

**BID SUBMITTAL FORM**  
**Alabama County Joint Bidding Program**  
**Heavy Equipment – Bid Item: Compact Track Excavator Option D-1**

Company Name: Cowin Equipment Company Inc.

Address: 4325 N. Blvd  
Montgomery Al. 36110

Bid Submitted by: John Edwards  
(Name of company representative)

Title: Governmental Sales Manager E-mail address: jedwards@cowin.com

Phone: 334-262-6642 Fax: 334-834-2272  
C-850-685-7055

By submitting this bid, we agree:

Initials

The equipment model number identified below meets the bid specs for this bid item

JE

That the bid price will be honored for all counties for the period from Jan. 1, 2024 to Dec. 31, 2024.

JE

The equipment will be delivered at the bid price to all counties participating in the joint bid program.

JE

The company acknowledges the freight preparation and delivery price is to be included in the total bid price for the standard machine.

JE

The company representative listed above will be the contact person for purchasing this bid item under the joint bid program.

JE

The bid is accompanied by a current catalog or model specification document for the model number identified below.

JE

The bid is accompanied by a copy of the manufacturer's standard warranty as required in the bid specifications.

JE

The bid includes the e-verify documentation required by Alabama law.

JE

If awarded the bid, a performance bond will be provided upon request.

JE

The bid documents include the **Manufacturer's Suggested Retail Price Sheet (MSRP) for the Standard Machine.**

JE

Total Bid Price for Standard Machine: \$ 119,577.00  
(Total Bid Price for Standard Machine Includes Freight Preparation, Delivery and Standard Warranty Costs) \*

Freight Preparation and Delivery: \$ 1,500.00  
(Included in Standard Machine Bid Price)

Manufacturer's Suggested Retail Price for Standard Machine: \$ 134,430.00

Equipment Model #: Volvo EC R88D

Description: Compact Excavator

Signature of company representative submitting bid: John Edwards

Title: Governmental Sales Manager

\* **NOTE:** Award will be made based on the total cost of the **Standard Machine**. The total cost of the standard machine is to include the freight preparation, delivery and standard warranty cost. Freight preparation, delivery will be excluded from the total bid price of the standard machine in determining the percentage discount for any available options.

## BID SUBMITTAL FORM: OPTION COST SHEET

By submitting this bid, we agree:

To offer any available options at the percent difference between the Manufacturer's Suggested Retail Price Sheet and the actual bid price on the Standard Machine\*

JE

The bid documents include the **Manufacturer's Suggested Retail Price Sheet (MSRP)** for the Standard Machine

JE

Equipment Model #: Volvo ECR88D

Description: Compact Excavator

Signature of company representative submitting bid: John Edwards

Title: Governmental Sales Manager

**\*Note:** The percent difference between the **Manufacturer's Suggested Retail Price Sheet (MSRP)** for the standard machine as specified by these **Bid Specifications** and the actual price bid by the vendor will be calculated to determine the percentage discount to be applied to any available options. The bid price of the freight preparation, delivery cost shall be excluded in determining the percentage discount to be applied to available options. Any individual county may choose to add any available option to the standard machine at the percentage discount at the time of purchase.



Sales Code	Description	MSRP
ECR88D	Volvo ECR88D Compact Excavator	\$120,722
CE12005	Offset Boom 140" (3550mm)	\$0
CE13018	Standard Arm, 67" (1700mm) w/ thumb bracket w/cw CE87002 470lbs (210kg)	\$0
CE15023	Dozer Blade with Float Function	\$0
CE21011	18" rubber pad inserts for steel grousers (includes CE21003)	\$5,268
CE30013	Engine for NA,Stage V	\$0
CE31001	Auto idling	\$0
CE31002	Engine Auto Shutdown	\$256
CE40022	Cab " ONLY" (pre-wired for Caretrack); for heat add CE44005; for heat and a/c add CE44006	\$3,163
CE41005	Fabric seat Mech susp w/ heat	\$197
CE32001	Standard Cooling Package for Engine and Work Hydraulics	\$0
CE42003	Seat belt, 3" retractable	\$95
CE44006	Heat & A/C	\$2,457
CE43001	ISO Pattern Selector Valve	\$0
CE45010	Rearview mirror	\$162
CE45012	Hour meter, analog	\$0
CE46002	Universal key	\$0
CE47011	Joystick_ w/o X3	\$0
CE54001	Work light basic_Halogen	\$0
CE50002	Work light, additional rear	\$192
CE51001	Travel alarm w/ delay	\$432
CE60003	Hydraulic oil ISO VG46 14°F to 86°F (-10°C to 30°C)	\$0
CE62015	X1 Piping w offset boom control in r/h joystick	\$0
CE70002	Tool kit - daily maintenance	\$0
CE71005	Manual - English	\$0
CE72001	Frame lifetime guarantee	\$0
CE80002	Decals NA	\$0
CE87002	HD Counterweight 470lbs (210kg)	\$0
CE8293213	18" , .187yd, GP trenching bucket, VTS Tooth System (3 teeth)	\$1,487
	MSRP Total	\$134,430



# **BID SPECIFICATIONS FOR COMPACT TRACK-MOUNTED HYDRAULIC EXCAVATOR Option D-1**

## **GENERAL**

These specifications shall be construed as the minimum acceptable standards for a track mounted hydraulic excavator with long undercarriage. Should the manufacturer's current published data or specifications exceed these standards, the manufacturer's standards shall be considered minimum and shall be furnished. All integral parts not specifically mentioned in the scope of these specifications that are necessary to provide a complete working unit shall be furnished. Additionally, the machine offered for bid shall include all standard manufacturers' equipment. The excavator must be a new current production model and shall meet all EPA and other applicable standards at the time of manufacture.

Use of specific names and numbers in the specifications is not intended to restrict the bidder or any seller or manufacturer, but is intended solely for the purpose of indicating the type, size and quality of equipment considered best adapted to the uses of the counties participating in this joint bid.

