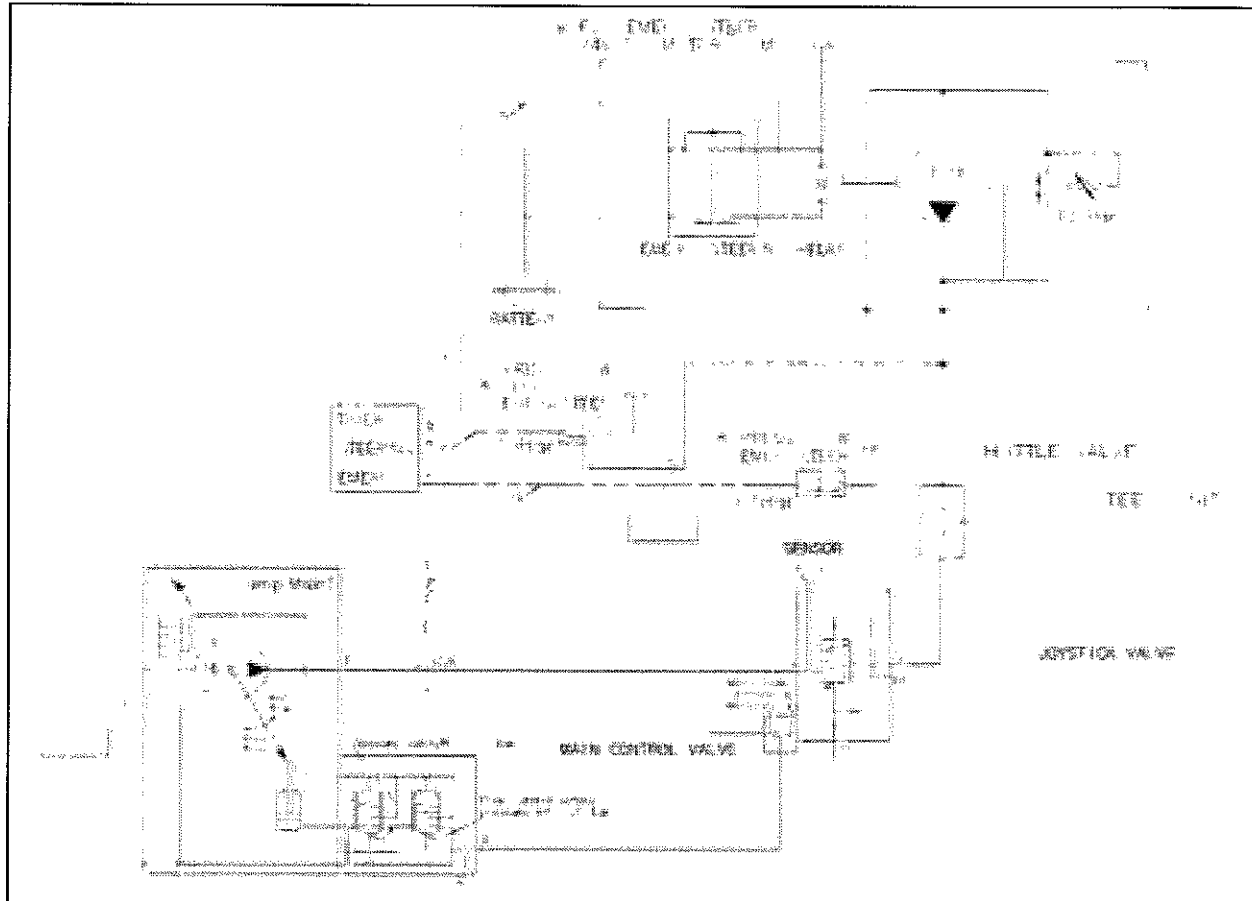
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### 13-2) ELECTRIC MOTOR

TYPE	24V DC, DOUBLE TERMINAL, WATER SEALED, MEDIUM DUTY w/ FOOT MOUNTING BRACKET BUILT IN STARTER SWITCH
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### 13-3) EMERGENCY STEER CIRCUIT



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## 5. DRIVE MECHANISM

### 5.1 TRAVELING SYSTEM

#### 1) TRANSMISSION

TYPE	4SPEED FULL AUTO (STANDARD)
	POWER-SHIFT, COUNTERSHAFT, ENGINE DIRECT MOUNTED
TORQUE CONVERTER STATOR	FIXED WHEEL STATOR
TORQUE CONVERTER STALL RATIO	2.664
TORQUE CONVERTER SIZE	300 mm
CHARGING PUMP FLOW	80.5 l/min at 2,300rpm
HYDRAULIC PUMP P.T.O RATIO	1
POWER SHIFT CONTROL PRESSURE	16~18 bar (232~261 psi)
CONVERTER SAFETY RELIEF PRESSURE	11 bar (160 psi)
CONVERTER OUTPUT LIMIT TORQUE	1,098 N.m (810 lbf.ft)
MAX. ROTATING SPEED (TM OUPUT)	3,226 rpm
SHIFT CONTROL	ELECTRIC SHIFT WITH PROPORTIONAL VALVE, SOLENOID VALVES (DC 24 V)
CONTROL UNIT	EST - 37A
OUTPUT FLANGE	FRONT - 6C MECHANICS
	REAR -6C MECHANICS
CONTROL CIRCUIT	4SPEED

