




The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.



Header 3

 List View

General Information

Contact

Default Values

Discount

Document Information

Procurement Folder: 566300


Procurement Type: Central Master Agreement

Vendor ID: 

Legal Name: RISH EQUIPMENT COMPANY

Alias/DBA:

Total Bid: \$3,658,000.00

Response Date: Response Time:

SO Doc Code: CRFQ

SO Dept: 0803



SO Doc ID: DOT1900000115

Published Date: 6/4/19

Close Date: 6/18/19

Close Time: 13:30

Status: Closed

Solicitation Description: 


Total of Header Attachments: 3

Total of All Attachments: 3



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder : 566300

Solicitation Description : ADDENDUM 1 HYDRAULIC TRACK EXCAVATOR (7019EC11)

Proc Type : Central Master Agreement

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-06-18 13:30:00	SR 0803 ESR06181900000005866	1

VENDOR
000000198312 RISH EQUIPMENT COMPANY

Solicitation Number: CRFQ 0803 DOT1900000115

Total Bid : \$3,658,000.00 **Response Date:** 2019-06-18 **Response Time:** 09:58:30

Comments:

FOR INFORMATION CONTACT THE BUYER
 Crystal G Hustead
 (304) 558-2402
 crystal.g.hustead@wv.gov

Signature on File	FEIN #	DATE
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	HYDRAULIC TRACK EXCAVATOR	20.00000	EA	\$182,900.000000	\$3,658,000.00

Comm Code	Manufacturer	Specification	Model #
22101526			

Extended Description :	HYDRAULIC TRACK EXCAVATOR
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Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Request for Quotation
 13 - Equipment

Proc Folder: 566300

Doc Description: HYDRAULIC TRACK EXCAVATOR (7019EC11)


Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2019-05-08	2019-06-18 13:30:00	CRFQ 0803 DOT1900000115	1

BID RECEIPT
 BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR
 Vendor Name, Address and Telephone Number:
 Rish Equipment Co.
 100 Heliport Loop
 Bridgeport, WV 26330
 304-842-3511

FOR INFORMATION CONTACT THE BUYER
 Crystal Rink
 (304) 558-2402
 crystal.g.rink@wv.gov

Signature X  FEIN # 54-1390608 DATE 6/18/19

All offers subject to all terms and conditions contained in this solicitation



Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Request for Quotation
 13 - Equipment

Proc Folder: 566300

Doc Description: HYDRAULIC TRACK EXCAVATOR (7019EC11)


Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2019-05-08	2019-06-18 13:30:00	CRFQ 0803 DOT1900000115	1

BID RECEIPT
 BID CLERK
 DEPARTMENT OF ADMINISTRATION
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VENDOR
 Vendor Name, Address and Telephone Number:
 Rish Equipment Co.
 100 Heliport Loop
 Bridgeport, WV 26330
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FOR INFORMATION CONTACT THE BUYER
 Crystal Rink
 (304) 558-2402
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Signature X  FEIN # 54-1390608 DATE 6/18/19

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION

THE STATE OF WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, WEST VIRGINIA DIVISION OF HIGHWAYS, IS SOLICITING BIDS TO ESTABLISH AN OPEN-END CONTRACT FOR A HYDRAULIC TRACK EXCAVATOR PER THE ATTACHED DOCUMENTS.

INVOICE	SHIP TO
DIVISION OF HIGHWAYS EQUIPMENT DIVISION RT 33 83 BRUSHY ROAD CROSSING, PO BOX 610 BUCKHANNON WV26201 US	DIVISION OF HIGHWAYS EQUIPMENT DIVISION 83 BRUSHY FORK RD CROSSING BUCKHANNON WV 26201 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	HYDRAULIC TRACK EXCAVATOR	20.00000	EA		

Comm Code	Manufacturer	Specification	Model #
22101526			

Extended Description :
 HYDRAULIC TRACK EXCAVATOR

SCHEDULE

Line	Event	Event Date
1	MANDATORY PRE-BID MEETING	2019-05-29 ✓
2	VENDOR QUESTION DEADLINE	2019-06-03

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Comm Code	Manufacturer	Specification	Model #
22101526			

Extended Description :
 HYDRAULIC TRACK EXCAVATOR

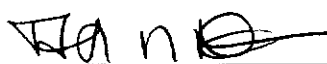
SCHEDULE

Line	Event	Event Date
1	MANDATORY PRE-BID MEETING	2019-05-29 ✓
2	VENDOR QUESTION DEADLINE	2019-06-03

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

Miranda M. Novak, Sales Coordinator
(Name, Title)
Miranda M Novak, Sales Coordinator
(Printed Name and Title)
100 Heliport Loop Bridgeport, WV 26330
(Address)
304-842-3511 (p) / 304-842-6126 (f)
(Phone Number) / (Fax Number)
mnovak@rish.com
(email address)

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Rish Equipment Co.
(Company)
 Sales Coordinator
(Authorized Signature) (Representative Name, Title)
Miranda M. Novak, Sales Coordinator
(Printed Name and Title of Authorized Representative)

(Date)
304-842-3511 (p) / 304-842-6126 (f)
(Phone Number) (Fax Number)

ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: CRFQ DOT1900000115

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.


Addendum Numbers Received:
(Check the box next to each addendum received)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6 |
| <input type="checkbox"/> Addendum No. 2 | <input type="checkbox"/> Addendum No. 7 |
| <input type="checkbox"/> Addendum No. 3 | <input type="checkbox"/> Addendum No. 8 |
| <input type="checkbox"/> Addendum No. 4 | <input type="checkbox"/> Addendum No. 9 |
| <input type="checkbox"/> Addendum No. 5 | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Rish Equipment Co.

Company



Authorized Signature

6/17/19

Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

SPECIFICATIONS

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways, Department of Transportation to establish an open-end contract for Hydraulic Track Excavator.

2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.

2.1 **“Contract Item” or “Contract Items”** means the list of items identified in Section 3, Subsection 1 below.

2.2 **“Pricing Pages”** means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A, and used to evaluate the Solicitation responses.

2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.

2.4 **“WVDOH”** means West Virginia Division of Highways.

2.5 **“F”** means Fahrenheit.

2.6 **“R.P.M.”** means revolutions per minute.

2.7 **“SAHR”** means spring applied hydraulic release.

2.8 **“ROPS”** means Roll- over protection structure

3. **GENERAL REQUIREMENTS:**

3.1 **Contract Items and Mandatory Requirements:** Vendor shall provide Agency with the Contract Items listed below on an open-end and continuing basis. Contract Items must meet or exceed the mandatory requirements as shown below.

3.1.1 **Hydraulic Track Excavator with attachments.**

3.1.1.1 Operating weight shall be minimum 33,500 pounds ✓
including fuel, thumb, and bucket and blade.

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

3.1.1.2 The unit specified herein and offered shall be manufactured on or after January 1, 2020 and will be clearly identified and marked with date of manufacture. ✓

3.1.2 Engine:

3.1.2.1 Engine shall be 90[✓] horsepower minimum; turbocharged diesel Tier 4 Final and shall have a pressurized liquid cooling system with thermostat, filled with manufacturers extended life permanent type anti-freeze that provides protection to at least -30 degrees F. ✓

3.1.2.1.1 Engine shall include the following characteristics;

- A. Fuel/Water separator ✓
- B. Filter in fuel line ✓
- C. Alternator 50 amp minimum - 60 Amp ✓
- D. Electric fuel priming pump ✓
- E. Engine Block heater, 1500 watt minimum if available by engine manufacturer. (NS)
Not needed

3.1.3 Hydraulic System:

3.1.3.1 Shall have hydraulic system to maintain safe oil temperature within manufacturers recommended operation range during continuous operation under maximum working combinations. ✓

3.1.3.2 Boom length shall be minimum 15 feet and shall be controlled by two (2) hydraulic cylinders minimum. ✓

3.1.3.3 Arm length shall be minimum 8 feet and shall be controlled by one (1) hydraulic cylinder and must have 2-way hydraulic flow at minimum. It shall include a shut off valve at end of piping. ✓

3.1.3.4 Unit shall be equipped with a hydraulic thumb minimum of 18 inches x 46 inches. ✓

3.1.3.5 Tine thickness of thumb shall be 1 inch minimum with a pin diameter of 2 inches minimum and a minimum of four (4) tines.

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

- min. width?*
- 3.1.3.6** Bucket shall be 0.50 cubic yard capacity minimum, shall have teeth and side cutters and controlled by one (1) hydraulic cylinder. *what size width?*
- 3.1.3.7** Drive shall be hydrostatic design with independent track control.
- 3.1.3.8** Shall have wet multiple disk brakes that automatically release while propelling and apply when stationary.
- 3.1.3.9** Unit must swing 360° degrees. ✓
- 3.1.3.10** Swing speed shall be 10 R.P.M. minimum ✓
- 3.1.3.11** Swing brake shall be SAHR for safety. ✓
- 3.1.3.12** Unit shall have multi-function auxiliary hydraulics with electric pressure control, settable from in cab monitor allowing use of multiple attachments. ✓

3.1.4 Undercarriage:

- 3.1.4.1** Undercarriage frame shall be manufacturers standard for model bid, and shall include:
- A. Sealed type track ✓
 - B. Track guides to prevent track misalignment ?
 - C. Track adjustment shall be of hydraulic design - grease adjustment
 - D. Manufacturer's triple grouser shoes minimum width 23-inches. ✓
 - E. Track length minimum 11 feet. -
 - F. Belly pan guard. -
 - G. Shall have double track chain guides. ?
- further explanation
→ roller guard?*

3.1.5 Cab:

- 3.1.5.1** Cab shall be ROPS certified. ✓
- 3.1.5.2** Cab shall be all weather steel isolation mounted. ✓
- 3.1.5.3** Unit shall have air-suspension seat cloth, heated seat with adjustable armrest with seatbelt. ✓

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

3.1.5.4 Cab shall be equipped with manufacturers' heater and air conditioning system. ✓

3.1.5.5 Cab shall be equipped with front windshield wiper and washer, intermittent features. ✓

3.1.5.6 Manufacturer's vandalism protection package shall be provided. The vandalism protection package shall include locking cab doors, locking compartments for engine and hydraulic components, locking fuel and radiator access and electrical cut-off switch. All locks except master switch shall be keyed alike. ✓

3.1.5.7 The following shall be included for cab area:

- A. Interior cab light ✓
- B. Work lights at boom and on cab for night shift operations. ✓
- C. Tinted safety glass at all locations ✓
- D. AM and FM radio with Bluetooth and antenna. ✓
- E. Rear and Right-side view camera/monitor, 7-inch minimum color LCD display monitor with indicators. ✓
- F. Sun visor ✓

*? OEM?
only*

*add-it
? OEM?*

aux

3.1.6 Blade

3.1.6.1 Blade dimensions shall be standard size for model excavator bid. ✓

3.1.7 Tilting Coupler/Swivel

3.1.7.1 Unit shall include a tilting coupler. *Helac? Geith?*

3.1.7.2 Total tilt range 134-degrees minimum. *(WB)*

3.1.7.3 Shall allow for use of OEM bucket.

3.1.7.4 Shall include integral quick coupler.

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

3.1.7.5 Swivel shall be installed when delivered. ✓

3.1.8 Finish Bucket

3.1.9 Unit shall include a 48-inch minimum finish bucket with a minimum capacity of 60 cubic yard with fixed cutting edge with bucket pins.

3.1.9 Paint:

3.1.9.1 Unit shall be painted manufacturers standard color. ✓

tail
SWB
radius-
130

3.2 Miscellaneous:

3.2.1 Vendor Responsibility

3.2.1.1 The vendor shall be responsible to furnish a Hydraulic Track Excavator that is properly engineered and that conforms to all and any laws governing such equipment.

3.2.1.2 Unspecified Accessories & Features: All parts, equipment, accessories, material, design and performance characteristics not specified herein, but which are necessary to provide a complete unit, must be furnished with each unit and required to conform to strength, quality of material, and quality of workmanship to those which are advertised and provided to the market in general by the unit industry.

3.2.1.3 All parts and accessories advertised and regularly supplied as standard shall be included, except those which would represent duplication of these specified and except those which, by specification, are not to be furnished.

3.2.1.4 All standard safety features required by Federal and State Law, shall be included.

~~3.2.1.5 Inspection: WVDOH requires unit shall have a West Virginia State inspection sticker upon delivery.~~

Notable

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

3.2.1.6 Unit shall be delivered: to WVDOH with all manufacturers recommended safety related decals and safety features intact.

3.2.2 Representative Unit for Test:

3.2.2.1 The successful vendor must (if specified) provide the DOH one (1) completed represented unit to be observed and evaluated on each order to insure compliance with specification. If requested, the time period for testing and evaluation shall be seven (7) working days following receipt of the unit. DOH will incur no obligation for deterioration of surfaces, finishes, seals, and mechanical or electrical parts on the unit resulting from operation and testing within the limits of these specifications; nor will DOH incur obligation for damage to the unit resulting from failure to meet specifications when due care and attention is given by DOH and testing is done within the limits of these specifications. Failure of the pilot unit to satisfactorily meet specifications as bid may be cause for cancellation of the purchase order and return of the delivered unit along with all associated equipment to the vendor at the vendor's expense.

3.2.3 Operating and Service Manuals and Parts Lists:

3.2.3.1 An operator's manual must be included with each unit upon delivery. A "line sheet" (if applicable) and the "Equipment Preventative Maintenance Questionnaire", (Exhibit "B") must be with pilot unit upon delivery, Attn: Marcia Lee. There must be 12 service/shop/maintenance manuals and 14 parts manuals; USB storage drive is preferred in lieu of parts manuals. Manuals and USB storage drive shall be delivered upon completion of delivery of total units. Failure to do so will delay payment.

3.2.4 Training:

3.2.4.1 Manufacturers and/or dealers will be required to stage a thorough seminar on the subjects of Preventative Maintenance, Operator, and Mechanic Training. In order to keep operators and mechanics updated, the successful vendor shall conduct training sessions covering the

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

operation, maintenance, trouble- shooting with each purchase order against this open-end contract.

Manufacturers and/or dealers shall be required to furnish the Training Academy with one (1) Operator's Manual to be shipped direct to

WVDOH
Training Academy
P.O. Box 610
Buckhannon, West Virginia 26201

Prior to delivery of the pilot unit. Training seminar to be held at the WVDOT, Equipment Division, Buckhannon, WV.

3.2.5 Preventative Maintenance & Operator Procedures:

3.2.5.1 Manufacturers and/or dealers will be required to submit to the Equipment Division, in addition to the operating and service manuals, booklets and pamphlets explaining the Preventative Maintenance and Operator Procedures to be used by the operators of this equipment, and must include such things as daily prestart inspection procedure, service schedule, and routine maintenance required, safety precautions, etc. The successful vendor shall furnish all training aids; i.e. videos, projectors as required in conducting the training.

3.2.6 Warranty and Service Policy:

3.2.6.1 The bid shall include a breakdown of the complete manufacturer's warranty per section. The unit must be accompanied upon delivery by the unit's manufacturers executed warranty and service policy.

4. CONTRACT AWARD:

4.1 Contract Award: The Contract is intended to provide Agencies with a purchase price on all Contract Items. The Contract shall be awarded to the Vendor that provides the Contract Items meeting the required specifications for the lowest overall total cost as shown on the Pricing Pages.

4.2 Pricing Pages: Vendor should complete the Pricing Pages (Exhibit A) by completing the Year, Make, Model, and inserting quoted unit price. Vendor should take estimated Quantity and multiply by unit price to get grand total.

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

Vendor should complete the pricing pages in their entirety as failure to do so may result in Vendor's bids being disqualified.

The Pricing Page contains a list of the Contract Items and estimated purchase volume. The estimated purchase volume for each item represents the approximate volume of anticipated purchases only. No future use of the Contract or any individual item is guaranteed or implied.