## **BID SUBMITTAL FORM**

Each bidder must submit his or her bid on the bid submittal form included in the invitation to bid package. All written warranties to be submitted shall be attached to the bid submittal form.

## **BID PRICE**

The price bid shall include all destination charges, delivery charges, title fees, rebates, and all other applicable costs and refunds.

## **MANUALS**

Each unit shall be provided with one (1) copy of the operator's manual, one [1] repair manual, and one (1) copy of the current parts manual. Units will not be accepted for delivery until the manuals as outlined above are received by the purchaser.

## **REPLACEMENT PARTS AVAILABILITY**

Parts must be available for 5 years or 7,500 hours of use for the piece of equipment. If any replacement parts are not delivered within three (3) working days of an order being placed, the bidder will deliver an equivalent machine for the county to use at no cost to the county until such time as the parts are delivered to the county so it can affect repairs to its machine.

## **WARRANTY**

Bidders shall submit a copy of the manufacturer's standard warranty. Warranty shall include service response time of maximum of 36 hours within notification by county.

Yes ☒ No ☐  
Page#   
or  
Attachment ☒

### **WEIGHT**

Minimum 18,000 lbs.

Yes ☒ No ☐  
Page # 18

Three (3) cylinders (or more), minimum 149 cubic inch diesel engine with minimum 55 net flywheel horsepower.

Yes ☒ No ☐  
Page # 16

### **UNDERCARRIAGE**

Track length shall be minimum 9'

Yes ☒ No ☐  
Page # 17

Track shoe width shall be minimum 17".

Yes ☒ No ☐  
Page # 17

Minimum five (5) track rollers per side.

Yes ☒ No ☐  
Page # 17

Minimum one (1) carrier rollers per side.

Yes ☒ No ☐  
Page # 17

Unit shall be equipped with steel tracks with rubber track pads.

Yes ☒ No ☐  
Page # option

### **CAPACITIES**

Fuel Tank Capacity – 29 gallon minimum

Yes ☒ No ☐  
Page # 16

Hydraulic Tank Capacity – 14 gallon minimum

Yes ☒ No ☐  
Page # 16

### **BOOM AND STICK**

One-piece boom with minimum 11' length

Yes ☒ No ☐  
Page # 17

Stick shall be a minimum 5.5' long

Yes ☒ No ☐  
Page # 17

### **DIMENSIONS**

Reach at ground level – 22' 0" minimum

Yes ☒ No ☐  
Page # 19

Bucket breakout force – minimum 10,000 lbs.

Yes ☒ No ☐  
Page # 19

Stick digging force – minimum 6,500 lbs.

Yes ☒ No ☐  
Page # 19

**BUCKET**

Bucket size and type will be provided as an option to be determined by ordering County

Yes ☒ No ☐  
Page # 22

**HYDRAULICS**

Hydraulic pump output shall be a minimum of 38 GPM

Yes ☒ No ☐  
Page # 16

**Blade**

Blade width – minimum 7.5'

Yes ☒ No ☐  
Page # 18

Blade height – minimum 14"

Yes ☒ No ☐  
Page # 18

**CAB**

Enclosed ROPS cab:

Heater

Yes ☒ No ☐  
Page # 22

Factory installed air conditioning

Yes ☒ No ☐  
Page # 22

AM/FM radio

Yes ☒ No ☐  
Page # 22



# **INVITATION TO BID HEAVY EQUIPMENT NOTICE OF BID OPENING**

**NOTICE IS HEREBY GIVEN** that the Association of County Commissions of Alabama, which administers the Alabama County Joint Bid Program on behalf of Alabama's county governing bodies, shall receive and open bids for the purchase of zero (0) or more items of heavy road equipment at its office located at 2 North Jackson Street, Montgomery, Alabama, at **10:00 a.m. on Friday, October 27, 2023**. Bid specifications are available at <http://www.alabamacounties.org/heavy-equipment/> for each of the following items:

Backhoes  
Track Mount Excavators  
Compact Track Mount Excavators  
Mini Track Excavator  
Wheeled Excavators  
Highway Speed Truck Excavators  
Motorgraders  
Heavy Duty Hydrostatic Bulldozers  
Mulching Dozer  
Wheel Loaders  
Heavy Duty Dump Chassis'  
Lowboy Tractors  
Skid Steer Attachments

Asphalt Milling Attachments  
Ride-on Industrial Boom Mowers  
Rubber Tire Roller  
7.5 Ton Single Drum Vibratory Roller  
One-man Pothole Patchers  
Trailer Mounted Patchers  
Trailer Mount Mastic Patcher/Crack Sealer  
Asphalt Storage Tanks  
Half Round End Dump Trailer  
Lowboy Trailers  
Dump Bodies (Automatic and Manual)

**Time is of the essence in submitting bids and only bids received in the Association office by 10:00 a.m. Central Time on Friday, October 27, 2023 will be opened and considered.** Bidders and any other interested individuals are invited to attend the bid opening.

## **NOTICE OF BID OPENING PROCEDURES**

All bids for **Heavy Equipment** will be opened and the name(s) of the bidders read aloud on the morning of the bid opening on Friday, **October 27, 2023 at 10:00 a.m.** at 2 North Jackson Street, Montgomery, AL. The specifics of each bid submitted will be compiled by the Association staff thereafter and will be available, **upon written or emailed request**, one week after the bid opening. Requests should be emailed to [jointbid@alabamacounties.org](mailto:jointbid@alabamacounties.org).

## **THE INVITATION PACKAGE**

The invitation package for each item to be bid includes: this invitation to bid, the written bid specifications for the particular item of heavy road equipment, and a Bid Submittal Form to be used in submitting a bid for that particular item. Bidders should verify that they have received all pages of the invitation package. If there are any omissions, the bidder should contact Kenya Howard in the Association office by mail, fax, or e-mail ([jointbid@alabamacounties.org](mailto:jointbid@alabamacounties.org)) to request missing pages. It is the responsibility of the bidder to make this request in sufficient time to prepare and submit the bid in time for the bid opening. Bidders should carefully read and comply with all parts of the invitation package, including all attachments and/or any addendum.