#### 2) PROPELLER SHAFT

	FRONT	ARTIC	REAR
MAX. ALLOWABLE TORQUE	3040 N.m (2242 lbf.ft)		
MIN. JOINT ANGLE	25°/25°	25°/25°	20°/20°
MAX. PHASE MISALIGNMENT	±1.5°	±1.5°	±1°
MAX. ALLOWABLE SPEED	5000 rpm	5000 rpm	5000 rpm
COUPLING DIMENSION	6C	6C	6C

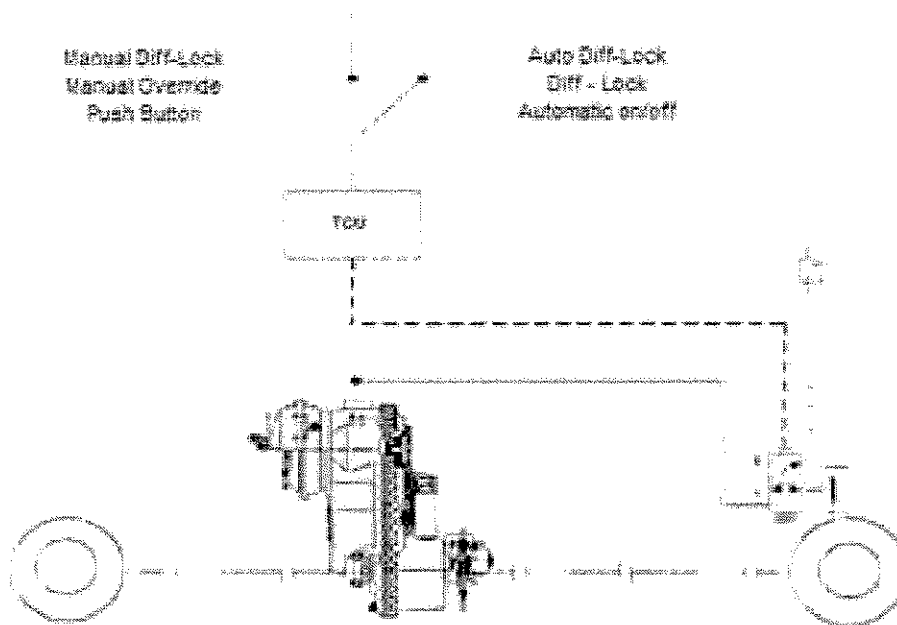
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### 3) DIFFERENTIAL HYDRAULIC LOCK (OPT)

ACTUATION PRESSURE TO AXLE

16 bar + 4 bar



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### 3) FRONT AXLE

TYPE	FULLY FLOATING PLANETARY-TYPE
	HUB DRIVE FIXED MOUNTING
	LSD 45%(STANDARD), DHL(OPTION)
OVERALL REDUCTION RATIO	21.53
AXLE LOAD (EMPTY )	5,300 kg (11,690 lb)
AXLE LOAD (BREAKOUT )	22,140 kg (48,810 lb)
WHEEL BOLT P.C.D	Φ425 mm
BRAKE TYPE	WET DISC
BRAKE TORQUE per WHEEL	15,672 N.m at 60 bar
DRIVE FLANGE	6C MECHANICS

### 4) REAR AXLE

TYPE	FULLY FLOATING PLANETARY-TYPE
	HUB DRIVE FIXED MOUNTING
	LSD 45%(STANDARD), OPEN(OPTION)
OVERALL REDUCTION RATIO	21.53
AXLE LOAD (EMPTY )	7,500 kg (16,540 lb)
AXLE LOAD (BREAKOUT )	9,340 kg (20,590 lb)
WHEEL BOLT P.C.D	Φ425mm
BRAKE TYPE	WET DISC
BRAKE TORQUE per WHEEL	15,672 N.m at 60 bar
DRIVE FLANGE	6C MECHANICS