Vendor should electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. In most cases, the Vendor can request an electronic copy of the Pricing Pages for bid purposes by sending an email request to the following address: Crystal.G.Rink@wv.gov.

5. ORDERING AND PAYMENT:

5.1 Ordering: Vendor shall accept orders by regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.

5.2 Payment: Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia.

6. DELIVERY AND RETURN:

Delivery 120 Pilot for balance

6.1 Delivery Time: A completed pilot model for inspection must be provided within 120 working day(s) after receipt of the pilot model order, by the successful vendor. Vendor shall deliver standard orders within 150 working days after orders are received Working day is defined as any week day, Monday thru Friday, excluding Federal and State Holidays. Vendor shall ship all orders until a minimum delivery quantity is met.

6.2 Late Delivery: The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party.

Any Agency seeking to obtain items from a third party under this provision must first

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

obtain approval of the Purchasing Division.

6.3 Delivery Payment/Risk of Loss: Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery.

6.4 Condition of Unit(s) Upon Delivery: All units must arrive at the prescribed delivery point having been completely pre-serviced with oil, lubricants, and coolant. All prescribed precautions pertaining to first operations and break-in of the unit are to be posted conspicuously on the unit for ready observance by the operator.

6.5 Delivery Point: Delivery point of the completed representative unit will be the WVDOH, Equipment Division, 83 Brushy Fork Crossing, Buckhannon, WV 26201.

7. VENDOR DEFAULT:

7.1 The following shall be considered a vendor default under this Contract.

7.1.1 Failure to provide Contract Items in accordance with the requirements contained herein.

7.1.2 Failure to comply with other specifications and requirements contained herein.

7.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.

7.1.4 Failure to remedy deficient performance upon request.

7.2 The following remedy shall be available to Agency upon default.

7.2.1 Immediate cancellation of the contract.

7.2.2 Immediate cancellation of one or more release orders issued under this Contract.

7.2.3 Any other remedies available in law or equity.

REQUEST FOR QUOTATION
CRFQ DOT1900000115
(WVDOH CLASS 310) HYDRAULIC TRACK EXCAVATOR-7019EC11

8. MISCELLANEOUS:

8.1 No Substitutions: Vendor shall supply only Contract Items submitted in response to RFQ unless a contract modification is approved in accordance with the provisions contained in this contract.

8.2 Reports: Vendor shall provide quarterly reports and annual summaries to the Agency showing the Agency's items purchased, quantities of items purchased, and total dollar value of the items purchased. Vendor shall also provide reports, upon request, showing the items purchased during the term of this Contract, the quantity purchased for each of those items, and the total value of purchases for each of those items. Failure to supply such reports may be grounds for cancellation of this Contract.

8.3 Contract Manager: During its performance of this Contract, Vendor must designate and maintain a primary contract manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract manager and his or her contact information below.

Contract Manager: Miranda Nasak
Telephone Number: 304-842-3511 x6518
Fax Number: 304-842-6126
Email Address: mnoval@erish.com

Exhibit A**CRFQ DOT1900000115****HYDRAULIC TRACK EXCAVATOR**

Item No.	Description:	Make/Model & Year	Estimated Unit Quantity	Unit Price	Item Total Cost
1	One Complete unit: Hydraulic Track Excavator	2020 Komatsu PC138USLC-11	20	\$ 182,900. ⁰⁰	\$ 3,658,000. ⁰⁰

Total Bid Cost\$ 3,658,000. ⁰⁰**Vendor Information**

Company Name: Rish Equipment Co.

Contract Manager: Miranda M. Novak

Address: 100 Heliport Loop

Bridgeport, WV 26330

Phone: 304-842-3511 x 6518

Fax: 304-842-6126

Email: mnovak@rish.com

Signature:

filled out by award winner

EXHIBIT B

EQUIPMENT PREVENTATIVE MAINTENANCE QUESTIONNAIRE

THIS FORM MUST BE COMPLETED IN ITS ENTIRETY BY SUCCESSFUL BIDDER OR MANUFACTURER'S TECHNICAL REPRESENTATIVE PRIOR TO DELIVERY TO THE WVDOT.

DESCRIPTION: _____ MAKE: _____

MODEL: _____ YEAR: _____ PURCHASE AMOUNT: _____

ENGINE: MAKE: _____ MODEL: _____ FUEL TYPE: _____

HORSEPOWER: _____ CYLINDER: _____ ENGINE SERIAL: _____

COOLING SYSTEM CAPACITY: _____

BELTS:	DESCRIPTION:	PART NUMBERS:
	_____	_____
	_____	_____

GVW: _____ AXLE CAPACITY: FRONT: _____ REAR: _____

TIRES: FRONT MAKE & SIZE: _____

REAR MAKE & SIZE: _____

DIMENSIONS OF UNIT: LENGTH: _____ WIDTH: _____ LENGTH: _____

VENDOR CONTACT PERSON: _____ PHONE: _____

PARTS:

BATTERY MAKE: _____ MODEL: _____ CCA: _____

TOP OR SIDE POST: _____ DIMENSIONS: LENGTH _____ WIDTH _____ HEIGHT _____

SPARK PLUGS OR FUEL INJECTORS MAKE: _____ PART # _____

FUEL PUMP OR INJECTION PUMP MAKE: _____ MODEL: _____

ALTERNATOR MAKE: _____ PART #: _____

STARTER MAKE: _____ PART #: _____

TURBO CHARGER MAKE: _____ PART #: _____

TRANS. MAKE: _____ MODEL: _____ AUTO/MANUAL: _____

HYDRAULIC PUMP MAKE: _____ MODEL: _____

FILTERS	MAKE	PART NO.	LUBRICANT	MANUFACTURER TYPE
OIL	_____	_____	ENGINE	_____
AIR INNER	_____	_____	TRANSMISSION	_____
AIR OUTER	_____	_____	POWER STEERING	_____
FUEL PRIMARY	_____	_____	HYDRAULIC	_____
FUEL SECONDARY	_____	_____	DIFFERENTIALS	_____
COOLANT	_____	_____	BRAKE FLUID	_____
HYDRAULIC	_____	_____	COOLANT	_____
OTHER	_____	_____	OTHER	_____

West Virginia Ethics Commission



Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: Rish Equip. Address: 100 Heliport Loop
Bridgeport WV 26330

Name of Authorized Agent: Miranda Novak Address: same

Contract Number: _____ Contract Description: _____

Governmental agency awarding contract: _____

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract
 Check here if none, otherwise list entity/individual names below.
2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)
 Check here if none, otherwise list entity/individual names below.
3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)
 Check here if none, otherwise list entity/individual names below.

Signature: [Signature] Date Signed: 6/18/19

Notary Verification

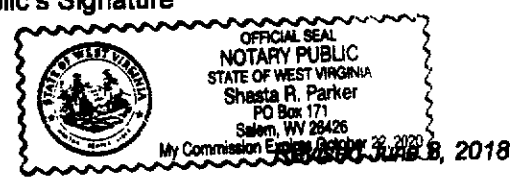
State of West Virginia, County of Harrison:

I, Miranda Novak, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 18th day of June, 2019

Shasta R. Parker
Notary Public's Signature

To be completed by State Agency:
Date Received by State Agency: _____
Date submitted to Ethics Commission: _____
Governmental agency submitting Disclosure: _____



STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

CONSTRUCTION CONTRACTS: Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

ALL CONTRACTS: Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

EXCEPTION: The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Employer default" means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

"Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

AFFIRMATION: By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

WITNESS THE FOLLOWING SIGNATURE:

Vendor's Name: Rish Equipment Co.

Authorized Signature: [Signature] Date: 6/18/19

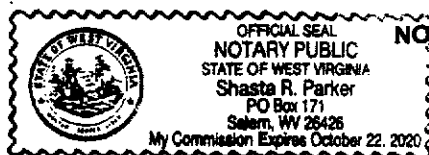
State of West Virginia

County of Harrison to-wit:

Taken, subscribed, and sworn to before me this 18th day of June, 2019.

My Commission expires October 22, 2020.

AFFIX SEAL HERE



NOTARY PUBLIC

Shasta R Parker

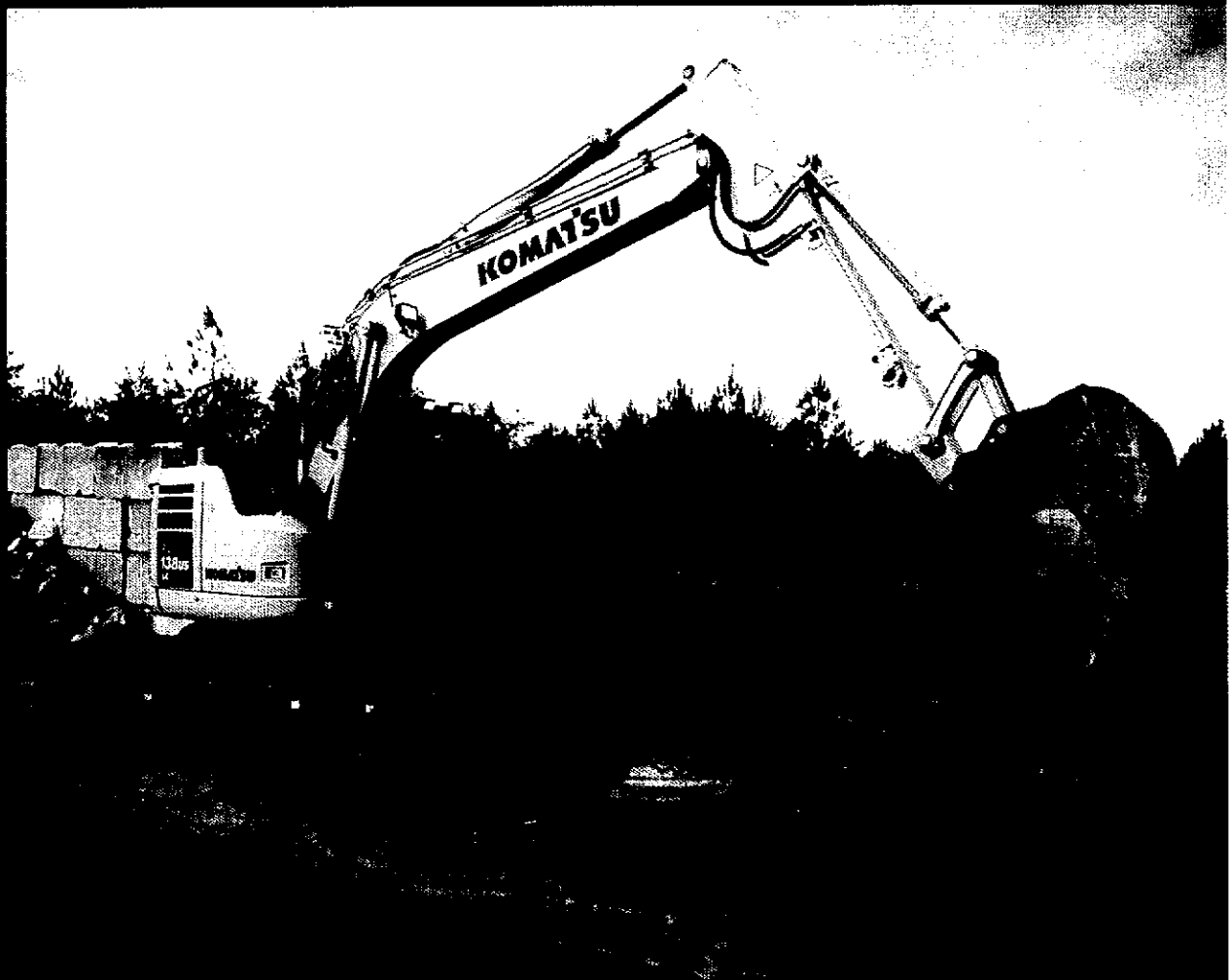
Purchasing Affidavit (Revised 01/19/2018)

KOMATSU®

PC138USLC-11

Tier 4 Final Engine

HYDRAULIC EXCAVATOR



PC138USLC

NET HORSEPOWER

97.2 HP @ 2050 rpm
72.5 kW @ 2050 rpm

OPERATING WEIGHT

34,563–37,547 lb
15,682–17,032 kg

BUCKET CAPACITY

0.34–1.00 yd³
0.26–0.76 m³

WALK-AROUND

PC138USLG-11



Photos may include optional equipment.

NET HORSEPOWER

97.2 HP @ 2050 rpm
72.5 kW @ 2050 rpm

OPERATING WEIGHT

34,563–37,547 lb
15,682–17,032 kg

BUCKET CAPACITY

0.34–1.00 yd³
0.26–0.76 m³



CONVENTIONAL PERFORMANCE IN A TIGHT TAIL BODY

Heavy counterweight mass provides equal or better lift capacity than most conventional excavators in the same size class.

Rounded cab profile with a sliding door, allows the cab to swing within the same swing radius as the counterweight for true tight tail performance.

A powerful Komatsu SAA4D95LE-7 engine provides a net output of 72.5 kW 97.2 HP. This engine is EPA Tier 4 Final emissions certified.

Variable Flow Turbocharger improves engine response and provides optimum air flow under all speed and load conditions.

Komatsu Diesel Oxidation Catalyst (KDOC) reduces particulate matter using passive regeneration over 98% of the time.

Selective Catalytic Reduction (SCR) reduces NOx and has easy to access components.

Komatsu Auto Idle Shutdown helps reduce nonproductive engine idle time and reduces operating costs.

Komatsu's Closed-center Load Sensing System (CLSS) provides quick response and smooth operation to maximize productivity.

Enhanced working modes are designed to match engine speed, pump delivery, and system pressure to the application.

Temperature controlled fan clutch helps improve fuel efficiency and lower sound levels.

Large LCD color monitor panel:

- 7" high resolution screen
- Provides "Ecology-Guidance" for fuel efficient operation
- Enhanced attachment control

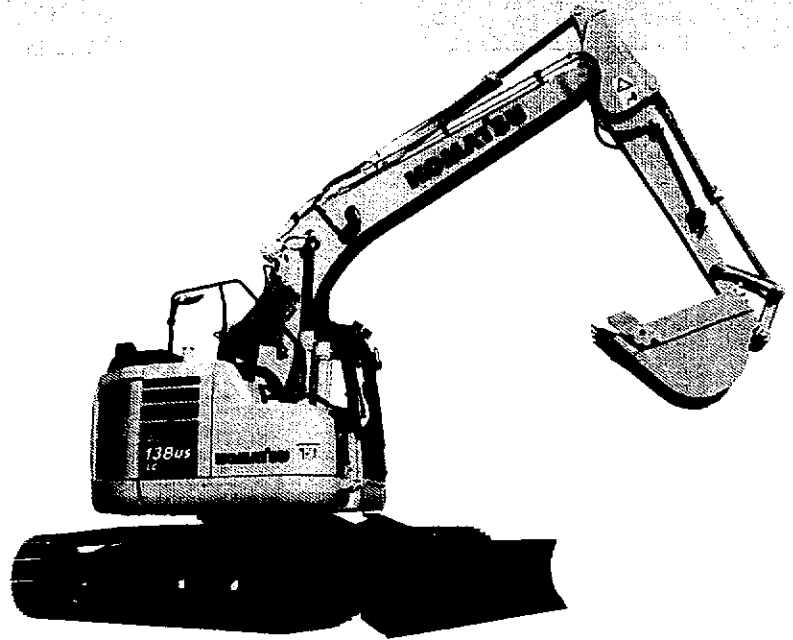
Aux jack and (2) 12V outlets

Rearview monitoring system (standard)

Equipment Management Monitoring System (EMMS) continuously monitors machine operation and vital systems to identify machine issues and assist with troubleshooting.