## **PREPARING AND SUBMITTING BIDS**

All bids must be typed or hand written in ink on the attached Bid Submittal Form. **The completed Bid Submittal Form shall be placed in front of and separated from all other documents included in the bid packet, such that it will be the first document viewed upon opening the bid packet.**

Bids submitted in pencil and bids not submitted on the Bid Submittal Form will **not** be considered. All bids shall include a current catalog or model specification document for the equipment model number being offered for consideration. Bids submitted without such documentation will **not** be considered. Only information contained on the attached Bid Submittal Form and in the model specification document will be considered in evaluating bids.

Each separate requirement in the bid specification includes a block for indicating whether or not the item bid meets the specification. The bidder shall indicate compliance with each requirement by checking "Yes" or "No" in the block to the right of each bid specification. In addition, the bidder shall indicate the page number in the supplied manufacturer's equipment literature on which compliance with the specification can be verified. Failure to complete this portion of the bid form may result in the subject bid not being considered. Additionally, all bidders are required to submit a factory build/order sheet showing all of the standard and option items for each piece of equipment bid in order to assist the bid review committee in assuring that each bid is in conformance with the required bid specifications.

Each bid for one of the heavy equipment items included in the bid package must be submitted on the Bid Submittal Form for that item and forwarded in a separate envelope with the bid item and item number clearly identified on the outside of the envelope. Envelopes containing a "no bid" shall also include the words "NO BID" on the outside of the envelope. Facsimiles and e-mails will not be accepted. Bids submitted by "Express/Overnight" services must be in a separate inner envelope or package sealed and identified as stated above. All bids must be received in the Association office prior to the bid opening. Bids received after the deadline will be returned unopened.

The County Joint Bid Program reserves the right to require a performance bond from successful bidders as permitted under Alabama law. However, **no bid bond is required for this bid offering.**

All bids should be mailed or hand-delivered to:

**Attn: Joint Bid Program  
Association of County Commissions of Alabama  
2 North Jackson Street Montgomery, Alabama 36104 (Physical Address)  
P.O. Box 5040, Montgomery, Alabama 36103 (Mailing Address)**



## **BID SPECIFICATIONS**

Please note that each piece of heavy equipment available for bid may include several different sizes and categories of machines. You should read each set of specifications very carefully as the differences vary depending upon the piece and size of equipment.

Where applicable, each bid submission shall include the separate cost of each item listed in the "Options" section of the bid specifications. However, all bids will be awarded on the basis of the **total cost of the machine with all options included**. Therefore, the "Bid Price" stated on the Bid Submittal Form must be the total cost, including the cost of all options.

Once the bids have been awarded, any county participant purchasing under this program may, at its discretion, deduct one or more of the options set out in the bid specifications, and in such event, the cost of the option as stated on the bid shall be deducted from the total cost of the machine. There shall be no other deductions and no additions made to the machine by the purchasing county or by the vendor.

Any use of specific names and/or model numbers in the attached specifications is not intended to restrict the bidder or any seller or manufacturer, but is included solely for the purpose of indicating the type, size, and quality of materials, product services, or equipment considered best adapted to the use of the counties participating in the joint bid program.

## **BIDDER QUALIFICATIONS**

All bidders and all program participants must be in compliance with any applicable federal, state, county and municipal laws, regulations, resolutions and ordinances, including but not limited to, licensing, permitting, and taxation requirements. All bidders should be prepared to submit evidence or documentation as proof that they are properly licensed and permitted under any applicable laws upon request. Such evidence or documentation may be submitted with the bid. Additionally, all bidders shall provide proof that they are in compliance with the e-verify requirements of Alabama's Immigration Law (Ala. Code § 31-13-1 et seq., as amended by Act No. 2012-491).

## **BID AWARD**

The Houston County Commission will serve as the awarding authority for all bids and will award all contracts at a regular meeting of the Houston County Commission. Any and all bids submitted in compliance with this invitation to bid shall be considered, and award will be made to the lowest responsible bidder meeting bid specifications as determined by the awarding authority in compliance with Alabama law. All bids will be reviewed and evaluated by a committee created for that purpose, which committee will make comments and recommendations to the awarding authority regarding the award. All factors contained in each invitation package will be evaluated in determining the successful bidder, and any omissions of the stated requirements may be cause for rejection of the bid submitted. The awarding authority reserves the right to reject any and all bids, to waive any informality in bids, and to accept in whole or in part such bid or bids solely at its discretion.

The contract period will be one year with an option to renew for a second and third year under identical price, terms, and conditions upon the mutual consent of the vendor and the awarding authority. Any renewal contract shall be approved in writing by the vendor and the awarding authority no later than 90 days prior to the expiration of the existing contract.



### **CONTACT REGARDING BIDS AND INVITATION**

Contact initiated by a potential bidder with any county official, county employee, or member of the Association staff shall only be as specifically set out in this Invitation to Bid. Any questions related to the bid or the County Joint Bid Program shall be directed to Association staff in writing under the procedures set out in this Invitation to Bid. Additionally, a bidder may contact the Association in writing to request an appointment to review bid specifications following the bid opening. **However, there shall be no communication with any county official or county employee regarding this bid between the date of this invitation and the date of bid award.** Any contact other than as set out here shall be deemed as an attempt to unduly influence the bid award, and shall be grounds for rejection of the bid submitted by the bidder initiating such other contact.

Any questions or problems related to downloading or obtaining copies of this Invitation to Bid should be directed to **Kenya Howard** at [jointbid@alabamacounties.org](mailto:jointbid@alabamacounties.org) or **334-263-7594**.