### 5) TIRE & WHEEL

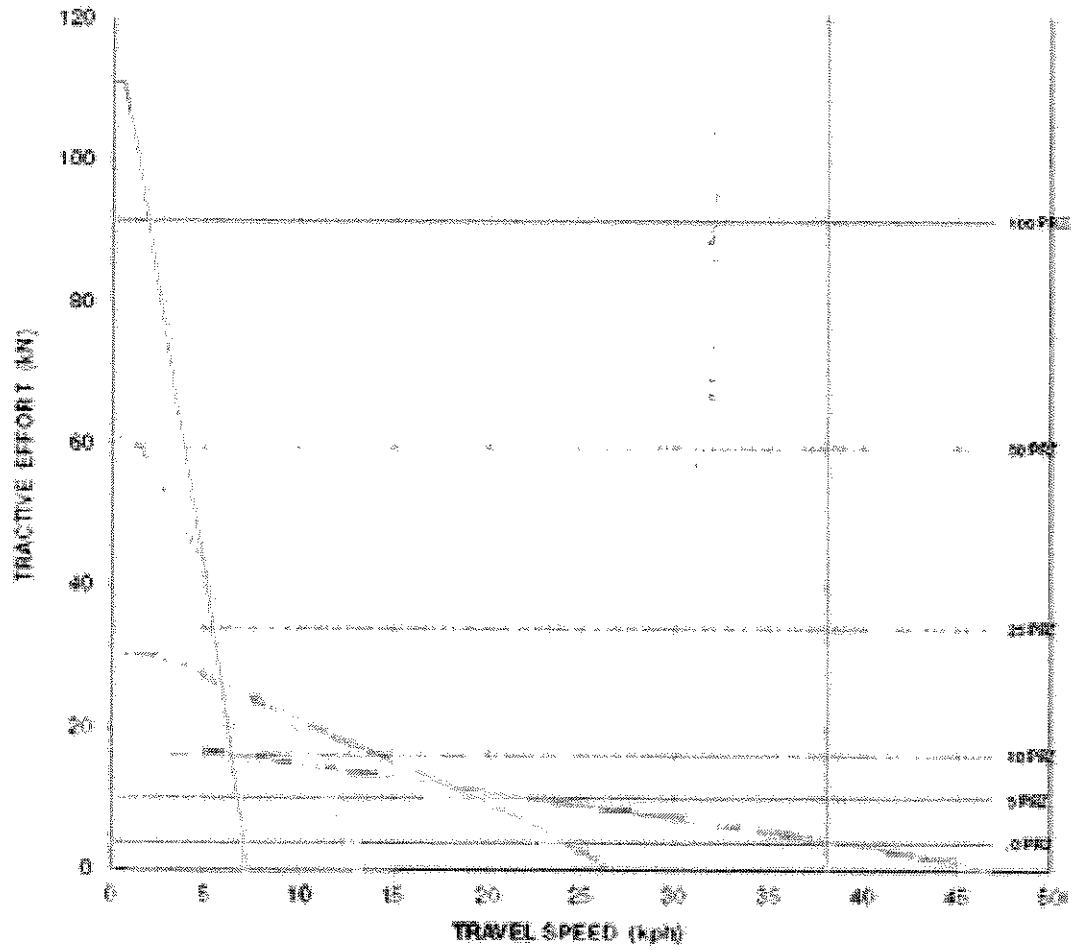
TYPE TYPE	TUBELESS, SINGLE
TIRE SPEC.	20.5R25 (L2), 20.5R25 (L3), 20.5-25 16PR (L3), 20.5-25 12PR (L3)
RIM SPEC.	17.00/1.7 x 25
DISC OFFSET	28mm

### 6) TRAVELING PERFORMANCE (REFER TO NEXT PAGE)

MAX. SPEED	38 km/h ( 23.6 MPH)
MAX. TRACTIVE EFFORT	11.5 ton ( 25,350 lb)
GRADEABILITY	30° (58%)

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- 4WG - Gear ratio : 4.012/2.174/1.088/0.619



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## 5.2 BRAKE SYSTEM

### 1) FAN & BRAKE PUMP

TYPE	VARIABLE DISPLACEMENT AXIAL PISTON PUMP
DISPLACEMENT	18 cc/rev
MAX. SUPPLY FLOW	37.8 L/min ( 10GPM)

### 2) SERVICE BRAKE PEDAL VALVE (DUAL)

SYSTEM	FULL HYDRAULIC, SEPARATE DUAL LINE
BRAKE PRESSURE	60±3 bar ( 870 psi)
PEDAL FORCE	16±2kg at 60 bar, 135 mm RAD.

### 3) PARKING BRAKE

TYPE	SPRING-APPLIED HYDRAULIC-RELEASED, SLIDING CALIPER DISC BRAKE ON THE FACE OF TRANSMISSION
RELEASE PRESSURE	100 bar (1,450 psi)
MAX. CLAMPING FORCE (1mm CLEARANC)	34 kN (7,644 lbf)
MAX. STATIC CIRUMFERENTIAL FORCE	25.16 kN (5,656 lbf)

### 4) BRAKE PERFORMANCE

BRAKING DISTANCE	6.3 m at 32 km/h (21'12" at 20 MPH)
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### 5.3 STEERING SYSTEM

#### 1) PUMP

TYPE	VARIABLE DISPLACEMENT AXIAL PISTON PUMP
QUANTITY	1
DISPLACEMENT	74 cc/rev
MAX. FLOW RATE	160 L/min ( 42.3 GPM)

#### 2) STEERING UNIT

TYPE	LOAD SENSING, NON REACTION
DISPLACEMENT	630 cc/rev

#### 3) PRIORITY VALVE

TYPE	INTERNAL PILOT DYNAMIC SIGNAL
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#### 4) ACCUMULATOR; STEER

TYPE	BLADDER (cc OIL IS FILLED WITH NITROGEN GAS)
CHARGE PRESSURE, VOLUME	35±1 bar, 0.16 L ( 507 psi, 0.04 USgal)