Enhanced working environment

- Integrated ROPS cab design (ISO 12117-2)
- Cab meets ISO Level 1 Operator Protective Guard (OPG) top guard (ISO 10262)



Wide access service doors provide easy access for ground level maintenance.

Komatsu designed and manufactured components

New engine and hydraulic control technology improves operational efficiency and lowers fuel consumption by up to 4%.

New quick return arm valve improves arm cylinder hydraulic flow for faster arm out speed and performance.

Handrails (standard) provides convenient access to the upper structure.

Battery disconnect switch allows a technician to disconnect the power supply before servicing the machine.

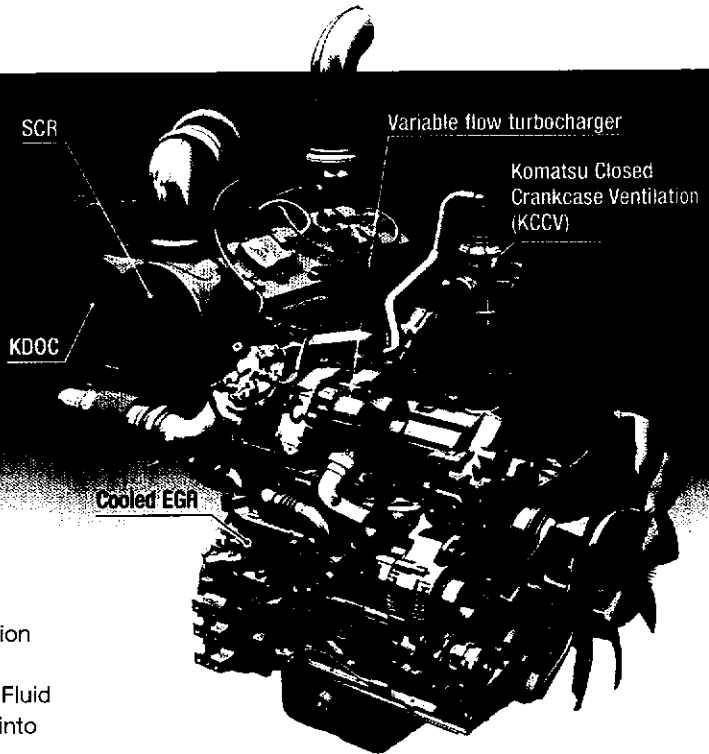
The KOMTRAX® telematics system is standard on Komatsu equipment with no subscription-fee's throughout the life of the machine. Using the latest wireless technology, KOMTRAX® transmits valuable information such as location, utilization, and maintenance records to a PC or smart-phone app. Custom machine reports are provided for identifying machine efficiency and operating trends. KOMTRAX® also provides advanced machine troubleshooting capabilities by continuously monitoring machine health.

PERFORMANCE FEATURES

KOMATSU NEW ENGINE TECHNOLOGIES

New Tier 4 Final Engine

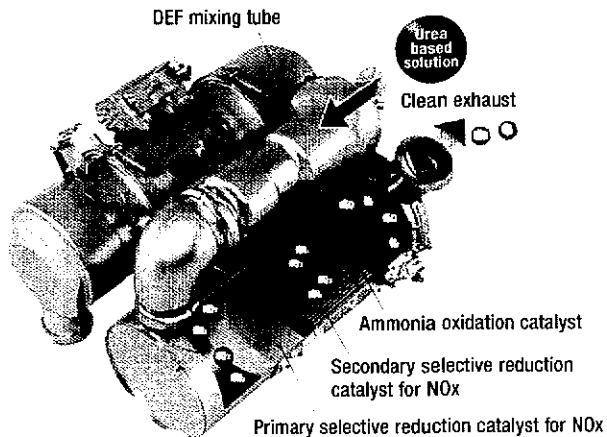
New regulations require the reduction of NOx emissions to one tenth or below from the preceding regulations. Komatsu has developed a new Selective Catalytic Reduction (SCR) device for use in the PC138USLC-11 and other models.



Technologies Applied to New Engine

Heavy-duty aftertreatment system

This new system combines a Komatsu Diesel Oxidation Catalyst (KDOC) and SCR. The SCR NOx reduction system injects the correct amount of Diesel Exhaust Fluid (DEF) at the proper rate, thereby decomposing NOx into non-toxic water (H₂O) and nitrogen gas (N₂).



Heavy-duty cooled Exhaust Gas Recirculation (EGR) system

The system recirculates a portion of exhaust gas into air intake and lowers combustion temperatures to reduce NOx emissions. Furthermore, while EGR gas flow is increased, by incorporating a high-efficiency and compactly designed cooling system, the system achieves a dynamic reduction of NOx, while helping reduce fuel consumption.

Advanced Electronic control system

The electronic control system performs high-speed processing of all signals from sensors installed in the machine providing total control of equipment in all operating conditions of use. Engine condition information is displayed via an onboard network to the monitor inside the cab, providing necessary information to the operator. Additionally, managing the information via KOMTRAX helps customers keep up with required maintenance.

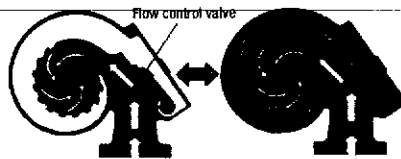
High Pressure Common Rail (HPCR) fuel injection system

High pressure fuel injection with computerized control attains close to complete combustion reducing Particulate Matter (PM) emissions. While this technology is already used in current engines, the new system uses a higher-pressure injection, thereby reducing both PM emissions and fuel consumption at all engine load conditions.

Variable flow turbocharger

A variable flow turbocharger features simple and reliable technology that varies the intake air-flow. The Exhaust turbine speed is controlled by a flow control valve that optimizes air volume to the engine combustion chamber under all engine speed and load conditions. The result is cleaner exhaust

gas while maintaining power and performance.



PC138USLC-11

Fuel consumption is reduced up to 4%

Fuel consumption is reduced up to 4% using a temperature controlled viscous fan clutch and improved engine and hydraulic system efficiencies.

Fuel Consumption Compared to the PC138USLC-10

Reduced by up to 4%

Based on typical work pattern collected via KOMTRAX. The fuel consumption reduction may be less than the above value during actual work, depending on the application. The fuel consumption data is based on in-house test results.

Komatsu Auto Idle Shutdown

Komatsu auto idle shutdown automatically shuts the engine down after idling for a set period of time to reduce unnecessary fuel consumption and exhaust emissions. The countdown to engine shutdown can be easily programmed from 5 to 60 minutes.

Efficient hydraulic system

The PC138USLC-11 uses a Closed-center Load Sensing System (CLSS) that improves fuel efficiency and provides quick response to the operator's demands. The control system matches engine and hydraulic demand at the most efficient point under any load condition. There have also been improvements in the main valve and hydraulic circuit to reduce hydraulic loss, resulting in higher efficiency and lower fuel consumption.

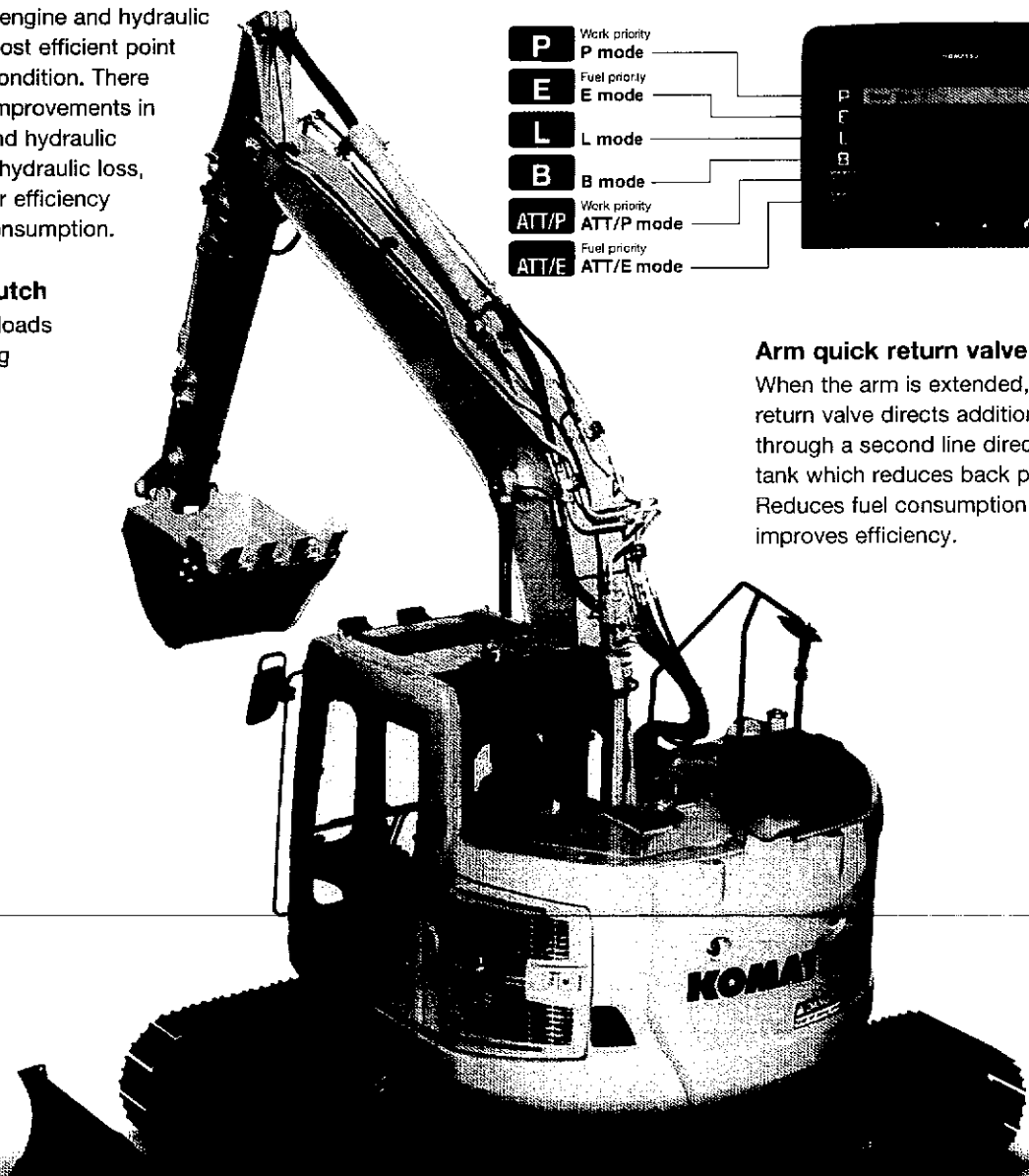
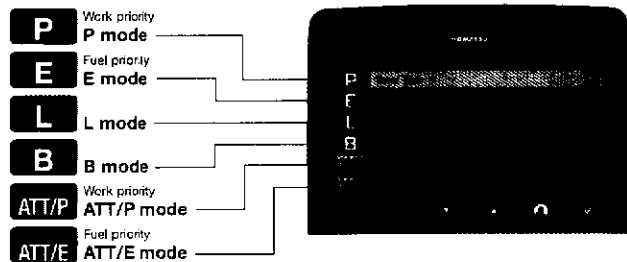
Viscous fan clutch

Reduces engine loads at lower operating temperatures.

Working Mode Selection

The PC138USLC-11 excavator is equipped with six working modes (P, E, L, B, ATT/P and ATT/E). Each mode is designed to match engine speed, pump flow, and system pressure to the application. The PC138USLC-11 features an attachment mode (ATT/E) that allows operators to run attachments while in Economy mode.

Working Mode	Application	Advantage
P	Power mode	<ul style="list-style-type: none"> •Maximum production/power •Fast cycle times
E	Economy mode	<ul style="list-style-type: none"> •Good cycle times •Better fuel economy
L	Lifting mode	<ul style="list-style-type: none"> •Increases hydraulic pressure
B	Breaker mode	<ul style="list-style-type: none"> •Optimum engine rpm, hydraulic flow
ATT/P	Attachment Power mode	<ul style="list-style-type: none"> •Optimum engine rpm, hydraulic flow, 2-way •Power mode
ATT/E	Attachment Economy mode	<ul style="list-style-type: none"> •Optimum engine rpm, hydraulic flow, 2-way •Economy mode

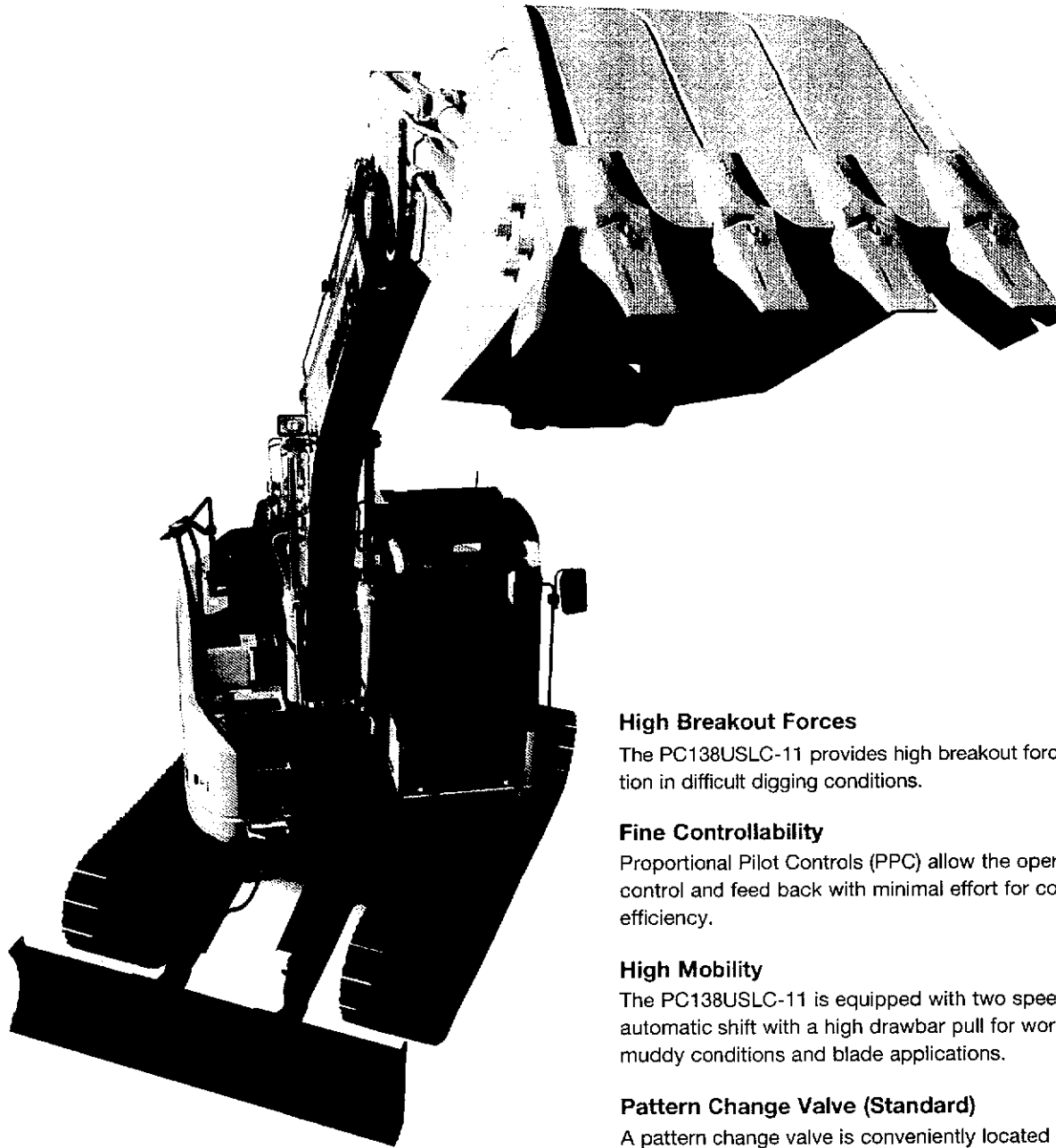


Arm quick return valve

When the arm is extended, the quick return valve directs additional oil through a second line directly back to tank which reduces back pressure. Reduces fuel consumption and improves efficiency.