Any other questions or requests for additional information regarding this invitation or the bid specifications shall be submitted **in writing** no later than five (5) days prior to bid opening to:

**Patrick McDougald**  
Association of County Commissions of Alabama  
P.O. Box 5040  
Montgomery, Alabama 36103  
E-mail: [pattymackdaddy@gmail.com](mailto:pattymackdaddy@gmail.com)



V O L V O



John Edwards Governmental  
Sales Manager 850-685-7055  
jedwards@cowin.com

ACCA



Volvo Excavators 8.6-10.0 t / 19,010-22,050 lb 58 hp

**ECR88D**

Volvo Construction Equipment





# Welcome to our world

Welcome to a world of industry leading machinery. A world where imagination, hard work and technological innovation will lead the way towards developing a future which is cleaner, smarter, and more connected. A world supported by the enduring values of the Volvo Group. A world of stability, sustainability and innovation. A world which we put our customers at the heart of.

Welcome to the world of Volvo Construction Equipment – we think you're going to like it here.

## Small machines, big results

With decades of experience in the design and manufacture of compact excavators and wheel loaders, our range of compact machinery is designed with customer success in mind. Built from the same DNA as large Volvo machinery, our compact range sets the standard for efficiency performance and uptime – complemented by an extensive range of Volvo attachments for maximum versatility.

Building on our proud history, the Volvo Concept Lab continues to create cutting-edge ideas and innovative concepts – such as our award-winning electric compact machines – to ensure we offer our customers machines which deliver big results long into the future.





## Solutions for you

Our industry leading machines are just the start of your relationship with Volvo. As your partner, we have developed an extensive range of additional solutions to help you improve uptime, boost productivity and reduce costs.

### Designed for your business

Structured across nine blocks, our portfolio of products and services are designed to complement your machine's performance and boost your profitability. Simply put, we offer some of the best guarantees, warranties and technological solutions in the industry today.

### There when you need us

Whether you're buying new or used, our global network of dealers and technicians offer around-the-clock support, including machine monitoring and world-class parts availability. It's the basis of everything offered by Volvo Services, so you can be confident we've got you covered right from the start.



# BUILDING TOMORROW



# Powered to perform

Volvo proudly introduces the new ECR88D compact short swing radius excavator. Featuring a powerful Volvo engine and perfectly matched hydraulic system, this machine delivers high performance, excellent control and low fuel consumption. Sustain optimum power and productivity with Volvo.

## Volvo engine

Volvo's premium Tier 4f / Stage V engine delivers superior performance and low fuel consumption. The engine features an Exhaust After Treatment System (EATS) to lower emissions and a regeneration process that does not interrupt operation, performance or productivity.



## Slew and boom offset

Slew and boom offset movements are controlled simultaneously for easy and fast positioning of the machine. Joystick control enables precise, smooth and effortless command of the slew and boom offset.



## Tractive force

High system pressure delivers impressive tractive force when climbing gradients or traveling over rough terrain. For improved performance, the ECR88D boasts a 16% improvement in tractive force compared to the previous model.







# ENHANCED HYDRAULICS

Volvo's state-of-the-art hydraulic system is perfectly matched to the Volvo engine and components – delivering high performance and improved fuel efficiency. The hydraulic system has been designed for fast response and smooth operation.

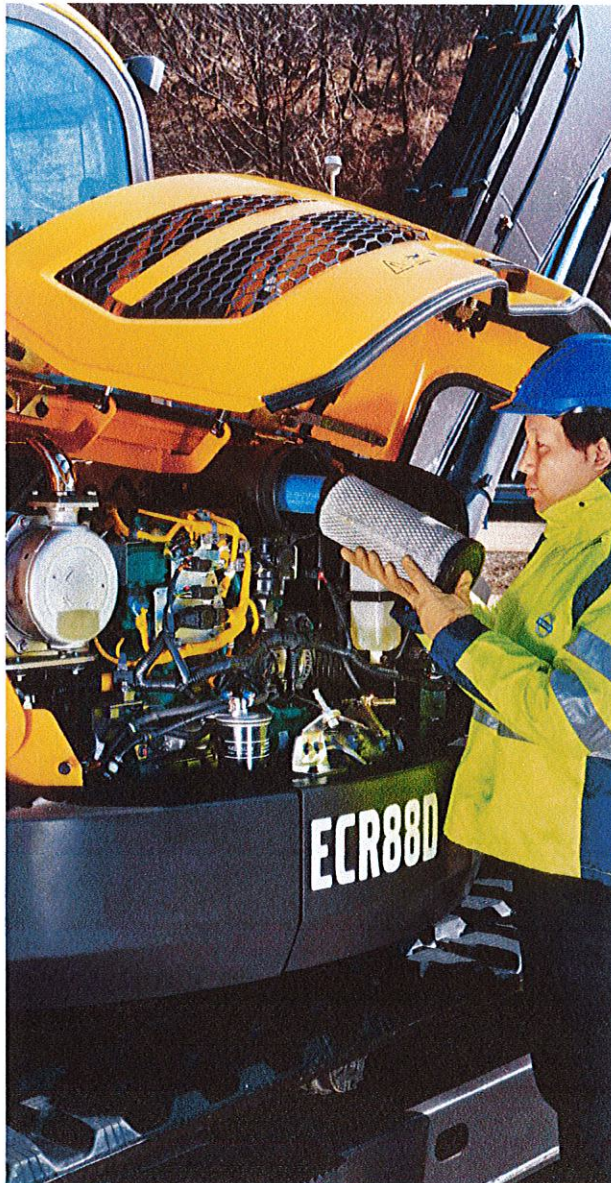


# Stability you can count on

Whether you're working in the road construction, utilities, landscaping or any other application, the ECR88D will give you access to more jobsites, where you can work closer to obstacles, safely. With a heavy counterweight and strong undercarriage, this machine delivers superior stability. And with easy service access you'll enjoy maintenance made easy with Volvo.