#### 5) STEERING CYLINDER

CUSHION STROKE	370 mm (1'3")
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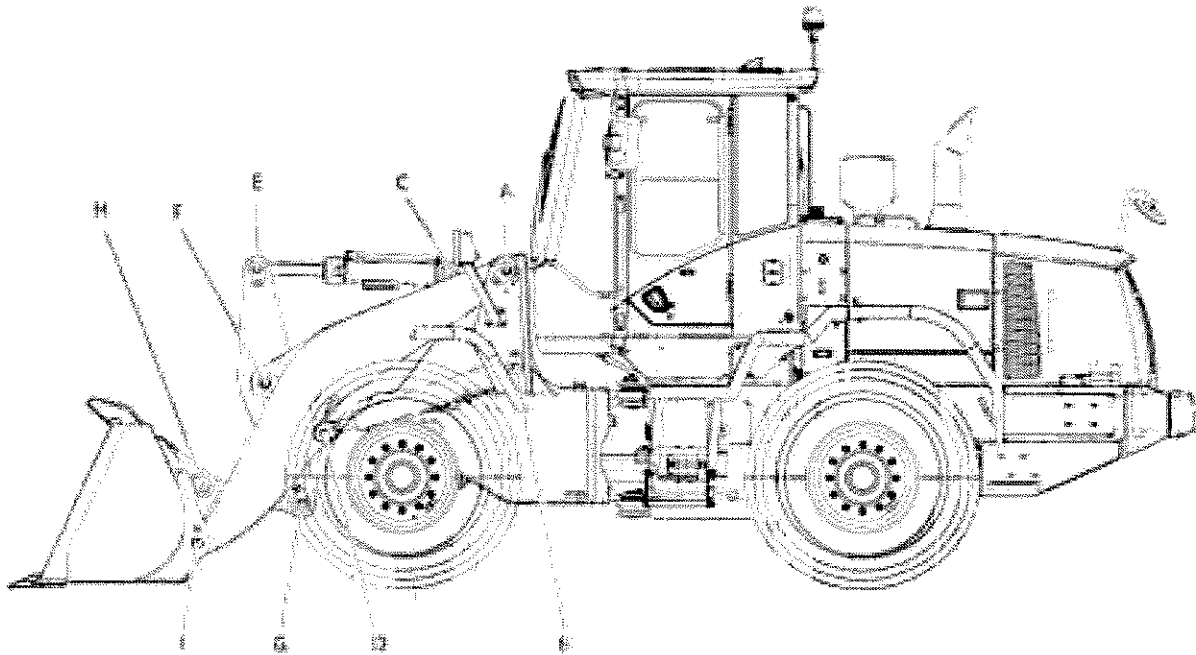


## 6. HYDRAULIC CYLINDERS

	UNIT	LIFT	BUCKET	STEER
QUANTITY	-	2	1	2
BORE	mm(ft in)	115 (5")	130 (5")	70 (2'75")
ROD DIA.	mm(ft in)	75 (3")	75 (3")	35 (1'37")
STROKE	mm(ft in)	790 (2'7")	515 (1'8")	370 (14'56")
CLOSED LENGTH	mm(ft in)	1255 (4'1")	955 (3'2")	780 (30'7")
RETRACTING CUSHION	-	X	X	O
EXTENDING CUSHION	-	X	X	X