PERFORMANCE FEATURES

PC138USLC-11



Blade Ready

Every PC138USLC-11 is equipped for easy field installation of a wide 2590 mm 8'6" blade.



High Breakout Forces

The PC138USLC-11 provides high breakout forces for operation in difficult digging conditions.

Fine Controllability

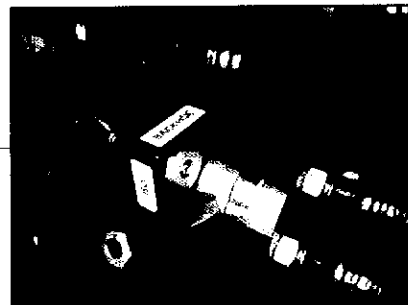
Proportional Pilot Controls (PPC) allow the operator finite control and feed back with minimal effort for comfort and efficiency.

High Mobility

The PC138USLC-11 is equipped with two speed travel and automatic shift with a high drawbar pull for work in wet or muddy conditions and blade applications.

Pattern Change Valve (Standard)

A pattern change valve is conveniently located at the front of the machine, making switching from excavator controls to backhoe controls quick and easy.



OPERATION FEATURES

SHORT SWING RADIUS

Short Implement Swing Radius

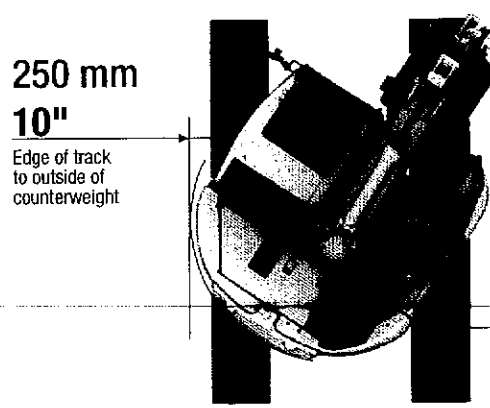
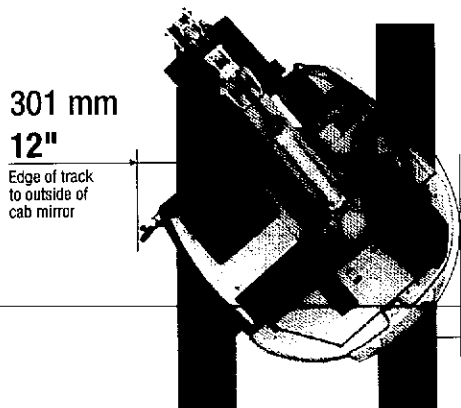
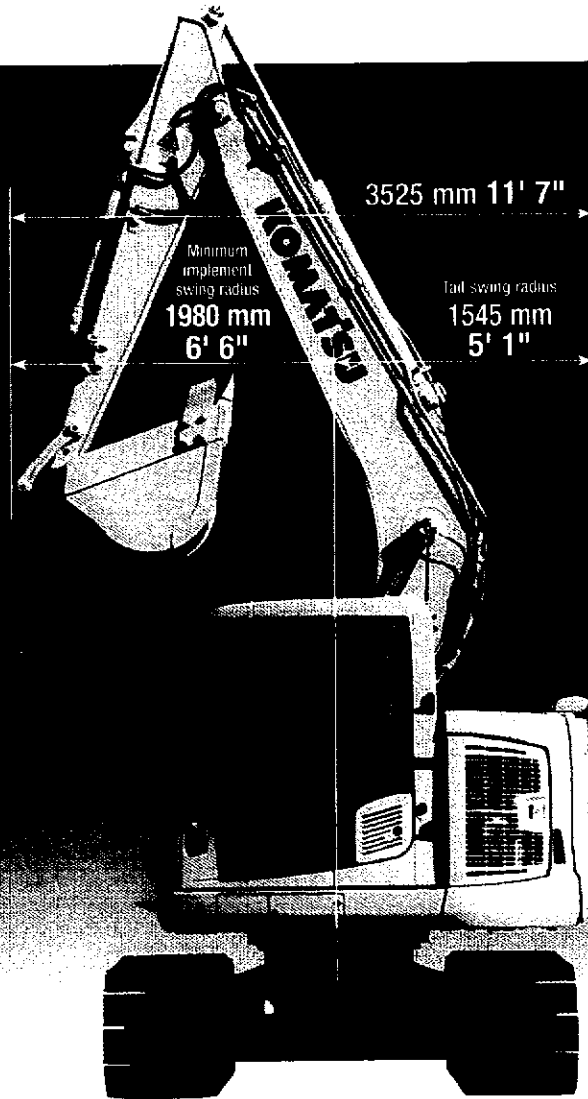
A higher boom raise angle than a standard excavator reduces the minimum front implement swing radius down to 1980mm **6'6"**. The result is greater front swing clearance when space is limited.

Short Tail Swing Radius

1545 mm **5'1"** short tail swing radius of the PC138USLC-11 allows the machine to work in more confined areas than a conventional machine.

Ideal for Confined Applications

The PC138USLC-11 is an ideal machine for applications such as road work, underground utilities or other applications where a conventional excavator will not fit. The contoured cab design and convex sliding door allow the cab to swing within the same radius as the counterweight. Trucks can be positioned closer to the machine when working within one lane of traffic, improving operator confidence and job efficiency.



Shoe width is 600 mm 24"

OPERATION FEATURES

ROPS CAB STRUCTURE

ROPS Cab (ISO 12117-2)

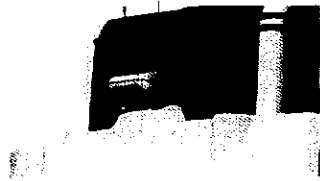
The machine is equipped with a ROPS cab that conforms to ISO 12117-2 for excavators as standard equipment. It also satisfies the requirements for Level 1 Operator Protective Guard (OPG) and top guard (ISO 10262).



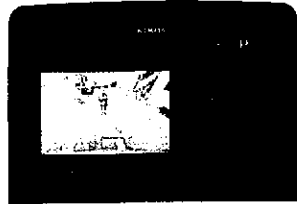
Rear View Monitoring System

An updated rear view monitoring system display has a camera image that is continuously displayed together with the gauges and important vehicle information. This enables the operator to carry out work while easily checking the surrounding area.

Rear view camera

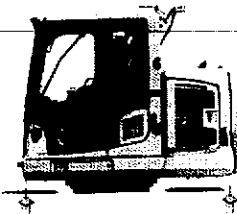
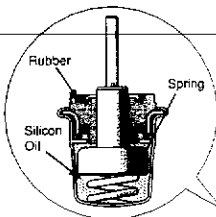


Rear view image on monitor



Low Vibration with Viscous Cab Mounts

The PC138USLC-11 uses viscous mounts for the cab that incorporate a longer stroke and the addition of a spring. The cab damper mounting combined with a high rigidity deck reduces vibration at the operator's seat.



General Features

Lock lever

Seat belt, retractable

Tempered & tinted glass

Large mirrors

Slip-resistant plates

Thermal and fan guards

Pump/engine room partition

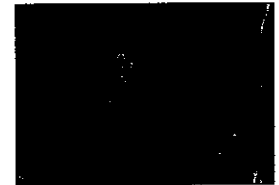
Travel alarm

Large cab entrance step

Handrails

Sliding door

Secondary engine shut down switch at base of seat to shutdown the engine.

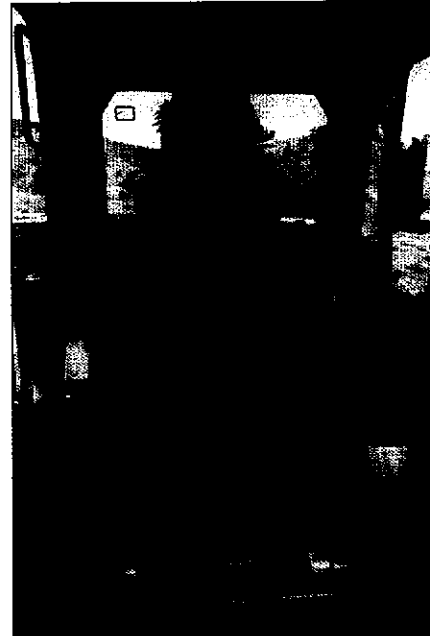


WORKING ENVIRONMENT

Comfortable Working Space

Large cab with wide front view and foot space

A large operator cab with rounded corner provides an overall cab size similar to a standard excavator cab even though this machine has an extra small swing radius. A sliding door enables easy access especially in confined work areas. Additional operator comfort is provided with a fully adjustable suspension seat.



Automatic Air Conditioner

The automatic air conditioner allows the operator to easily and precisely set the cab atmosphere using the large LCD color monitor panel. The bi-level control function improves air flow and keeps the inside of the cab comfortable throughout the year.



Auxiliary input jack

Connecting an auxiliary device such as an MP3 player to the auxiliary input enables the operator to hear the sound throughout the stereo speakers installed in the cab.



Low cab noise

Standard Equipment

Automatic air conditioner (A/C)

Pull-up front window



Remote intermittent wiper with windshield washer



Cab light

Opening & closing skylight

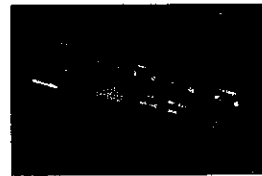


Defroster (conforms to the ISO standard)



Windshield glass with excellent UV filtering

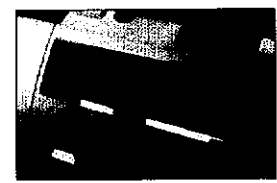
AM/FM radio



Cup holder



Literature box



Cigarette lighter & 12 V power supply



WORKING ENVIRONMENT

LARGE HIGH RESOLUTION LIQUID CRYSTAL DISPLAY (LCD) MONITOR



New Monitor Panel Interface Design

An updated large high resolution LCD color monitor enables accurate and smooth work. The interface has been redesigned to display key machine information in a new user friendly interface. A rear view camera and a DEF level gauge display have been added to the default main screen. The interface has a function that enables the main screen mode to be changed to provide the optimum screen information for the operator.

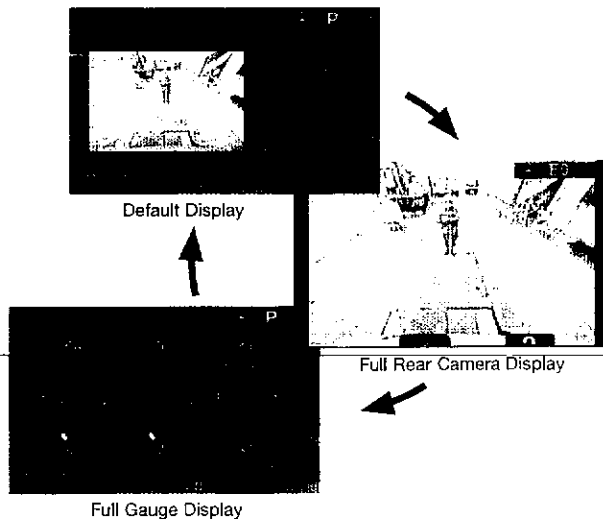
- | | |
|------------------------------------|-----------------------------|
| 1 Auto-decelerator | 8 DEF level gauge |
| 2 Working mode | 9 Service meter, clock |
| 3 Travel speed | 10 Fuel consumption gauge |
| 4 Ecology gauge | 11 Guidance icon |
| 5 Camera display | 12 Function switches |
| 6 Engine coolant temperature gauge | 13 Camera direction display |
| 7 Hydraulic oil temperature gauge | 14 DEF level caution lamp |

Basic operation switches

- | | |
|-------------------------|--------------------------|
| 1 Auto-decelerator | 8 Buzzer cancel |
| 2 Working mode selector | 9 Wiper |
| 3 Travel speed selector | 10 Window washer |
| | 11 Auto climate controls |

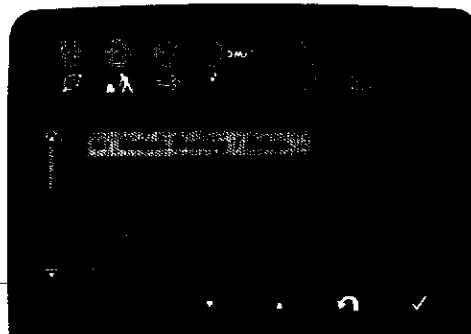
Switchable display modes

The updated monitor screen display mode can be easily switched by pressing the F3 key.



Visual user menu

Pressing the F6 key on the main screen displays the user menu screen. The menus are grouped for each function, and use easy-to-understand icons which enable the machine to be operated easily.



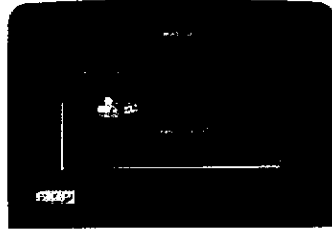
- 1 Energy saving guidance
- 2 Machine settings
- 3 Aftertreatment device regeneration*
- 4 SCR information
- 5 Maintenance
- 6 Monitor setting
- 7 Message check

*Blank screen, does not apply to SAA4D95LE-7. The DOC is 100% passive regeneration.

PG138USLG-11

Operator Identification Function

An operator identification (ID) code can be set for each operator and used to manage operation information of individual machines using KOMTRAX data. Data sent from KOMTRAX can be used to analyze operation status by operator, application etc. as well as by machine.



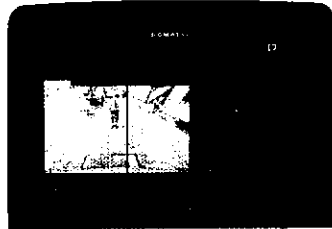
Support Efficiency Improvement

Ecology guidance

While the machine is operating, Ecology guidance information can be displayed on the monitor screen to provide fuel saving advice in real time.

Ecology gauge & fuel consumption gauge

The monitor screen includes an Ecology gauge and a fuel consumption gauge which is displayed continuously. The operator can set a target value.



Ecology gauge Fuel consumption gauge
Ecology guidance

Operation records, fuel consumption history, and Ecology guidance records

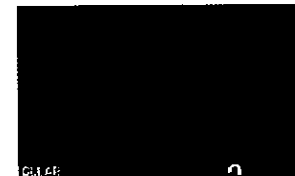
The Ecology guidance menu enables the operator to check the operation records, fuel consumption history and Ecology guidance records.



Ecology guidance record



Operation record



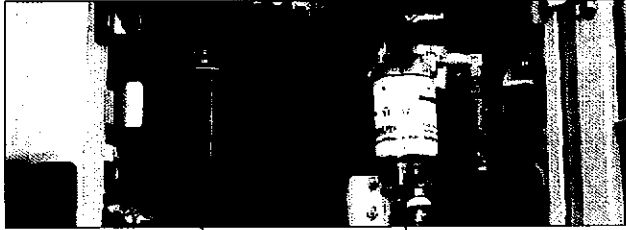
Fuel consumption history



MAINTENANCE FEATURES

Standard high-efficiency fuel filter and fuel pre-filter with water separator

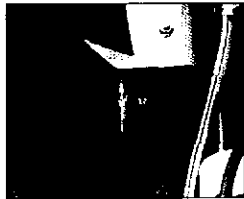
A high-efficiency fuel filter and a fuel pre-filter with water separator increase reliability. The fuel pre-filter is equipped with a priming pump.