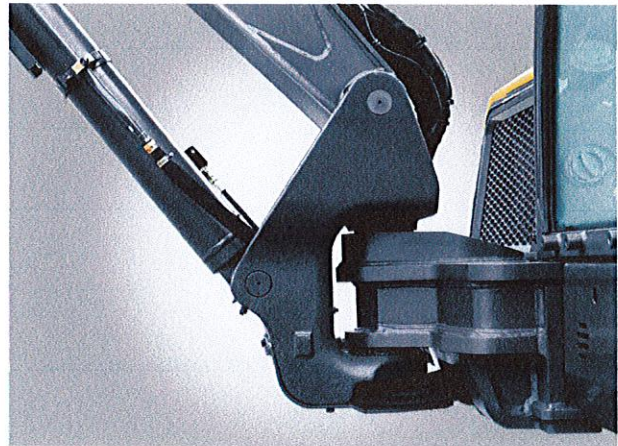
## Service access

For safe and easy access, all service check points are located under the wide-opening engine hood and are accessed from ground level. Grouped filters ensure regular maintenance is straightforward and uptime is maximized.



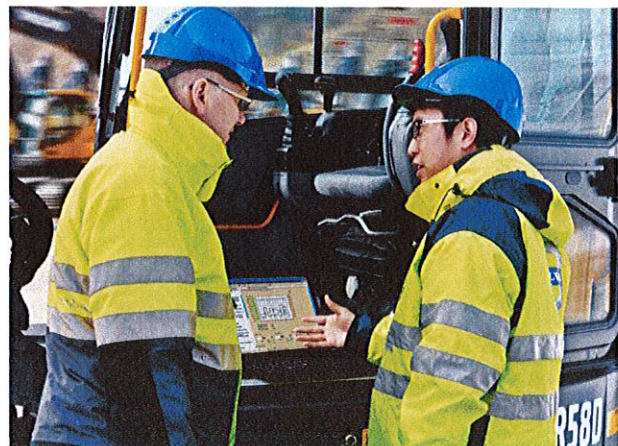
## Single pivot pin

Volvo uses a single pivot design that achieves maximum support between main frame and front equipment. This concept increases stability, durability and lifetime of the components.



## MATRIS and VCADS Pro

For increased uptime, Volvo's high-tech, computer-based MATRIS tool allows you to monitor machine usage and analyze machine operation. VCADS Pro analysis and programming software provides fast diagnostics.







# STABILITY

Design improvements including a counterweight have shifted the center of gravity towards the rear of the machine. Together with a strong undercarriage, this delivers superior stability while lifting bigger loads.

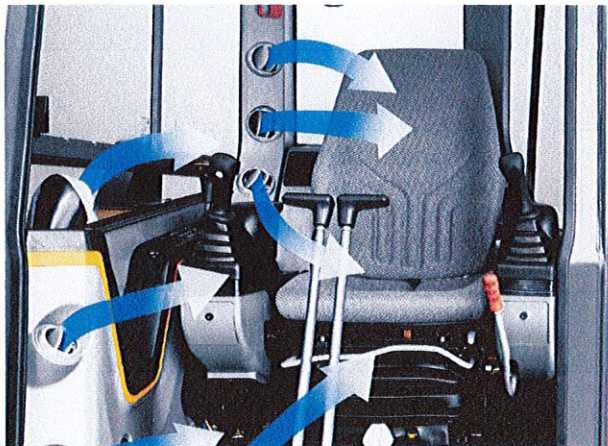


# Visibly better

At Volvo we know that when operators are comfortable they experience less fatigue and work more productively. That's why the premium, Volvo designed cab provides superior visibility, a safe and spacious working environment and easy to access controls. Step inside and see the results for yourself.

## Climate control

Control your climate with Volvo's powerful, industry-leading climate control system. With seven well-spaced vents quickly heating or cooling the cab, this air circulation and defrosting system increases comfort and productivity.



## Ease of control

Control your machine with minimal effort in order to get more done in less time. The keypad groups all controls on the right hand side and the 7" color LCD screen displays all machine information for access to functions through its easy to use menus. Through the hot keys, the operator can directly access pre-set functions for added convenience.



## Proportional joysticks

Via the joystick controls, the operator can easily adjust the direction and amount of hydraulic flow sent to the attachment. Benefit from the correct speed and power for optimal attachment operation.



## Storage

The Volvo cab features ample storage locations for personal belongings including an additional glove-box, side pocket, phone storage, cup holder and a pocket behind the seat.







# VOLVO CAB

All-around visibility from slim cab pillars and large expanses of glass is at the center of Volvo's cab design. The ROPS certified cab features vibration and noise isolation, ergonomic controls and an adjustable seat for increased comfort, reduced fatigue and increased productivity.

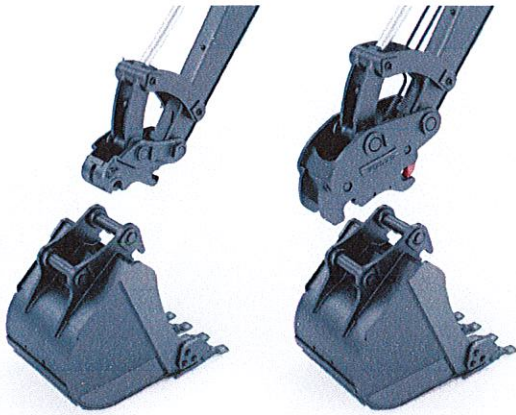


# One machine, many job sites

Volvo offers a wide range of durable attachments that are suitable for any job site, including utilities, building, agriculture, landscaping and forestry. Volvo attachments are an integrated part of the excavator for which they're intended – delivering maximum productivity and versatility.