## 7. FRONT

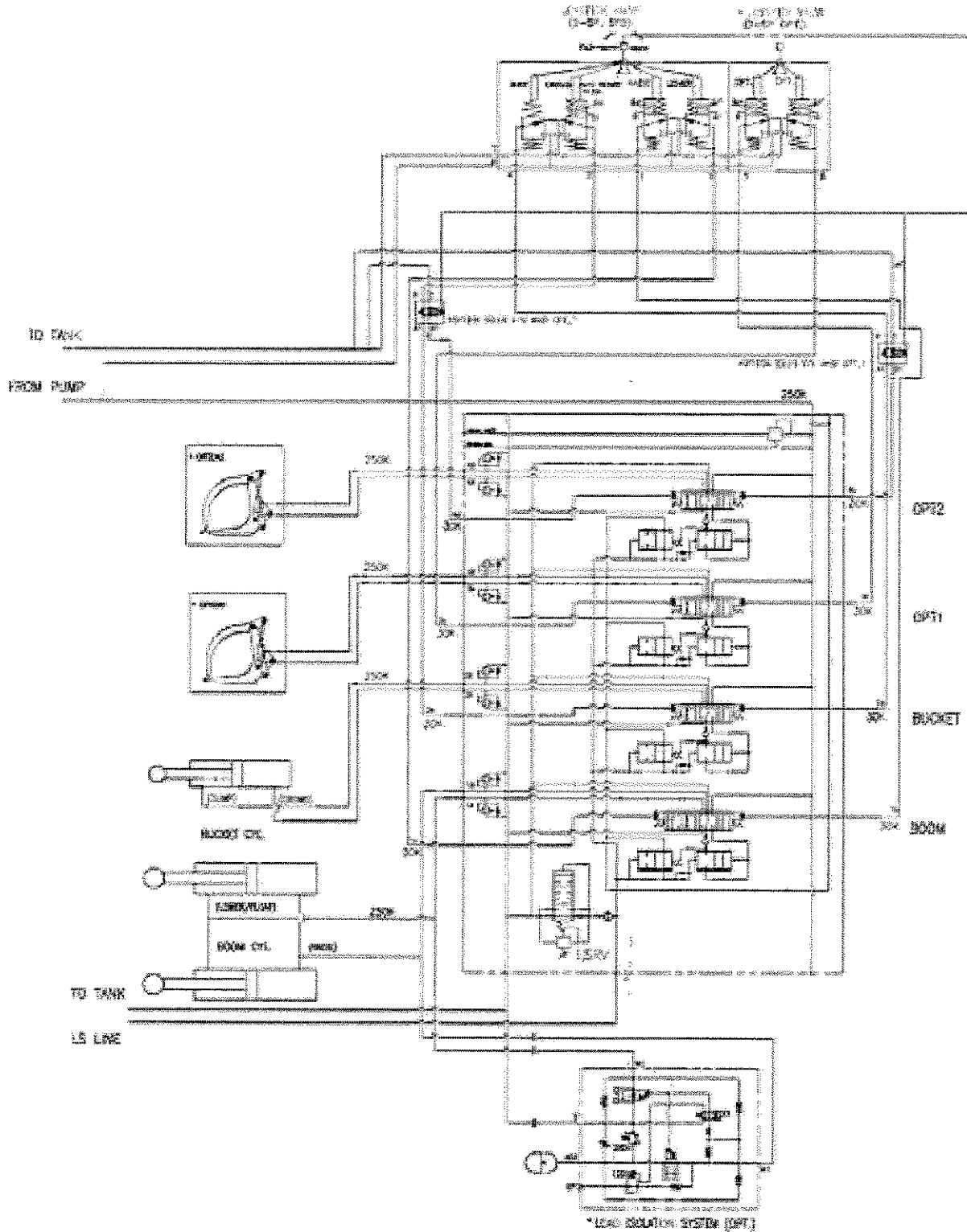
### 1) FRONT LINKAGE PIN SIZES



POINT	UNIT	DIA.	LENGTH
A	mm(ft in)	80 (3")	255 (10")
B	mm(ft in)	65 (3")	250 (10")
C	mm(ft in)	80 (3")	216 (9")
D	mm(ft in)	65 (3")	150 (6")
E	mm(ft in)	80 (3")	168 (7")
F	mm(ft in)	90 (4")	290 (11")
G	mm(ft in)	80 (3")	164 (6")
H	mm(ft in)	80 (3")	180 (7")
I	mm(ft in)	70 (3")	209 (8")

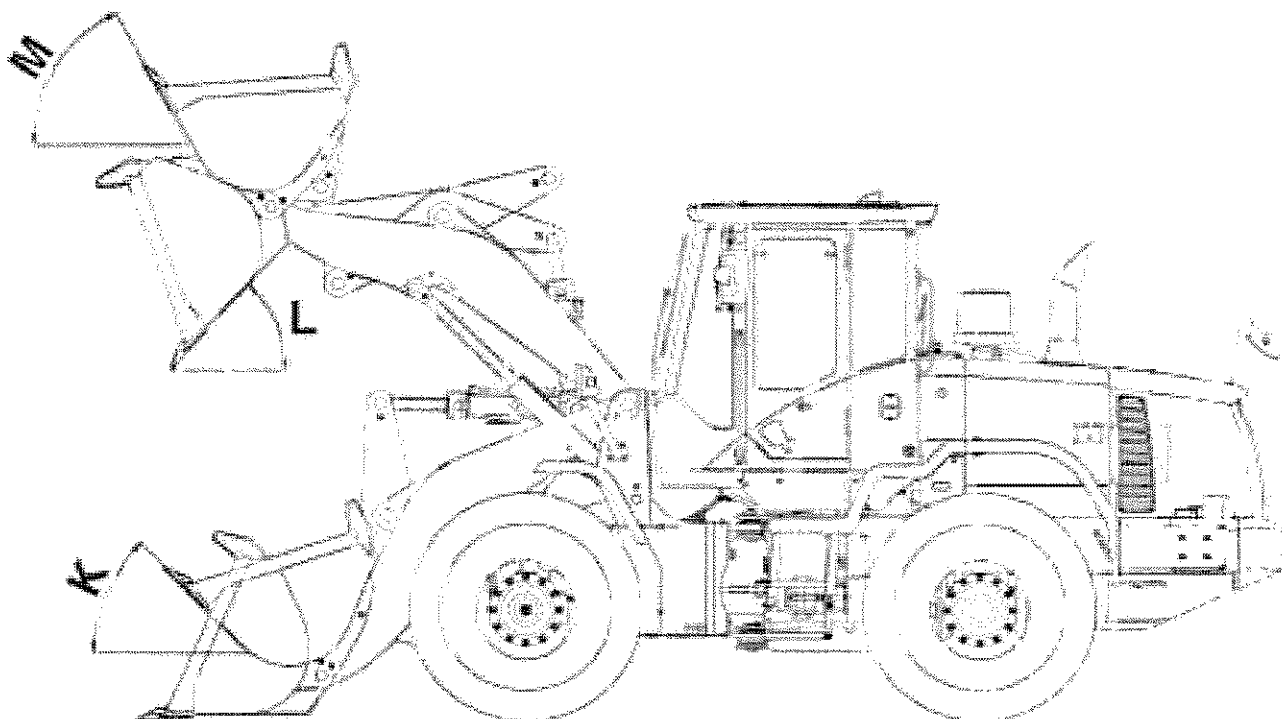
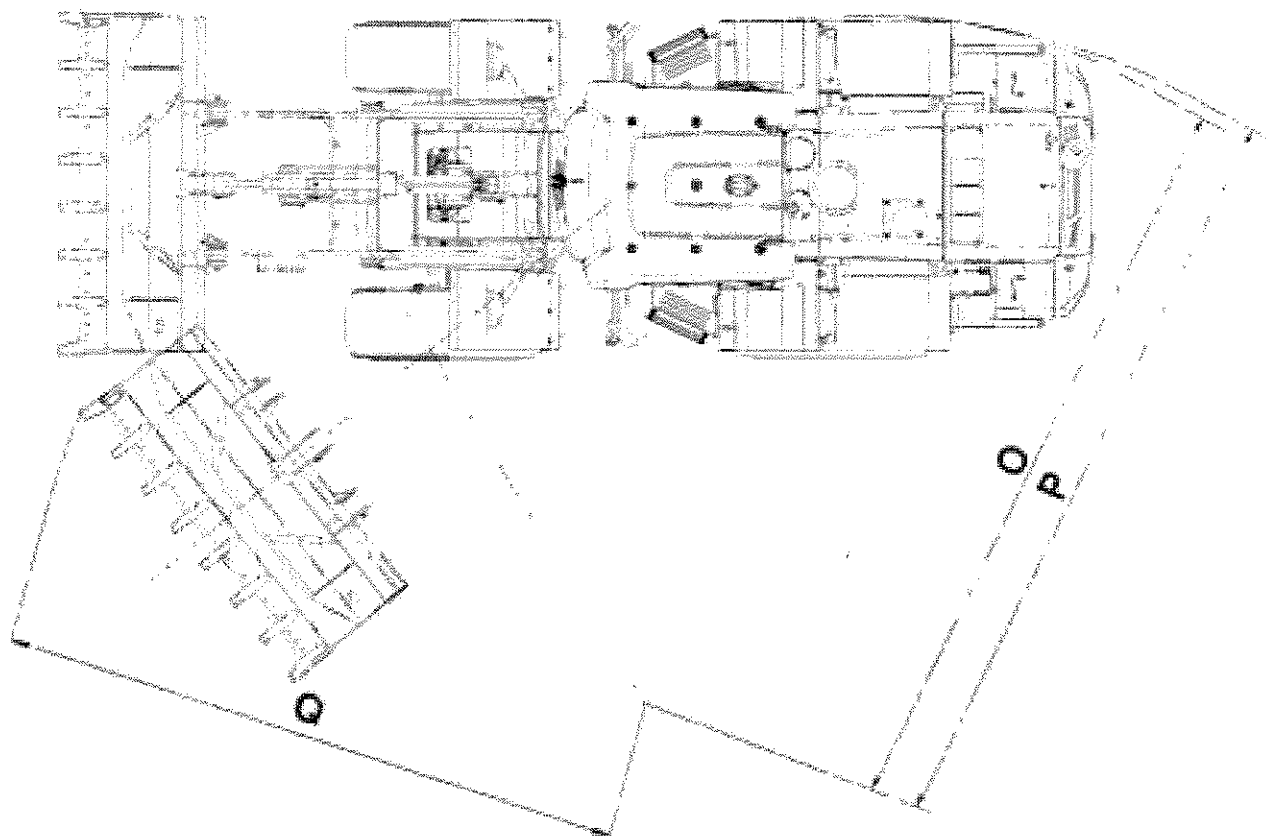
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## 2) OPTION PIPING(Log Fork)