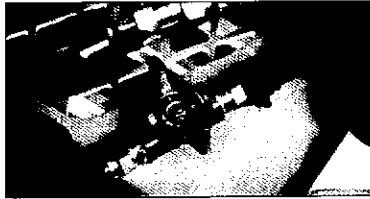
High efficiency fuel filter Fuel pre-filter (With water separator)

Easy access to engine oil filter, engine main fuel filter and fuel drain valve

The engine oil filter, engine main fuel filter and fuel drain valve are remote mounted to improve accessibility.



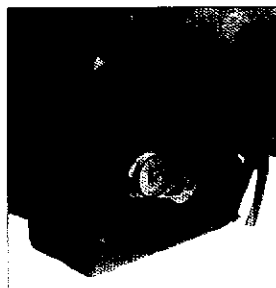
Engine oil filter



Fuel drain valve

Battery disconnect switch

A standard battery disconnect switch allows a technician to disconnect the power supply and lock out before servicing the machine.



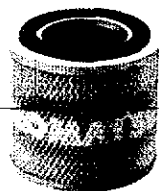
Long-life oil, filter

Engine oil & engine oil filter	every 500 hours
Hydraulic oil	every 5000 hours
Hydraulic oil filter	every 1000 hours



Fan belt auto-tensioner

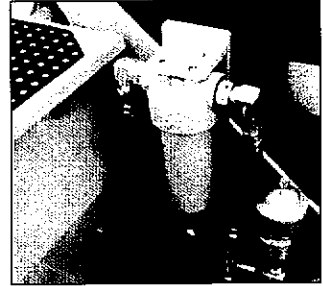
For maintenance free fan belt tension adjustment.



Hydraulic oil filter (Ecology white plus element)

Attachment circuit filter

An easy access filter protects the hydraulic system from attachment contaminants (included with factory + 1 attachment piping).

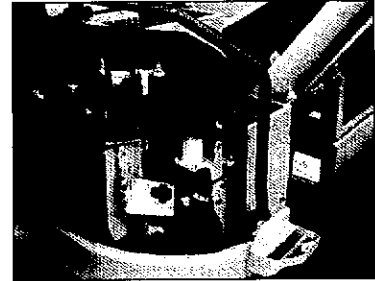


A/C filter

The A/C, cab air filter is serviced without the use of tools.

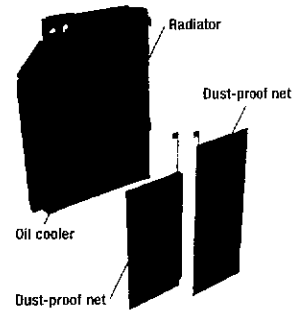
DEF tank and pump

Designed for ground level access, the DEF tank includes a sight glass gauge and the DEF pump and filter are conveniently located next to the DEF tank.



Side-by-side cooling

The radiator and oil cooler are side-by-side modules which simplifies cleaning, removal and installation. The addition of screens help keep the cooler cores clean and free of debris.



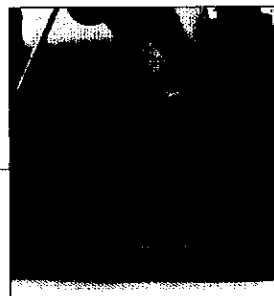
Large tool box

A tool box large enough for storing a grease gun is provided as standard.

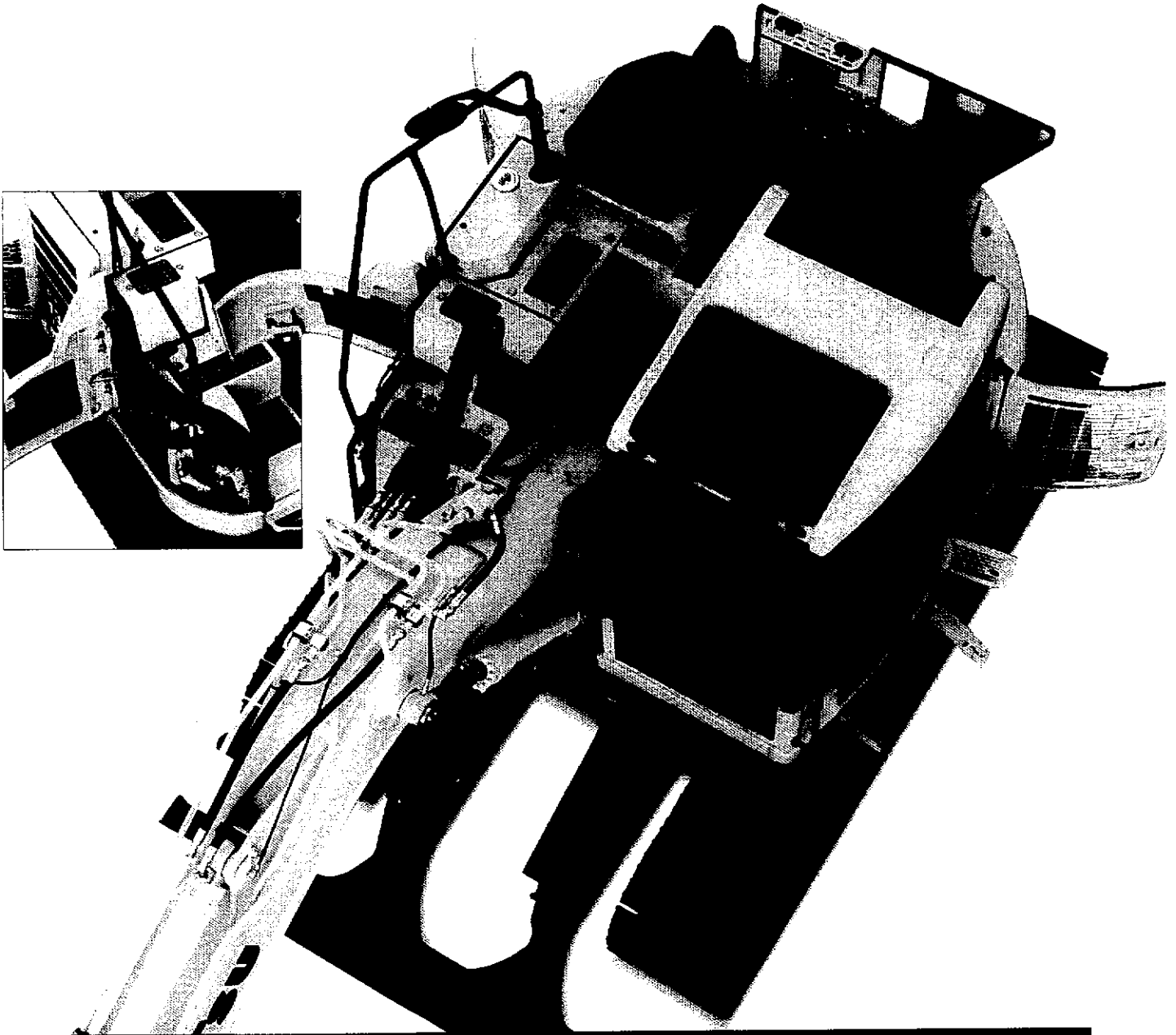


Easy-to-clean cab floor mat

The PC138USLC-11's surface grooves run parallel to the operator and has a flanged edge combined with drainage holes to allow water run off when cleaning the cab.



PC138USLC-11



Maintenance Information

“Maintenance time caution lamp” display

When the remaining time to maintenance becomes less than 30 hours* a maintenance time monitor appears.

* The settings can be changed to between 10 and 200 hours.



Maintenance screen

Aftertreatment device automatic regeneration display

When performing automatic regeneration to clean any urea deposits in the exhaust system, the monitor will display an action icon to the operator. There is no interruption to the operation of the machine during this cycle.



Aftertreatment device regeneration screen

DEF level and refill timing

The DEF level gauge is displayed continuously on the right side of the monitor screen. In addition, when the DEF level is low, DEF low level guidance messages appear as pop up displays to inform the operator.

* The 2014 standards for exhaust gases stipulates that when DEF level becomes low the engine must derate.



DEF level gauge



DEF low level guidance

KOMATSU PARTS & SERVICE SUPPORT



KOMATSU CARE

Program Includes:

*The PC138USLC-11 comes standard with complimentary factory scheduled maintenance for the first 3 Years or 2,000 Hours, whichever comes first.

Planned Maintenance Intervals at:

500/1000/1500/2000 hour intervals. (250 hr. initial interval for some products) Complimentary Maintenance Interval includes: Replacement of Oils & Fluid Filters with genuine Komatsu Parts, 50-Point inspection, Komatsu Oil & Wear Analysis Sampling (KOWA) / Travel & Mileage (distance set by distributor; additional charges may apply)

Benefits of Using Komatsu CARE

- Assurance of Proper Maintenance with OEM Parts & Service
- Increased Uptime & Efficiency
- Factory Certified Technicians Performing Work
- Cost of Ownership Savings
- Transferable Upon Resale

Complimentary SCR System Maintenance

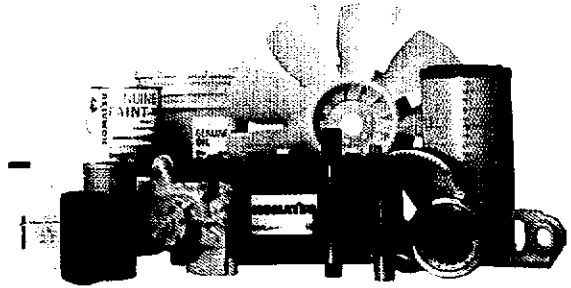
The PC138USLC-11 also includes 2 factory recommended services of the Selective Catalytic Reduction (SCR) Diesel Exhaust Fluid (DEF) system during the first 5 years or 9,000 hours whichever comes first. The service includes factory recommended DEF tank flush & strainer cleaning at the suggested service intervals of 4,500 hours & 9,000 hours.

KOMATSU CARE PC138USLC-11				
Interval PM	500	1000	1500	2000
KOWA SAMPLING – (Engine, Hydraulics, Swing Circle, L & R Final Drives)	✓	✓	✓	✓
LUBRICATE MACHINE	✓	✓	✓	✓
LUBRICATE SWING CIRCLE	✓	✓	✓	✓
CHECK SWING PINION GREASE LEVEL AND ADD, WHEN NECESSARY	✓	✓	✓	✓
CHANGE ENGINE OIL	✓	✓	✓	✓
REPLACE ENGINE OIL FILTER	✓	✓	✓	✓
REPLACE FUEL PRE-FILTER	✓	✓	✓	✓
REPLACE AC FRESH & RECIRC AIR FILTERS	✓	✓	✓	✓
CLEAN AIR CLEANER ELEMENT	✓	✓	✓	✓
DRAIN SEDIMENT FROM FUEL TANK	✓	✓	✓	✓
COMPLETE 50 POINT INSPECTION FORM; LEAVE PINK COPY WITH CUSTOMER OR IN CAB	✓	✓	✓	✓
RESET MONITOR PANEL MAINTENANCE COUNTER FOR APPROPRIATE ITEMS	✓	✓	✓	✓
REPLACE HYDRAULIC TANK BREATHER ELEMENT		✓		✓
REPLACE DEF TANK BREATHER ELEMENT		✓		✓
CHANGE FINAL DRIVE OIL		✓		✓
CHECK OIL LEVEL IN PTO GEAR AND ADD, WHEN NECESSARY		✓		✓
REPLACE MAIN FUEL FILTER		✓		✓
REPLACE HYDRAULIC OIL FILTER ELEMENT		✓		✓
CHANGE SWING MACHINERY OIL		✓		✓
CLEAN HYDRAULIC TANK STRAINER				✓
REPLACE KCCV FILTER ELEMENT				✓
REPLACE DEF PUMP FILTER				✓
FACTORY TRAINED TECHNICIAN LABOR	✓	✓	✓	✓

* Certain exclusions and limitations apply. Refer to the customer certificate for complete program details and eligibility. Komatsu® and Komatsu Care® are registered trademarks of Komatsu Ltd. Copyright 2017 Komatsu America Corp.

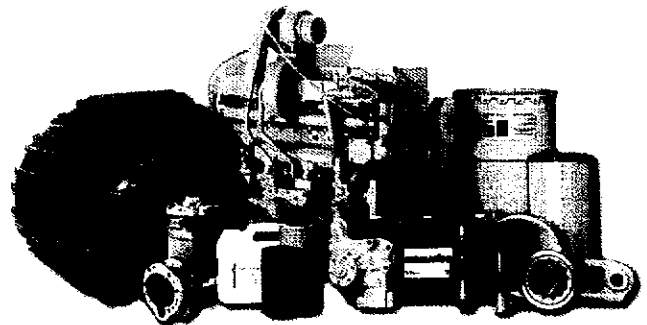
Komatsu CARE® – Extended Coverage

- Extended Coverage can provide peace of mind by protecting customers from unplanned expenses that effect cash flow
- Purchasing extended coverage locks-in the cost of covered parts and labor for the coverage period and helps turn these into fixed costs



Komatsu Parts Support

- 24/7/365 to fulfill your parts needs
- 9 parts Distribution Centers strategically located across the U.S. and Canada
- Distributor network of more than 300 locations across U.S. and Canada to serve you
- Online part ordering through Komatsu eParts
- Remanufactured components with same-as-new warranties at a significant cost reduction



Komatsu Oil and Wear Analysis (KOWA)

- KOWA detects fuel dilution, coolant leaks, and measures wear metals
- Proactively maintain your equipment
- Maximize availability and performance
- Can identify potential problems before they lead to major repairs
- Reduce life cycle cost by extending component life

PC138USLC-11

KOMTRAX EQUIPMENT MONITORING

GET THE WHOLE STORY WITH
KOMTRAX®

✓ WHAT

- KOMTRAX is Komatsu's remote equipment monitoring and management system
- KOMTRAX **continuously monitors and records** machine health and operational data
- Information such as fuel consumption, utilization, and a detailed history **lowering owning and operating cost**

✓ WHO

- KOMTRAX is **standard** equipment on all Komatsu construction products

✓ WHEN

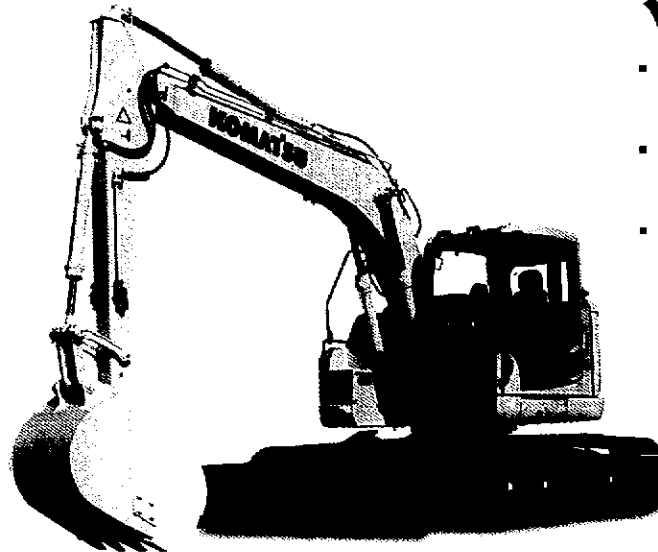
- Knowing when machines are **running or idling** can help improve fleet utilization
- Detailed movement records ensure you know when and where your equipment is moved
- Up to date records allow you to **know when maintenance is due** and help you plan for future maintenance needs

✓ WHERE

- KOMTRAX data **can be accessed virtually anywhere** through your computer, the web or your smart phone
- Automatic alerts keep fleet managers up to date on the latest machine notifications

✓ WHY

- Knowledge is power - **make informed decisions** to manage your fleet better
- Knowing your idle time and fuel consumption will help maximize your machine efficiency
- **Take control of your equipment** - any time, anywhere



KOMTRAX®

For construction and compact equipment.