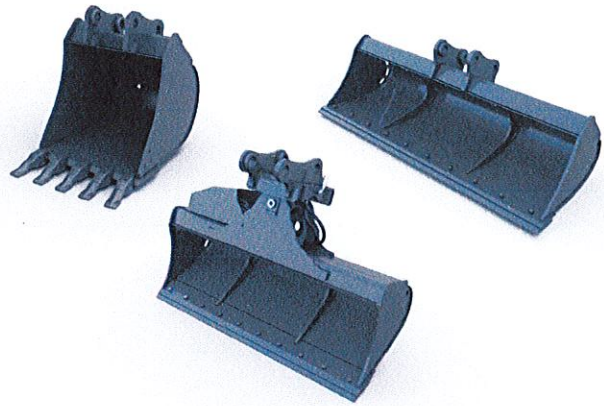
## Quick coupler

Both the mechanical and the hydraulic quick couplers allow a complete range of buckets to be changed quickly and efficiently.



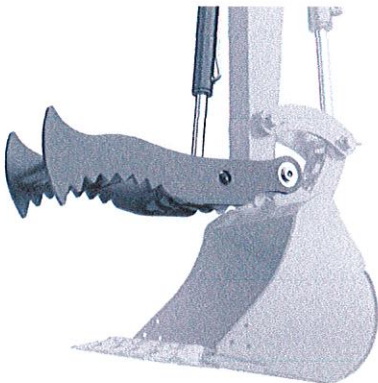
## Buckets

A complete range of buckets from general purpose reinforced buckets to ditching buckets, allow the ECR88D to work on many job sites for a wide range of applications. The durable buckets are built to work in loose gravel, crushed rock, dirt and soil.



## Thumb

Designed to work with both Volvo direct fit buckets and Volvo quick coupler, the Volvo thumb makes handling material easy for tasks including piling, placing, loading, lifting and carrying.



## Steelwrist tiltrotator

A Volvo compact excavator together with a Steelwrist® tiltrotator delivers the ultimate combination of high productivity, safety, precision and control. Steelwrist tiltrotators provide a superior tilt angle and the compact design with low build height results in improved digging performance and higher fuel efficiency. Get more done with your machine, without changing attachment or machine position.







# ATTACHMENTS VERSATILITY

The machine's attachment can be easily changed to save time and costs. Its design, hydraulics, piping and in-cab controls combined with Volvo's attachments range allows the ECR88D to take on a variety of tasks. Volvo attachments work in harmony with the machine to deliver maximum productivity.



# Built to get the job done

## Enhanced hydraulics

The hydraulic system is perfectly matched to the engine and components for fast response and smooth operation.

## Stability

A heavy counterweight and a strong undercarriage deliver superior stability and the ability to lift bigger loads.

## Service access

All service check points are accessed from ground level. Grouped filters make regular maintenance easy.

## Single pivot pin

Volvo uses a single pivot design that achieves maximum support between main frame and front equipment. This concept increases stability, durability and lifetime of the components.

## Optional hydraulics

For increased versatility, auxiliary hydraulic systems are available to enable the operation of a wide range of attachments.

## MATRIS and VCADS Pro

The MATRIS tool monitors machine usage and operation. VCADS Pro analysis and programming software provides fast diagnostics.

## ECO mode

The ECO mode provides optimal working performance together with fuel saving.





### Optional dozer floating

The optional dozer blade float function 'floats' the dozer blade over the ground for improved leveling control and fuel efficiency.

### Undercarriage

Durable and strong X-shape undercarriage ensures superior stability and increases machine lifetime.

### Auto engine shutdown

The auto engine shutdown provides lower fuel costs, less noise, much lower maintenance costs and a greater resale value.

### Auto idle

Engine speed is reduced to idle when the controls are inactive for more than five seconds or the left-hand console is raised – reducing fuel consumption and noise.

### Volvo engine

Tier 4f compliant Volvo Engine delivers superior performance with low fuel consumption.

### Volvo Cab

Volvo's purpose designed cab offers excellent allround viability, enhanced by the slim cab pillars and large windows.





# Adding value to your business

Being a Volvo customer means having a complete set of services at your fingertips. Volvo can offer you a long-term partnership, protect your revenue and provide a full range of customer solutions using high quality parts, delivered by passionate people. Volvo is committed to increasing the positive return on your investment and maximising uptime.

## Complete Solutions

Volvo has the right solution for you. So why not let us provide all your needs throughout the whole life cycle of your machine?

By listening to your requirements, we can reduce your total cost of ownership and increase your revenue.



## Genuine Volvo Parts

Our attention to detail is what makes us stand out. This proven concept acts as a solid investment in your machine's future. Parts are extensively tested and approved because every part is vital for uptime and performance. Only by using Genuine Volvo Parts, can you be sure that your machine retains the renowned Volvo quality.

## Service Network

In order to respond to your needs faster, a Volvo expert is on their way to your job site from one of our Volvo facilities. With our extensive infrastructure of technicians, workshops and dealers, Volvo has a comprehensive network to fully support you using local knowledge and global experience.







# CUSTOMER SUPPORT AGREEMENTS

The range of Customer Support Agreements offer preventive maintenance, total repairs and a number of uptime services. Volvo uses the latest technology to monitor machine operation and status, giving you advice to increase your profitability. By having a Customer Support Agreement you are in control of your service costs.



# Volvo ECR88D in detail

## Engine

The new Tier 4f / Stage V compliant diesel engine is equipped with in-line, turbocharged and water cooled.