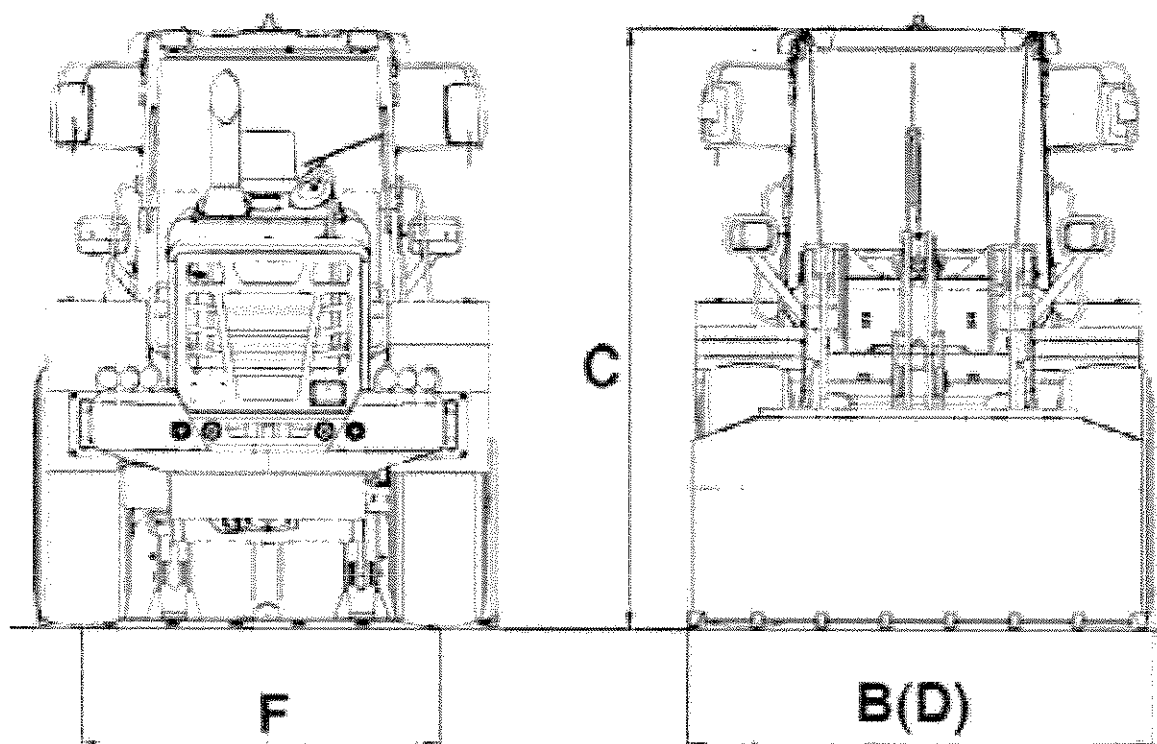
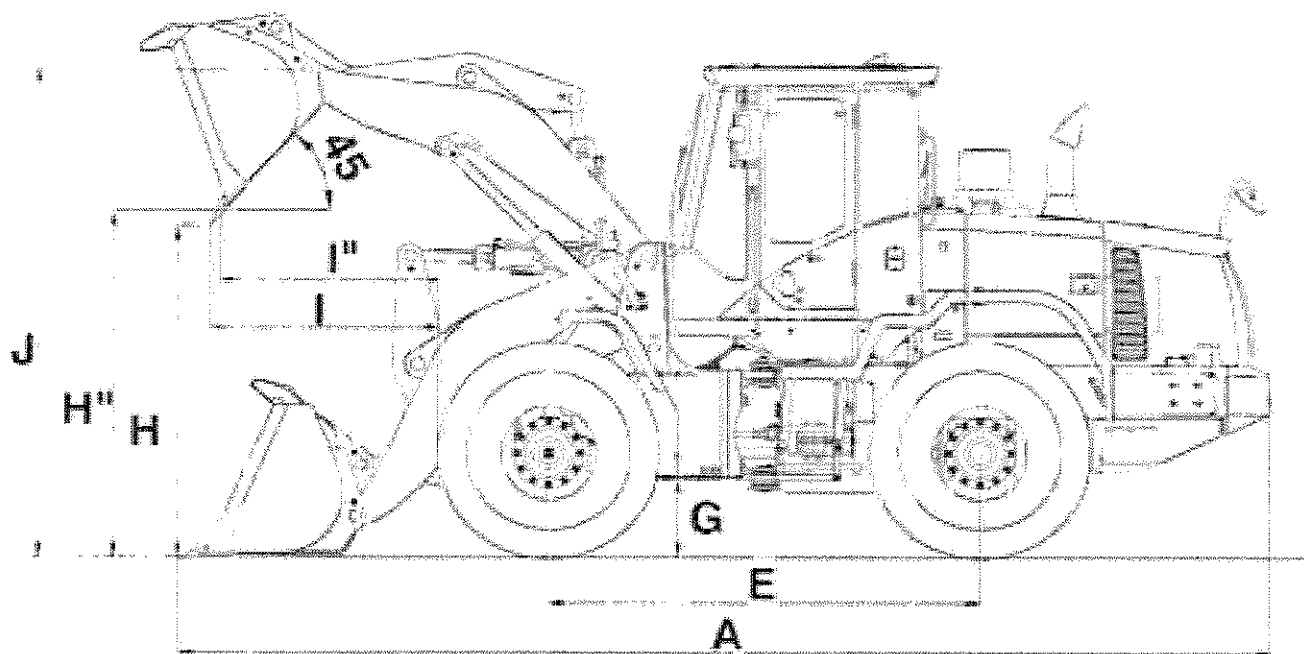