KOMTRAX Plus®

For production and mining class machines.

SPECIFICATIONS



ENGINE

Model.....Komatsu SAA4D95LE-7*
 Type.....Water-cooled, 4-cycle, direct injection
 Aspiration..... Variable flow, turbocharged, air-to-air aftercooled
 Number of cylinders..... 4
 Bore..... 95 mm **3.74"**
 Stroke..... 115 mm **4.53"**
 Piston displacement.....3.26 ltr **199 in³**
 Horsepower:
 SAE J1995.....Gross 72.6 kW **97.3 HP**
 ISO 9249 / SAE J1349..... Net 72.5 kW **97.2 HP**
 Rated rpm..... 2050
 Fan at maximum speed..... Net 67.8 kW **90.9 HP**
 Fan drive method for radiator cooling..... Mechanical with viscous clutch
 Governor..... All-speed control, electronic
 *EPA Tier 4 Final emissions certified



HYDRAULICS

Type..... HydrauMind (Hydraulic Mechanical Intelligence) system, closed-center system with load sensing valve and pressure compensated valve
 Number of selectable working modes6
 Main pump:
 Type.....Variable capacity piston type
 Pump for.....Boom, arm, bucket, swing, and travel circuits
 Maximum flow 242 ltr/min **64 gal/min**
 Hydraulic motors:
 Travel 2 x piston motor with parking brake
 Swing 1 x piston motor with swing holding brake
 Relief valve setting:
 Implement circuits 34.8 MPa 355 kgf/cm² **5,050 psi**
 Travel circuit..... 34.8 MPa 355 kgf/cm² **5,050 psi**
 Swing circuit..... 29.2 MPa 298 kgf/cm² **4,240 psi**
 Pilot circuit..... 3.2 MPa 33 kgf/cm² **470 psi**
 Maximum Auxiliary Flow 242 ltr/min **64 gal/min**
 at 250 kgf/cm² **3,553 psi***

Hydraulic cylinders:
 (Number of cylinders – bore x stroke x rod diameter)
 Boom 2–105 mm x 1055 mm x 70 mm **4.1" x 41.5" x 2.76"**
 Arm 1–110 mm x 1175 mm x 75 mm **4.3" x 46.3" x 2.95"**
 Bucket.. 1–95 mm x 885 mm x 65 mm **3.7" x 34.8" x 2.56"**



DRIVES AND BRAKES

Steering control.....Two levers with pedals
 Drive method Fully hydrostatic
 Maximum drawbar pull 123 kN 12500 kgf **27,560 lbf**
 Gradeability..... 70%, 35°
 Maximum travel speed: High..... 5.1 km/h **3.2 mph**
 (Auto-shift) Low..... 2.9 km/h **1.8 mph**
 Service brake..... Hydraulic lock
 Parking brake..... Wet, multiple-disc

* Auxiliary flow is adjustable through the monitor.



SWING SYSTEM

Driven by..... Hydraulic motor
 Swing reduction..... Planetary gear
 Swing circle lubrication..... Grease-bathed
 Service brake..... Hydraulic lock
 Swing lock Wet, multiple-disc brake
 Swing speed..... 11.0 rpm
 Swing torque.....2991 kg.m **21,627 ft lbs**



UNDERCARRIAGE

Center frame..... X-frame leg
 Track frame.....Box-section
 Track type.....Sealed track
 Track adjusterHydraulic
 Number of shoes (each side)..... 46
 Number of carrier rollers (each side)..... 2
 Number of track rollers (each side)..... 8



SOUND PERFORMANCE

Exterior – ISO 6395.....101 dB(A)
 Operator – ISO 6396.....71 dB(A)



COOLANT & LUBRICANT CAPACITY (REFILLING)

Fuel tank 200 ltr **52.8 U.S. gal**
 Coolant 17.7 ltr **4.6 U.S. gal**
 Engine..... 11.5 ltr **3.0 U.S. gal**
 Final drive, each side..... 2.1 ltr **.55 U.S. gal**
 Swing drive 2.5 ltr **0.7 U.S. gal**
 Hydraulic tank..... 69.0 ltr **18.2 U.S. gal**
 DEF tank 12.6 ltr **3.3 U.S. gal**



OPERATING WEIGHT [APPROXIMATE]

Operating weight includes 4600 mm **15'1"** one-piece boom, 2500 mm **8'2"** arm, SAE heaped 0.51 m³ **0.67 yd³** backhoe bucket, rated capacity of lubricants, coolant, full fuel tank, operator, and standard equipment.

Triple-Grouser	Operating Weight	Ground Pressure ISO 16754
Road Liner		
500 mm	15682 kg 34,563 lb	45.29 kPa / 0.46 kg/cm ² 6.57 psi
20"		
600 mm	15732 kg	37.86 kPa / 0.39 kg/cm ²
24"	34,673 lb	5.49 psi
700 mm	15932 kg	32.87 kPa / 0.34 kg/cm ²
28"	35,114 lb	4.77 psi

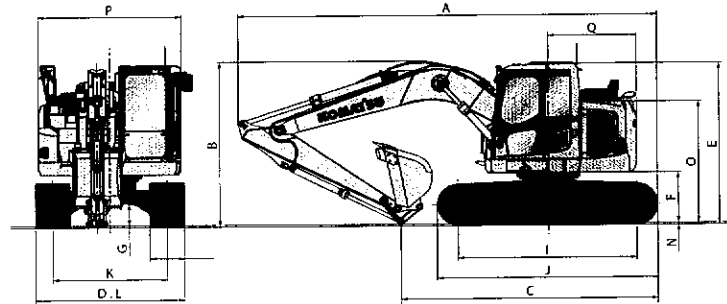
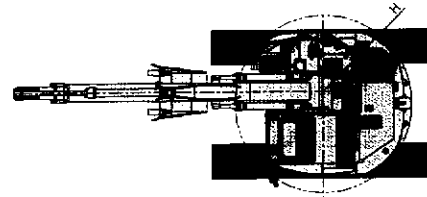
Component Weights

Arm including bucket cylinder and linkage
 2500 mm **8'2"** arm assembly..... 529 kg **1,164 lb**
 2500-mm **8'2"** arm assembly w/piping..... 558 kg **1,228 lb**
 3000 mm **9'10"** arm assembly 643 kg **1,415 lb**
 3000 mm **9'10"** arm assembly w/piping..... 678 kg **1,492 lb**
One piece boom including arm cylinder
 4600 mm **15'1"** boom 962 kg **2,118 lb**
Counterweight 3460 kg **7,630 lb**
Blade including blade cylinders 848 kg **1,870 lb**
Bucket 0.51 m³ **0.67 yd³** 762 mm **30"** width.....517 kg **1,140 lb**



DIMENSIONS

Arm Length	2500 mm	8'2"	3000 mm	9'10"
Boom length	4600 mm	15'1"	4600 mm	15'1"
A Overall length	7385 mm	24'3"	7285 mm	23'11"
B Overall height (to top of boom)*	2850 mm	9'4"	3210 mm	10'6"
C Length on ground (transport)	4540 mm	14'11"	4400 mm	14'5"
D Overall width	2590 mm	8'6"		
E Overall height (to top of cab)*	2815 mm	9'3"		
F Ground clearance, counterweight	900 mm	2'11"		
G Ground clearance, minimum	395 mm	1'4"		
H Tail swing radius	1545 mm	5'1"		
I Track length on ground	3140 mm	10'4"		
J Track length	3870 mm	12'8"		
K Track gauge	1990 mm	6'6"		
L Width of crawler	(500 mm Shoe)	2490 mm	8'2"	
	(600 mm Shoe)	2590 mm	8'6"	
	(700 mm Shoe)	2690 mm	8'10"	
N Grouser height	20 mm	0.8"		
O Machine height to top of counterweight	2140 mm	7'0"		
P Machine upper width	2490 mm	8'2"		
Q Distance, swing center to rear end	1545 mm	5'1"		



* : Including grouser height

Blade 2590mm 8'6" wide x 590mm 1' 11"



BACKHOE BUCKET, ARM AND BOOM COMBINATION

Bucket Type	Bucket						Arms	
	Capacity		Width		Weight		2.5 m (8'2")	3.0 m (9'10")
Komatsu TL	0.26 m ³	0.34 yd ³	457 mm	18"	332 kg	732 lb	V	V
	0.38 m ³	0.50 yd ³	610 mm	24"	387 kg	853 lb	V	V
	0.51 m ³	0.67 yd ³	762 mm	30"	437 kg	963 lb	V	V
	0.63 m ³	0.83 yd ³	914 mm	36"	499 kg	1,099 lb	W	X
	0.76 m ³	1.00 yd ³	1067 mm	42"	559 kg	1,232 lb	X	Y
Komatsu HP	0.26 m ³	0.34 yd ³	457 mm	18"	379 kg	836 lb	V	V
	0.31 m ³	0.40 yd ³	508 mm	20"	396 kg	873 lb	V	V
	0.38 m ³	0.50 yd ³	610 mm	24"	457 kg	1,007 lb	V	V
	0.51 m ³	0.67 yd ³	762 mm	30"	517 kg	1,140 lb	V	W
	0.63 m ³	0.83 yd ³	914 mm	36"	591 kg	1,303 lb	W	X
Komatsu HPS	0.76 m ³	1.00 yd ³	1067 mm	42"	664 kg	1,464 lb	Y	Z
	0.26 m ³	0.34 yd ³	457 mm	18"	406 kg	895 lb	V	V
	0.31 m ³	0.40 yd ³	508 mm	20"	426 kg	939 lb	V	V
	0.38 m ³	0.50 yd ³	610 mm	24"	493 kg	1,086 lb	V	V
	0.51 m ³	0.67 yd ³	762 mm	30"	562 kg	1,240 lb	V	W
	0.63 m ³	0.83 yd ³	914 mm	36"	645 kg	1,423 lb	X	Y
	0.76 m ³	1.00 yd ³	1067 mm	42"	728 kg	1,605 lb	Y	Z

V - Used with material weights up to 3,500 lb/yd³

W - Used with material weights up to 3,000 lb/yd³

X - Used with material weights up to 2,500 lb/yd³

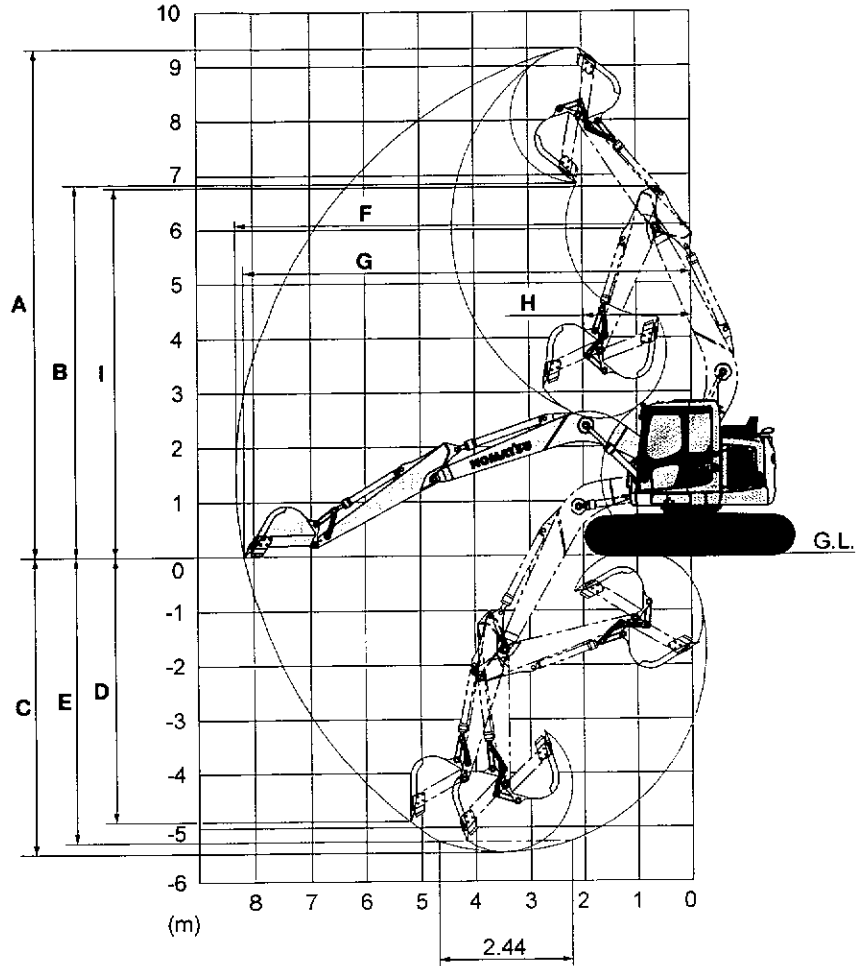
Y - Used with material weights up to 2,000 lb/yd³

Z - Not useable

SPECIFICATIONS



WORKING RANGE



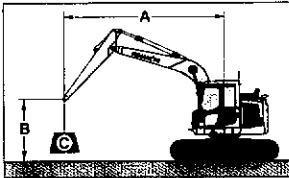
	Arm Length	2500 mm	8'2"	3000 mm	9'10"
A	Max. digging height	9340 mm	30'8"	9700 mm	31'10"
B	Max. dumping height	6840 mm	22'5"	7350 mm	24'1"
C	Max. digging depth	5480 mm	18'0"	5900 mm	19'4"
D	Max. vertical wall digging depth	4900 mm	16'1"	5340 mm	17'6"
E	Max. digging depth for 8' level bottom	5265 mm	17'3"	5715 mm	18'9"
F	Max. digging reach	8300 mm	27'3"	8720 mm	28'7"
G	Max. digging reach at ground level	8180 mm	26'10"	8600 mm	28'3"
H	Min. swing radius	1980 mm	6'6"	2264 mm	7'5"
I	Max. height at min. swing radius	6770 mm	22'3"	6770 mm	22'3"
SAE rating	Bucket digging force	81.4 kN		78.0 kN	
		8300 kg / 18,300 lb		7950 kg / 17,530 lb	
SAE rating	Arm crowd force	60.8 kN		54.4 kN	
		6200 kgf / 13,670 lb		5550 kgf / 12,235 lb	
ISO rating	Bucket digging force	93.2 kN		88.3 kN	
		9500 kg / 20,945 lb		9000 kg / 19,840 lb	
ISO rating	Arm crowd force	61.8 kN		55.9 kN	
		6300 kgf / 13,890 lb		5700 kgf / 12,570 lb	

PG138USLCG-11

LIFT CAPACITIES



LIFTING CAPACITY WITH LIFTING MODE



- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊕: Rating at maximum reach

- Conditions:
- 4600 mm 15' 1" one-piece boom
 - Counterweight (total mass): 3460 kg 7,630 lb
 - Bucket: None
 - Lifting mode: On

Arm: 2500 mm 8'2" Shoes: 500 mm 20" triple grouser Blade: No Blade Unit: kg lb

B	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⊕ MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m			* 3470	* 3470							* 2500	* 2500
25'			* 7650	* 7650							* 5510	* 5510
6.1 m					* 3360	* 3360					* 2010	* 2010
20'					* 7420	* 7420					* 4430	* 4430
4.6 m					* 3730	* 3730	* 3010	2490			* 1870	* 1870
15'					* 8220	* 8220	* 6650	5500			* 4140	* 4140
3.0 m			* 6000	* 6000	* 4600	3730	3890	2440			* 1870	* 1870
10'			* 13230	* 13230	* 10150	8230	8590	5380			* 4140	* 4140
1.5 m			* 8460	6340	* 5570	3510	3790	2350			* 1980	1820
5'			* 18660	13980	* 12290	7750	8370	5180			* 4370	4010
0 m			* 5730	* 5970	5680	3350	3700	2270			* 2210	1830
0'			* 14850	* 13160	12540	7380	8157	5010			* 4880	4050
-1.5 m	* 3920	* 3920	* 9030	5910	5500	3270	3660	2230			* 2880	2000
-5'	* 8640	* 8640	* 19920	13030	12340	7210	8080	4920			* 5920	4420
-3.0 m	* 7540	* 7540	* 7570	5980	* 5240	3290					* 3790	2470
-10'	* 16620	* 16620	* 16700	13200	* 11570	7260					* 8350	5460