Model	Volvo	D2.6H
Max. power at	r/min (r/s)	2,000 (33.3)
Net (ISO 9249/SAEJ1349)	kW (hp)	41 (55)
Gross (SAE J1995)	kW (hp)	42.4 (57)
Max. torque	Nm (ft lbf)	220 (162)
at engine speed	r/min	1,300
No. of cylinders		4
Displacement	l (in <sup>3</sup> )	2.62 (160)
Bore	mm (in)	87 (3.4)
Stroke	mm (in)	110 (4.3)

## Electrical system

Voltage	V	12
Batteries	V	1 x 12
Battery capacity	Ah	100
Alternator	V/Ah	12/70
Starter motor output	V - kW	12 - 2.5

## Hydraulic system

Open-center, negative hydraulic system providing accurate controllability

Main pump: Variable-displacement pump

Maximum flow	l/min (gal/min)	2 x 68 + 54 (2 x 18 + 14)
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Pilot pump: Gear pump

Maximum flow	l/min (gal/min)	13 (3.4)
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Relief valve setting pressure

Implement	MPa (psi)	29.4 (4,264)
Travel circuit	MPa (psi)	29.4 (4,264)
Swing circuit	MPa (psi)	24.5 (3,553)
Pilot circuit	MPa (psi)	3.4 (493)

## Swing system

Direct drive swing with radial piston motor-maintenance free and automatic holding brake anti-rebound valve.

Max. swing speed	r/min	8.3
Max. swing torque	kNm (ft lbf)	22.9 (16,890)

## Undercarriage

Robust X-shaped frame with sealed and greased track chains.

Track shoes		2 x 39
Link pitch	mm (in)	154 (6.1)
Shoe width - steel	mm (in)	450 / 600 (17.7 / 23.6)
Shoe width - rubber	mm (in)	450 (17.7)
Bottom rollers		2 x 5
Top rollers		2 x 1

## Travel System

Each track is powered by an automatic two-speed shift travel motor. The track brakes are multi-disc, spring-applied and hydraulic released.

Travel speed low	km/h (mi/h)	2.6 (1.6)
Travel speed high	km/h (mi/h)	5.2 (3.2)
Max. drawbar pull	kN (lbf)	65 (14,613)
Gradeability	°	35

## Service Refill

Fuel tank	l (gal)	110 (29)
Hydraulic system, total	l (gal)	140 (37)
Hydraulic tank	l (gal)	84 (22)
Engine oil	l (gal)	10.2 (2.7)
Engine coolant	l (gal)	9.3 (2.5)
Travel reduction unit	l (gal)	2 x 1.6 (2 x 0.4)

## Cab

Refrigerant of the type R134a is used when this machine is equipped with air conditioning. Contains fluorinated greenhouse gas R134a, Global Warming Potential 1.430 t CO<sub>2</sub>-eq

## Sound Level

Sound level in cab according to ISO 6396

L <sub>pA</sub>	dB	74
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External sound level according to ISO 6395 and EU Noise Directive 2000/14/EC

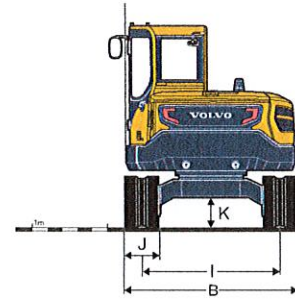
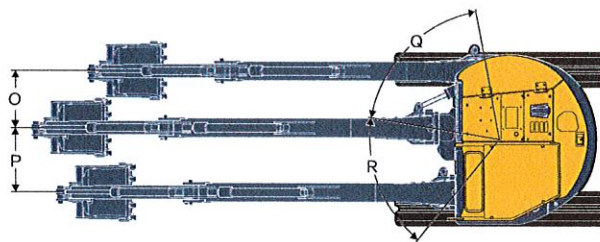
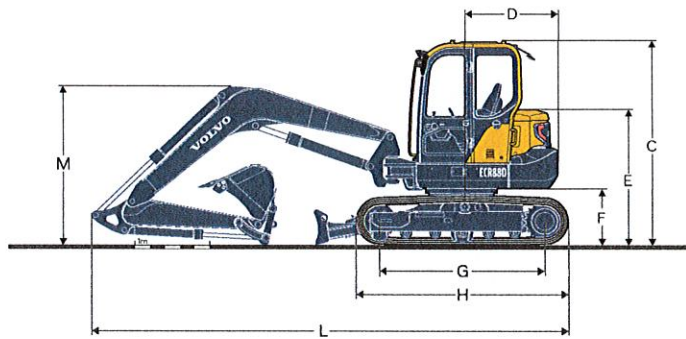
L <sub>WA</sub>	dB	98
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## Buckets

	Width		Weight		Capacity	
	mm	in	kg	lb	l	cu.in
Direct bucket	300	12	111	250	79	4,820
	450	18	139	310	143	8,730
	600	24	162	360	200	12,200
	750	30	182	400	266	16,230
	900	35	205	450	333	20,320
Quick coupler bucket	450	18	132	290	143	8,730
	600	24	156	340	200	12,200
	700	28	171	380	244	14,890
	850	33	191	420	310	18,920



# Specifications



## DIMENSIONS

### Machine



Boom	m	ft in	3.55	11'8"	3.55	11'8"
Arm	m	ft in	1.7	5'7"	2.1	6'11"
A Overall width of upper structure	mm	ft in	2,260	7'5"	2,260	7'5"
B Overall width	mm	ft in	2,300 / 2,450	7'7" / 8'0"	2,300 / 2,450	7'7" / 8'0"
C Overall height of cab	mm	ft in	2,715	8'11"	2,715	8'11"
D Tail swing radius	mm	ft in	1,290	4'3"	1,290	4'3"
E Overall height of engine hood	mm	ft in	1,810	5'11"	1,810	5'11"
F Counterweight clearance *	mm	ft in	760	2'6"	760	2'6"
G Tumbler length	mm	ft in	2,200	7'3"	2,200	7'3"
H Track length	mm	ft in	2,830	9'3"	2,830	9'3"
I Track gauge	mm	ft in	1,850	6'1"	1,850	6'1"
J Shoe width	mm	ft in	450 / 600	1'6" / 1'12"	450 / 600	1'6" / 1'12"
K Min. ground clearance *	mm	ft in	405	1'4"	405	1'4"
L Overall length	mm	ft in	6,370	20'11"	6,420	21'1"
M Overall height of boom	mm	ft in	2,115	6'11"	2,230	7'4"
O Boom swing distance	mm	ft in	760	2'6"	760	2'6"
P Boom swing distance	mm	ft in	860	2'10"	860	2'10"
Q Boom swing angle	°		70		70	
R Boom swing angle	°		60		60	