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## 8. DIMENSIONS AND WORKING RANGE



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DOOSAN INFRACORE CO., LTD.

Loader type		General purpose	
Bucket mount		PIN ON	PIN ON
Configuration	Unit	Teeth	Bolt-on edge
Capacity heaped ISO/SAE	m <sup>3</sup> yd <sup>3</sup>	2.2 2.9	2.3 3.0
Tooth type		General Purpose	General Purpose
Bucket width B	mm ft in	2,550 8'4"	2,550 8'4"
Breakout force	kN lbf	105.4 23,700	105.2 23,650
Static tipping load (straight)	kg lb	9,730 21,450	9,680 21,340
Static tipping load (at full turn)	kg lb	8,430 18,590	8,380 18,480
Dump height (at 45°) (at fully raised) (1)	H mm ft in	2,755 9'	2,825 9'3"
Dump reach (at 45°) (at fully raised) (1)	I mm ft in	1,130 3'8"	1,065 3'6"
Dump height (at max. dump) (at max. reach) (1)	mm ft in	2,720 8'11"	2,790 9'2"
Dump reach (at max. dump) (at max. reach) (1)	mm ft in	1,070 3'6"	1,010 3'4"
Digging depth	mm ft in	88 3"	88 3"
Height at bucket pivot point J	mm ft in	3,860 12'8"	3,860 12'8"
Max. tilt angle at carry position K	deg	48	48
Max. tilt angle at fully raised M	deg	59	59
Max. tilt angle on ground	deg	42	42
Max. tilt angle at max. reach	deg	58	58
Max. dump angle at max. reach L	deg	65	65
Max. dump angle on ground	deg	64	64
Max. dump angle at fully raised	deg	48	48
External radius at tire side O	mm ft in	5,245 17'2"	5,245 17'2"
External radius at bucket edge Q	mm ft in	5,840 19'2"	5,815 19'1"
Wheel base E	mm ft in	2,900 9'6"	2,900 9'6"
Width at tyres	mm ft in	2,530 8'4"	2,530 8'4"
Tread F	mm ft in	1,930 6'4"	1,930 6'4"
Ground clearance G	mm ft in	435 1'5"	435 1'5"
Overall length C	mm ft in	7,580 24'10"	7,485 24'7"
Overall height	mm ft in	3,280 10'9"	3,280 10'9"
Tyre size		20.5R25 L2	
Operating weight	kg lb	12,810 28,240	12,860 28,350

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## 9. PERFORMANCE DATA

### 1) PRESSURE SETS

WORKING (PUMP CUT-OFF)	250 ± 5 bar (3625 ± 72 psi)
STEERING RELIEF (LS PORT SIDE)	175 ± 10 bar (2538 ± 145 psi)
(STEER PUMP SIDE)	200 ± 10 bar (2900 ± 145 psi)
PILOT CONTROL	30 ± 2 bar (435 ± 29 psi)
BRAKE ACCUMULATOR CHARGING	120 ~ 140 bar (1,740 ~ 2,030 psi)
SERVICE BRAKE	60 ± 3 bar (870 ± 43 psi)
FAN MOTOR MAX.	160 ± 10 bar (2320 ± 145 psi)
PARKING BRAKE RELEASE	120 ± 5 bar (1740 ± 72 psi)
T/M SELECTION PRESSURE	16 + 2 bar (232 + 29 psi)