Arm: 2500 mm 8'2" Shoes: 500 mm 20" triple grouser Blade: Blade Included - Blade on Ground Unit: kg lb

B	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⊕ MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m			* 3470	* 3470							* 2500	* 2500
25'			* 7650	* 7650							* 5510	* 5510
6.1 m					* 3360	* 3360					* 2010	* 2010
20'					* 7420	* 7420					* 4430	* 4430
4.6 m					* 3730	* 3730	* 3010	2530			* 1870	* 1870
15'					* 8220	* 8220	* 6650	5800			* 4140	* 4140
3.0 m			* 6000	* 6000	* 4600	3920	* 3950	2570			* 1870	* 1870
10'			* 13260	* 13260	* 10150	8660	* 8710	5680			* 4140	* 4140
1.5 m			* 8460	6680	* 5570	3710	* 4320	2480			* 1980	1930
5'			* 18660	14730	* 12290	8180	* 9520	5480			* 4370	4250
0 m			* 6730	* 6310	* 6150	3540	* 4560	2400			* 2210	1950
0'			* 14850	* 13920	* 13580	7810	* 10050	5310			* 4880	4300
-1.5 m	* 3920	* 3920	* 9030	6250	* 6100	3460	* 4390	2370			* 2680	2130
-5'	* 8640	* 8640	* 19920	13780	* 13440	7640	* 9690	5220			* 5920	4590
-3.0 m	* 7540	* 7540	* 7570	6330	* 5240	3480					* 3790	2620
-10'	* 16620	* 16620	* 16700	13950	* 11570	7690					* 8350	5790

Arm: 3000 mm 9'10" Shoes: 500 mm 20" triple grouser Blade: No Blade Unit: kg lb

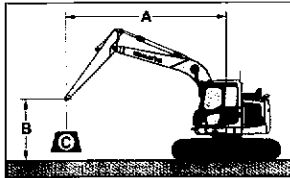
B	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⊕ MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m					* 2060	* 2060					* 1980	* 1980
25'					* 4550	* 4550					* 4380	* 4380
6.1 m					* 2960	* 2960	* 1860	* 1860			* 1660	* 1660
20'					* 6520	* 6520	* 4100	* 4100			* 3670	* 3670
4.6 m					* 2990	* 2990	* 2910	2500			* 1560	* 1560
15'					* 6600	* 6600	* 6420	5510			* 3430	* 3430
3.0 m			* 3850	* 3850	* 3680	* 3680	* 3470	2430	* 1650	* 1650	* 1550	* 1550
10'			* 8500	* 8500	* 8110	* 8110	* 7650	5360	* 3640	* 3640	* 3420	* 3420
1.5 m			* 7590	6440	* 5180	3510	3770	2320	* 2410	1550	* 1620	1610
5'			* 16740	14210	* 11420	7740	8320	5120	* 5310	3670	* 3580	3550
0 m			* 7920	5940	5650	3310	3660	2220	* 2300	1620	* 1780	1620
0'			* 17460	13100	12470	7290	8080	4900	* 5070	3580	* 3940	3570
-1.5 m	* 3520	* 3520	* 8510	5780	5520	3190	3600	2160			* 2100	1740
-5'	* 7770	* 7770	* 18760	12750	12180	7050	7940	4770			* 4640	3850
-3.0 m	* 7130	* 7130	* 8150	5830	5490	3190	3610	2170			* 2780	2080
-10'	* 15710	* 15710	* 17970	12860	12120	7040	7950	4790			* 6130	4600
-4.6 m			* 5710	* 5710	* 3680	3300					* 3190	3070
-15'			* 12600	* 12600	* 8120	7280					* 7050	6780

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 67% of hydraulic lift capacity or 75% of tipping load.

LIFT CAPACITIES



LIFTING CAPACITY WITH LIFTING MODE



- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊕: Rating at maximum reach

Conditions:

- 4600 mm 15' 1" one-piece boom
- Counterweight (total mass): 3460 kg 7,630 lb
- Bucket: None
- Lifting mode: On

Arm: 3000 mm 9'10" Shoes: 500 mm 20" triple grouser Blade: Blade Included - Blade on Ground Unit: kg lb

B \ A	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m					2060	2060					1980	1980
25'					4550	4550					4380	4380
6.1 m					2960	2960	1860	1860			1660	1660
20'					6520	6520	4100	4100			3670	3670
4.6 m					2990	2990	2910	2630			1560	1560
15'					6600	6600	6420	5810			3430	3430
3.0 m			3850	3850	3680	3680	3470	2560	1650	1650	1550	1550
10'			8500	8500	8110	8110	7650	5660	3640	3640	3420	3420
1.5 m			7590	6780	5180	3700	4070	2560	2410	1770	1620	1620
5'			15740	14950	11420	8170	8980	5660	5310	3900	3580	3580
0 m			7920	6280	5940	3500	4420	2360	2300	1730	1780	1720
0'			17460	13850	13110	7720	9740	5200	5070	3810	3940	3800
-1.5 m	3520	3520	8510	6130	6070	3390	4430	2300			2100	1860
-5'	7770	7770	18760	13510	13400	7480	9770	5070			4640	4100
-3.0 m	7130	7130	8150	6170	5540	3380	3770	2310			2780	2210
-10'	15710	15710	17970	13610	12220	7460	8320	5090			6130	4880
-4.6 m			5710	5710	3680	3460					3190	3190
-15'			12600	12600	8120	7640					7050	7050

Arm: 2500 mm 8'2" Shoes: 600 mm 24" triple grouser Blade: No Blade Unit: kg lb

B \ A	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m			3470	3470							2500	2500
25'			7650	7650							5510	5510
6.1 m					3360	3360					2010	2010
20'					7420	7420					4430	4430
4.6 m					3730	3730	3010	2520			1870	1870
15'					8220	8220	6650	5560			4140	4140
3.0 m			6000	6000	4600	3770	3940	2470			1870	1870
10'			13230	13230	10150	8320	8590	5440			4140	4140
1.5 m			8450	6410	5570	3550	3840	2380			1980	1840
5'			18650	14130	12290	7840	8470	5250			4370	4060
0 m			6730	6040	5750	3390	3750	2300			2210	1860
0'			14850	13320	12690	7470	8270	5070			4880	4100
-1.5 m	3920	3920	9030	5980	5660	3310	3710	2260			2680	2030
-5'	8640	8640	19920	13190	12490	7300	8180	4990			5920	4480
-3.0 m	7540	7540	7570	6060	5240	3330					3790	2510
-10'	16620	16620	16700	13360	11570	7350					8350	5530

Arm: 2500 mm 8'2" Shoes: 600 mm 24" triple grouser Blade: Blade Included - Blade on Ground Unit: kg lb

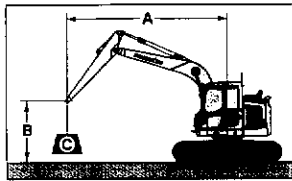
B \ A	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m			3470	3470							2500	2500
25'			7650	7650							5510	5510
6.1 m					3360	3360					2010	2010
20'					7420	7420					4430	4430
4.6 m					3730	3730	3010	2650			1870	1870
15'					8220	8220	6650	5960			4140	4140
3.0 m			6000	6000	4600	3970	3950	2600			1870	1870
10'			13230	13230	10150	8750	8710	5740			4140	4140
1.5 m			8460	6750	5570	3750	4320	2510			1980	1950
5'			18660	14890	12290	8270	9520	5540			4370	4300
0 m			6730	6380	6160	3880	4560	2430			2210	1970
0'			14850	14070	13580	7900	10050	5370			4880	4350
-1.5 m	3920	3920	9030	6320	6100	3500	4390	2390			2680	2150
-5'	8640	8640	19920	13940	13440	7730	9690	5280			5920	4750
-3.0 m	7540	7540	7670	6400	5240	3520					3790	2650
-10'	16620	16620	16700	14110	11570	7780					8350	5860

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

PG138USLG-11



LIFTING CAPACITY WITH LIFTING MODE



- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊗: Rating at maximum reach

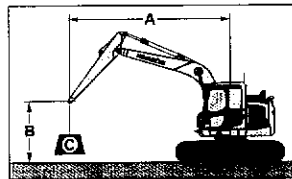
Conditions:

- 4600 mm 15' 1" one-piece boom
- Counterweight (total mass): 3460 kg 7,630 lb
- Bucket: None
- Lifting mode: On

Arm: 3000 mm 9'10" Shoes: 600 mm 24" triple grouser Blade: No Blade Unit: kg lb

B	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⊗ MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m 25'					* 2060	* 2060					* 1980	* 1980
6.1 m 20'					* 4550	* 4550					* 4380	* 4380
4.6 m 15'					* 2960	* 2960	* 1860	* 1860			* 1660	* 1660
3.0 m 10'					* 6520	* 6520	* 4100	* 4100			* 3670	* 3670
1.5 m 5'					* 2990	* 2990	* 2910	2530			* 1560	* 1560
0 m 0'					* 6660	* 6660	* 6420	5580			* 3430	* 3430
-1.5 m -5'	* 3520	* 3520	* 3850	* 3850	* 3680	* 3680	* 3470	2460	* 1650	* 1650	* 1550	* 1550
-3.0 m -10'	* 7770	* 7770	* 8500	* 8500	* 8110	* 8110	* 7550	5420	* 3640	* 3640	* 3420	* 3420
-4.6 m -15'	* 15710	* 15710	* 7590	* 6510	* 5180	* 3550	3820	2350	* 2410	1680	* 1620	* 1620
			* 16740	14360	* 11420	7830	8420	5190	* 5310	3720	* 3580	* 3580
			* 7920	6010	5720	3350	3710	2250	* 2300	1640	* 1780	1640
			* 17460	13260	12620	7380	8180	4970	* 5070	3630	* 3940	3620
			* 8510	5850	5590	3240	3640	2190			* 2100	1770
			* 18760	12910	12330	7140	8040	4840			* 4640	3900
			* 8150	5900	* 5540	3230	3650	2200			* 2780	2110
			* 17970	13010	* 12220	7130	8050	4850			* 5130	4660
			* 5710	* 5710	* 3680	3340					* 3190	3110
			* 12600	* 12600	* 8120	7370					* 7050	6850

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.



- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊗: Rating at maximum reach

Conditions:

- 4600 mm 15' 1" one-piece boom
- Counterweight (total mass): 3460 kg 7,630 lb
- Bucket: None
- Lifting mode: On

Arm: 3000 mm 9'10" Shoes: 600 mm 24" triple grouser Blade: Blade Included - Blade on Ground Unit: kg lb

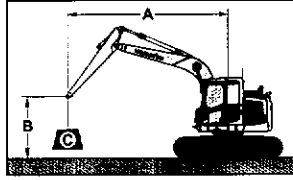
B	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⊗ MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m 25'					* 2060	* 2060					* 1980	* 1980
6.1 m 20'					* 4550	* 4550					* 4380	* 4380
4.6 m 15'					* 2960	* 2960	* 1860	* 1860			* 1660	* 1660
3.0 m 10'					* 6520	* 6520	* 4100	* 4100			* 3670	* 3670
1.5 m 5'					* 2990	* 2990	* 2910	2660			* 1560	* 1560
0 m 0'					* 6600	* 6600	* 6420	5870			* 3430	* 3430
-1.5 m -5'	* 3520	* 3520	* 3850	* 3850	* 3880	* 3880	* 3470	2590	* 1650	* 1650	* 1550	* 1550
-3.0 m -10'	* 7770	* 7770	* 8500	* 8500	* 8110	* 8110	* 7650	5720	* 3640	* 3640	* 3420	* 3420
-4.6 m -15'	* 15710	* 15710	* 7590	6860	* 5180	3740	* 4070	2480	* 2410	1790	* 1620	* 1620
			* 16740	15120	* 11420	8260	* 8980	5480	* 5310	3950	* 3580	* 3580
			* 7920	6350	* 5940	3540	* 4420	2390	* 2300	1750	* 1780	1740
			* 17460	14010	* 13110	7810	* 9740	5260	* 5070	3860	* 3940	3850
			* 8510	6200	* 6070	3430	* 4430	2330			* 2100	1880
			* 18760	13670	* 13400	7570	* 9770	5140			* 4640	4150
			* 7130	* 7130	* 8150	6240	* 5540	3420	* 3770	2330	* 2780	2240
			* 15710	* 15710	* 17970	13770	* 12220	7550	* 8320	5150	* 6130	4940
			* 5710	* 5710	* 3680	* 3500					* 3190	* 3190
			* 12600	* 12600	* 8120	* 7720					* 7050	* 7050

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.

LIFT CAPACITIES



LIFTING CAPACITY WITH LIFTING MODE



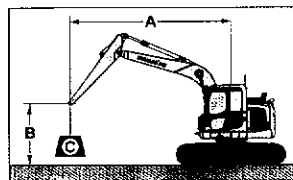
- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊕: Rating at maximum reach

- Conditions:
- 4600 mm 15' 1" one-piece boom
 - Counterweight (total mass): 3460 kg 7,630 lb
 - Bucket: None
 - Lifting mode: On

Arm: 2500 mm 8'2" Shoes: 700 mm 28" triple grouser Blade: No Blade Unit: kg lb

B	A		1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⊕ MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m			* 3470	* 3470									* 2500	* 2500
25'			* 7650	* 7650									* 5510	* 5510
6.1 m					* 3360	* 3360							* 2010	* 2010
20'					* 7420	* 7420							* 4430	* 4430
4.6 m					* 3730	* 3730	* 3010	2550					* 1870	* 1870
15'					* 8220	* 8220	* 6650	5630					* 4140	* 4140
3.0 m			* 6000	* 6000	* 4600	3820	* 3950	2500					* 1870	* 1870
10'			* 13230	* 13230	* 10150	8420	* 8710	5510					* 4140	* 4140
1.5 m			* 8460	* 8460	* 5570	3600	3890	2410					* 1980	1860
5'			* 18660	* 18660	* 12290	7940	8580	5320					* 4370	4120
0 m			* 6730	* 6120	5830	3430	3800	2380					* 2210	1880
0'			* 14850	* 13490	12860	7570	8390	5140					* 4880	4160
-1.5 m	* 3920	* 3920	* 9030	6060	5740	3360	3760	2290					* 2690	2050
-5'	* 8640	* 8640	* 19920	13360	12660	7400	8290	5050					* 5920	4540
-3.0 m	* 7540	* 7540	* 7560	6140	* 5240	3380							* 3790	2540
-10'	* 16520	* 16520	* 16700	13530	* 11570	7450							* 8350	5610
-4.6 m														
-15'														

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.



- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊕: Rating at maximum reach

- Conditions:
- 4600 mm 15' 1" one-piece boom
 - Counterweight (total mass): 3460 kg 7,630 lb
 - Bucket: None
 - Lifting mode: On

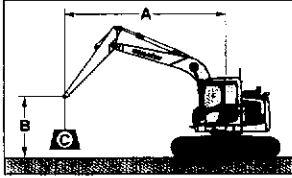
Arm: 2500 mm 8'2" Shoes: 700 mm 28" triple grouser Blade: Blade Included - Blade on Ground Unit: kg lb

B	A		1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⊕ MAX	
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs
7.6 m			* 3470	* 3470									* 2500	* 2500
25'			* 7650	* 7650									* 5510	* 5510
6.1 m					* 3360	* 3360							* 2010	* 2010
20'					* 7420	* 7420							* 4430	* 4430
4.6 m					* 3730	* 3730	* 3010	2690					* 1870	* 1870
15'					* 8220	* 8220	* 6650	5930					* 4140	* 4140
3.0 m			* 6000	* 6000	* 4600	4010	* 3950	2630					* 1870	* 1870
10'			* 13200	* 13200	* 10150	8850	* 8710	5810					* 4140	* 4140
1.5 m			* 8460	6830	* 5570	3790	* 4320	2540					* 1980	1970
5'			* 18660	15070	* 12290	8370	* 9520	5610					* 4370	4360
0 m			* 6730	* 6480	* 6160	3630	* 4560	2460					* 2210	2000
0'			* 14850	* 14250	* 13580	8000	* 10050	5440					* 4880	4410
-1.5 m	* 3920	* 3920	* 9030	6400	* 8100	3550	* 4390	2430					* 2680	2180
-5'	* 8640	* 8640	* 19920	14120	* 13440	7830	* 9590	5350					* 5920	4810
-3.0 m	* 7540	* 7540	* 7570	6480	* 5240	3570							* 3790	2690
-10'	* 16620	* 16620	* 16700	14290	* 11570	7880							* 8350	5930
-4.6 m														
-15'														

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.



LIFTING CAPACITY WITH LIFTING MODE



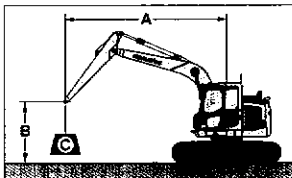
- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊕: Rating at maximum reach

- Conditions:
- 4600 mm 15' 1" one-piece boom
 - Counterweight (total mass): 3460 kg 7,630 lb
 - Bucket: None
 - Lifting mode: On

Arm: 3000 mm 9'10" Shoes: 700 mm 28" triple grouser Blade: No Blade

B	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⚡ MAX			
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs		
7.6 m					* 2060	* 2060					* 1980	* 1980		
25'					* 4550	* 4550					* 4380	* 4380		
6.1 m					* 2960	* 2960	* 1860	* 1860			* 1660	* 1660		
20'					* 6520	* 6520	* 4100	* 4100			* 3670	* 3670		
4.6 m					* 2990	* 2990	* 2910	2560			* 1560	* 1560		
15'					* 6500	* 6500	* 6420	5650			* 3430	* 3430		
3.0 m		* 3850	* 3850		* 3680	* 3680	* 3470	2490	* 1650	* 1650	* 1550	* 1550		
10'		* 8500	* 8500		* 8110	* 8110	* 7650	5490	* 3640	* 3640	* 3420	* 3420		
1.5 m		* 7590	6590		* 5180	3590	3870	2380	* 2410	1710	* 1620	* 1620		
5'		* 16740	14540		* 11420	7930	8540	5250	* 5310	3770	* 3580	* 3580		
0 m		* 7920	6090		5800	3390	3760	2280	* 2900	1670	* 1780	1660		
0'					* 17460	13490	12790	7480	8290	5030	* 5070	3680	* 3940	3670
-1.5 m	* 3520	* 3520			* 8510	5930	5670	3280	3690	2220		* 2100	1790	
-5'	* 7770	* 7770			* 18760	13090	12500	7240	8150	4910		* 4640	3960	
-3.0 m	* 7130	* 7130			* 8150	5980	5540	3270	3700	2230		* 2780	2140	
-10'	* 15710	* 15710			* 17970	13190	12220	7230	8170	4920		* 6130	4720	
-4.6 m					* 5710	* 5710	* 3680	3380				* 3190	3150	
-15'					* 12600	* 12600	* 8120	7470				* 7050	5960	

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.



- A: Reach from swing center
- B: Bucket hook height
- C: Lifting capacity
- Cf: Rating over front
- Cs: Rating over side
- ⊕: Rating at maximum reach

- Conditions:
- 4600 mm 15' 1" one-piece boom
 - Counterweight (total mass): 3460 kg 7,630 lb
 - Bucket: None
 - Lifting mode: On

Arm: 3000 mm 9'10" Shoes: 700 mm 28" triple grouser Blade: Blade Included - Blade on Ground

B	1.5 m 5'		3.0 m 10'		4.6 m 15'		6.1 m 20'		7.6 m 25'		⚡ MAX			
	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs		
7.6 m					* 2980	* 2980					* 1980	* 1980		
25'					* 6520	* 6520					* 4380	* 4380		
6.1 m					* 2060	* 2060	* 1860	* 1860			* 1660	* 1660		
20'					* 4550	* 4550	* 4100	* 4100			* 3670	* 3670		
4.6 m					* 2990	* 2990	* 2910	2690			* 1560	* 1560		
15'					* 6600	* 6600	* 6420	5940			* 3430	* 3430		
3.0 m		* 3850	* 3850		* 3680	* 3680	* 3470	2620	* 1650	* 1650	* 1550	* 1550		
10'		* 8500	* 8500		* 8110	* 8110	* 7650	5790	* 3640	* 3640	* 3420	* 3420		
1.5 m		* 7590	6940		* 5180	3790	* 4070	2520	* 2410	1810	* 1620	* 1620		
5'		* 16740	15300		* 11420	8360	* 8980	5550	* 5310	4000	* 3580	* 3580		
0 m		* 7920	6430		* 5940	3590	* 4420	2420	* 2300	1770	* 1780	1770		
0'					* 17460	14190	* 13110	7910	* 9740	5330	* 5070	3910	* 3940	3900
-1.5 m	* 3520	* 3520			* 8510	6280	* 6070	3470	* 4430	2360		* 2100	1910	
-5'	* 7770	* 7770			* 18760	13840	* 13400	7670	* 9770	5200		* 4640	4210	
-3.0 m	* 7130	* 7130			* 8150	6320	* 5540	3470	* 3770	2370		* 2780	2270	
-10'	* 15710	* 15710			* 17970	13940	* 12220	7650	* 8320	5220		* 6130	5010	
-4.6 m					* 5710	* 5710	* 3680	3550				* 3190	3190	
-15'					* 12600	* 12600	* 8120	7820				* 7050	7050	

*Load is limited by hydraulic capacity rather than tipping. Ratings are based on ISO standard No. 10567. Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load.



STANDARD EQUIPMENT

ENGINE

- Air cleaner, double element with auto dust evacuator
- Cooling fan, viscous type
- Debris guards for radiator and oil cooler
- Engine, Komatsu SAA4D95LE-7
- Engine overheat prevention system

ELECTRICAL SYSTEM

- Alternator, 24 V/60 A
- Auto-decelerator
- Batteries, 2 x 12 V/72 Ah
- Electric horn
- Starting motor 24 V/4.5 kW
- Working light on boom
- Working lights on cab (2)

HYDRAULIC SYSTEM

- Boom holding valve

GUARDS AND COVERS

- Fan guard structure
- Handrails
- Pump/engine partition cover

UNDERCARRIAGE

- Shoe, 600 mm **24"** triple grouser

OPERATOR ENVIRONMENT

- 2 x 12 V power points
- 2 way multi-control valve
- 24 V - 12 V power converter
- Automatic A/C
- Auto idle shutdown function
- Auxiliary input jack
- Cab includes: antenna, AM/FM radio, floor mat, intermittent front windshield wiper and washer, large ceiling hatch, pull-up front window, removable lower windshield
- Foldable mirror (LH)
- Large high resolution LCD monitor
- Lock lever
- Mirror (Rear)
- Operator identification function
- Operator protective top guard, OPG level 1 (ISO 10262)
- Rear view monitor system
- ROPS cab (ISO 12117-2)
- Seat belt, 76 mm **3"**
- Suspension seat
- Swing holding brake

OTHER

- Counterweight (total mass), 3460 kg **7,630 lb**
- Equipment management monitoring system
- KOMTRAX®
- Pattern change valve
- Rear reflector
- Travel alarm



OPTIONAL EQUIPMENT

HYDRAULIC SYSTEM

- Hydraulic control unit - 1 additional actuator (+ 1 Hydraulics) with one and two-way flow

GUARDS AND COVERS

- Cab guard
 - Full front guard, OPG level 1 (ISO 10262)
 - Full front guard, OPG level 2 (ISO 10262)
 - Bolt-on top guard, OPG level 2 (ISO 10262)

UNDERCARRIAGE

- Extended track frame steps for 700 mm **28"** tracks
- Shoes
 - 500 mm **20"** triple grouser
 - 700 mm **28"** triple grouser
 - 500 mm **20"** rubber roadliner

OPERATOR ENVIRONMENT

- Sunvisor

WORK EQUIPMENT

- Arms
 - 2500 mm **8'2"** arm assembly
 - 2500 mm **8'2"** arm assembly with piping
 - 3000 mm **9'10"** arm assembly
 - 3000 mm **9'10"** arm assembly with piping
- Booms
 - 4600 mm **15'1"** boom assembly
 - 4600 mm **15'1"** boom assembly with piping
- Blade
 - 2490 mm **8'6"** wide blade

KOMATSU®

Note: All comparisons and claims of improved performance made herein are made with respect to the prior Komatsu model unless otherwise specifically stated.



3-1-2 STANDARD PRODUCT WARRANTY COVERAGE POLICY

Contents

A) **PURPOSE**..... 18

B) **COVERAGE** 18

C) **EXCLUSIONS** 20

D) **DISTRIBUTOR RESPONSIBILITIES**..... 21

E) **KOMATSU RESPONSIBILITIES**..... 21

STANDARD PRODUCT WARRANTY COVERAGE POLICY

A) PURPOSE

Komatsu warrants that a new Machine procured by the Distributor from Komatsu for resale to Customers or for use by the Distributor will be free of defects in material and workmanship.

This policy provides an overview of the terms of Komatsu’s Machine Product Warranty Coverage Policy. Product Warranty is also sometimes referred to as Standard Warranty.

B) COVERAGE

1. Komatsu will reimburse the Distributor for specific expenses related to correcting defects in material or workmanship. In general, the repairs executed in correcting these defects should restore the Machine to its operating condition just prior to the failure.
2. Komatsu’s reimbursement will follow the terms outlined in Reimbursement Policy Section of the Warranty and Coverage Policies.
3. The warranty period for the Machine extends for 12 months from the Machine’s FID date with the following exceptions:

- a. **DORF Machines:** 15 months from FID date or 8,736 hours, whichever comes first. 24 months from FID date for all machines with FID date after August 1, 2013.
- b. **RTS Machines:** Rent to Sell [RTS] machines with an FID after [1/1/2015] will receive 18 months to use 12 months of Standard Product Warranty (365 days). Any unused Standard Product Warranty days (365) will transfer to the customer if the Rent to Sell [RTS] machine is final delivered within the 18 months. The warranty term will never extend past the 18 month period from FID date. The Standard Product Warranty start date is the machine FID date and Standard Product Warranty days used is based on machine rental in and out activity as documented in Pronto.

Example:

- Rent to Sell [RTS] machine consumes 200 warranty days, based on Distributor recorded rental in and out activity in PRONTO.
- Machine is final delivered [FD] to the customer at 15 months from the FID.
- This customer then receives the remainder of Standard Product Warranty to use within the next 3 months. The Standard Product Warranty term will never extend past the 18 month period from FID date.

Example:

- Rent to Sell [RTS] machine consumes 100 warranty days, based on Distributor recorded rental in and out activity in PRONTO.
 - The machine is final delivered [FD] to the customer at 20 months from the FID.
 - There is NO Standard Product Warranty remaining because the machine is past the 18 months from FID.
- c. Machines covered by marketing programs: Komatsu may release marketing programs from time to time that provide special product warranty coverage terms for specific machines. The marketing programs are announced through *Price and Policy Letters* that can be found on the Marketing homepage of Komatsu's extranet system (<https://www.komatsuamerica.net>).

C) EXCLUSIONS

1. Repairs to components supplied by Allied Suppliers. Please see **Allied Supplier Warranty Policy and Contact Information Section** of the **Warranty and Coverage Policies** for a list of these suppliers and their contact information.
2. Repairs or replacements of:
 - a. Parts that are worn because of use. Examples of wear resulting from use would include, by way of example but not limitation, deterioration of undercarriage components and machine work equipment, hydraulic cylinder seal leaks, wear of clutch or brake packs, pins or bushings, etc.
 - b. Parts that are not procured from **Komatsu**.
3. Operating expenses required to keep the **Machine** in good operating condition including, by way of example but not limitation:
 - a. System adjustments.
 - b. Scheduled maintenance outlined in the **Machine Operation and Maintenance Manual ("O&M Manual")**, including the cost of periodic maintenance items such as filters, lubricants, brushes and grease.
 - c. Oil analysis condition monitoring program such as **Komatsu Oil Wear Analysis ("KOWA")**, including the cost of drawing samples, oil, sampling accessories, postage and analysis report fees.
 - d. The cost of carrying out oil sampling program maintenance recommendations such as early re-sampling and/or replacement of oil or filters.
4. **Komatsu** will not cover any unauthorized modification without prior approval of **Komatsu** management.
5. Failures resulting from:
 - a. Shipment of **Machine** or replacement parts by any party other than **Komatsu**.
 - b. Failure of parts from allied suppliers or parts not procured through **Komatsu**.
 - c. Operating the **Machine** outside the guidelines specified in **O&M Manual**.
 - d. Operating the **Machine** outside of the parameters specified in the **Machine specific Payload Policy** or other notices or letters from **Komatsu**.
 - e. Noncompliance with the maintenance schedule and procedure outlined in the **Machine's O&M manual**.
 - f. Contaminated fuel, lubricant or coolant.
 - g. Continuing to operate the **Machine** when oil sampling reports or the **Machine** monitor panel, **Komtrax PLUS**, **Komtrax**, **PLM** or any other systems ("**Machine Monitoring Systems**") show critical errors, indicate that components are compromised by failures or are performing below specifications, or when **Komatsu** or the **Distributor** has requested that components be repaired or removed from the **Machine** because of an impending failure, **Komatsu** authorized field campaign or other good cause.
 - h. Improper **Machine** or replacement part storage procedures.
 - i. Incomplete or faulty repair procedures on previous repairs.
 - j. Improper initialization procedures during **Machine** or replacement part commissioning.

- k. **Machine** attachments options, accessories, modifications, or work equipment not authorized in O&M Manual and other materials published by **Komatsu** for **Distributors** and **Customers** or otherwise approved in writing and signed by an engineering officer of **Komatsu** (example **SEST**, **SFR**, etc.).
- l. Work site hazards or falling objects.
- m. Fire, accidents, vandalism, theft, acts of terrorism or war, acts of nature or other causes beyond the direct control of **Komatsu**.
- n. Misuse, misapplication, negligence or other misconduct on the part of the **Distributor**, **Customer** or any other person.

D) DISTRIBUTOR RESPONSIBILITIES

- 1. **Distributor** will review the terms of **Komatsu's** Machine Product Warranty Coverage Policy with the **Customer** representative when the **Machine** is sold to the **Customer**. The **PRODUCT WARRANTY CERTIFICATE FORM** is a copy of the **Machine** warranty certificate.
- 2. **Distributor** will store a copy of the Machine Product Warranty Certificate signed by the **Customer** for a minimum period of 7 years from the **Machine FID date**.
- 3. **Distributor** will establish and manage an oil condition monitoring for wheel motors on **Electric Drive Trucks**.
- 4. **Distributor** will complete **Covered Repairs**, store the failed parts and register claims for reimbursement from **Komatsu** per the terms specified in Reimbursement Policy Section of the **Warranty and Coverage Policies**.

E) KOMATSU RESPONSIBILITIES

Komatsu will assess **Distributor** claims per the terms specified in the **Claim Evaluation, Review and Distributor Reimbursement Procedure Section** of the **Warranty and Coverage Policies**.