### 2) SPEED & FORCE

OPERATION		UNIT	SPEED-FORCE	REMARKS
ARM	UP	SEC	6.0 ± 0.5	
	DOWN	SEC	3.5 ± 0.4	
BUCKET	CROWD	SEC	1.9 ± 0.3	Max. Height
	DUMP	SEC	1.3 ± 0.3	
STEERING	LOCK TO LOCK	TURN	4	
E/G RPM	HIGH	RPM	2,290 ± 50	(On machine)
	LOW	RPM	800 ± 25	(On machine)
E/G RPM	HYDRAULIC STALL	RPM	2,150	
	CONVERTER STALL	RPM	2,015	
	T/C + HYD. STALL	RPM	1,670	
COOLING FAN	E/G HIGH	RPM	500 ~ 1,500	
TRAVEL SPEED (1/2/3/4)		km/h	7.1/12.8/24.3/38.0	
BRAKING DISTANCE		m	6.3 m at 32 km/h	
MAX. TRACTIVE EFFORT		ton	11.5	
BREAKOUT FORCE		kN	105.2	
PAYLOAD		ton	4.19	
STATIC TIPPING LOAD (straight)		ton	9.68	
STATIC TIPPING LOAD (full turn)		ton	8.38	

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## 10. NOISE LEVEL

SURFACE SOUND POWER LEVEL ( $L_{WA}$ )

72 dB(A) (ISO 6395)

OPERATOR'S CABIN NOISE LEVEL ( $L_{PA}$ )

103 dB(A) (ISO 6396)

## 11. USER SERVICE DATA

COMPARTMENT/ GREASE JOINT	No, OF C/G	REFILL CAPACITY	FLUID OR LUBRICANT	SERVICE INTERVAL (hr)	
				LUBE	FILTER
COOLING SYSTEM	1	40 ℓ (11 USgal)	WATER	2,000	-
FUEL TANK	1	235ℓ (62 USgal)	DIESEL	-	500
HYD. SYSTEM	1	142 ℓ (38 USgal)	ISO #46	2,000	1,000
ENGINE CRANKCASE	2	27 ℓ (7 USgal)	E/G OIL (API CJ-4)	50/500	50/500
AXLE_FRONT	1	21.5 ℓ (5.7 USgal)	GEAR OIL. [TDH PREMIUM]	500/1500	
AXLE_REAR	1	21.5 ℓ (5.7 USgal)	GEAR OIL. [TDH PREMIUM]	500/1500	
T/C AND T/M	1	30 ℓ (7.9 USgal)	SAE 15W40	250/1000	250/1000
FRONT PROPELLER SHAFT	1	-	GREASE	250	-
FRONT PIN	13	-	GREASE	50	-
ARTICULATION JOINT	2	-	GREASE	50	-
REAR AXLE PIVOT	3	-	GREASE	50	-
STEER CYLINDER	2	-	GREASE	50	-

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## 12. SUB GROUP WEIGHTS

ITEM	UNIT	WEIGHT	REMARKS
COUNTERWEIGHT	kg(lb)	554(1,221)	
FRONT FRAME	kg(lb)	1,048(2310)	
REAR FRAME	kg(lb)	964(2,125)	
OIL TANK	kg(lb)	114(251)	w/o Oil
FUEL TANK	kg(lb)	201(443)	w/o Oil
DPF	kg(lb)	40(88)	
ENGINE	kg(lb)	684(1,508)	w/Cac pipe& Oil
TRANSMISSION	kg(lb)	398(877)	w/o Oil, w/o Lock-up
AXLE_FRONT	kg(lb)	770(1,698)	w/ Oil
AXLE_REAR	kg(lb)	780(1,720)	w/ Oil
TIRE(20.5-25 16PR) at Each Tire	kg(lb)	209(461)	
TIRE (20.5R25VMT, L3) at Each Tire	kg(lb)	236(520)	
RIM( x 25) at Each Rim	kg(lb)	115(254)	
PROPELLER SHAFTS (3EA)	kg(lb)	59(130)	
RADIATOR	kg(lb)	154(340)	w/o Water
MAIN PUMP	kg(lb)	51(112)	
CONTROL VALVE	kg(lb)	39(85)	Standard only
COVER GROUP	kg(lb)	274(604)	
AXLE PIVOT SUPPORT_FRONT	kg(lb)	69(152)	
AXLE PIVOT SUPPORT_REAR	kg(lb)	116(256)	
CABIN ASS'Y (ROPS)	kg(lb)	894(1,970)	
LOADER ARM ASS'Y	kg(lb)	788(1,737)	
TILT LEVER ASS'Y	kg(lb)	226(498)	
2.3 m3 BUCKET ASS'Y (w/ Edge)	kg(lb)	958(2,112)	
LINK	kg(lb)	44(97)	
CYLINDER_ARM	kg(lb)	92(203)	
CYLINDER_BUCKET	kg(lb)	103(227)	

## 13. LIFTING CAPACITY (kgf)

BUCKET	UNIT	2.2 m <sup>3</sup> BOT	2.3 m <sup>3</sup> BOC
Lifting Capacity to Max.Height	kgf	6,170	6,104

MODEL	DL220-3	DOCUMENT No	24/24
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