\* Without shoe grouser



# Specifications

## Boom and Arm

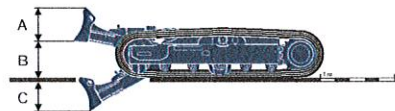
								
			Boom		Arm			
	m	ft in	3.55	11'8"	1.7	5'7"	2.1	6'11"
A Length	mm	ft in	3,700	12'2"	2,283	7'6"	2,684	8'10"
B Height	mm	ft in	1,244	4'1"	518	1'8"	562	1'10"
Width	mm	ft in	335	1'1"	305	1'0"	305	1'0"
Weight	kg	lb	530	1,170	280	620	340	750

Boom: Includes cylinder, piping and pin, excludes boom cyl. Pin.

Arm: Includes cylinder, linkage and pin.

## Dozer blade

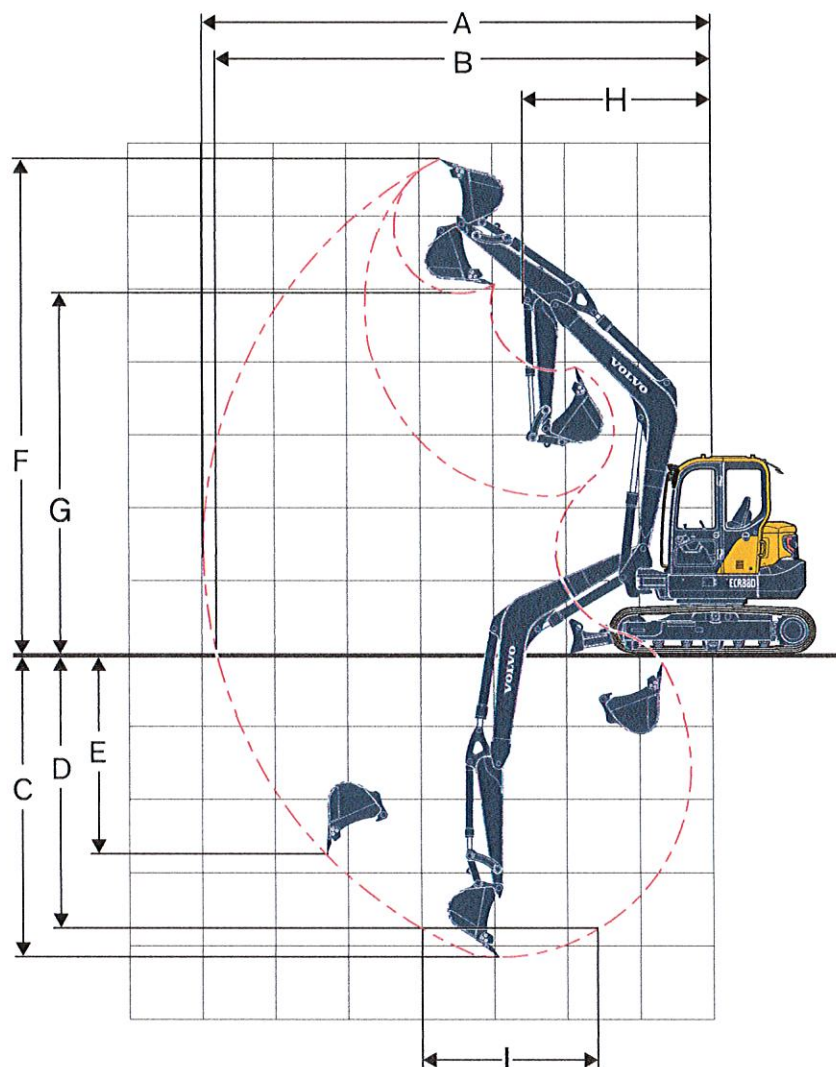
A Height	mm	ft in	470	1'7"
Width	mm	ft in	2,300	7'7"
B Lifting height	mm	ft in	518	1'8"
C Digging depth	mm	ft in	433	1'5"



## MACHINE WEIGHTS AND GROUND PRESSURE

	Shoe width		Operating weight		Ground pressure	
	mm	in	kg	lb	kPa	psi
<b>Mono boom 3.55 m 11'8", Arm 1.7 m 5'7", Bucket 188 kg (266 l) 410 lb, Counterweight 1 610 kg / 3,549 lb</b>						
Steel track	450	18	9,149	20,170	41.1	6.0
	600	24	9,318	20,543	31.4	4.55
Rubber track	450	18	8,962	19,758	40.3	5.9
Rubber pad	450	18	9,198	20,278	41.2	6.0
<b>Mono boom 3.55 m 11'8", Arm 2.1 m 6'11", Bucket 188 kg (266 l) 410 lb, Counterweight 1 400 / 1 610 kg 3,086 / 3,549 lb</b>						
Steel track	450	18	9,207	20,298	41.4	6.0
	600	24	9,376	20,671	31.6	4.6
Rubber track	450	18	9,020	19,886	40.6	5.9
Rubber pad	450	18	9,256	20,406	41.4	6.0





#### WORKING RANGES

Description	Unit					
	m	ft in	3.55	11'8"	3.55	11'8"
Boom						
Arm	m	ft in	1.7	5'7"	2.1	6'11"
A Max. digging reach	mm	ft in	6,970	22'10"	7,350	24'1"
B Max. digging reach on ground	mm	ft in	6,800	22'4"	7,180	23'7"
C Max. digging depth	mm	ft in	4,130	13'7"	4,530	14'10"
D Max. digging depth (l=2.44m / 8' level)	mm	ft in	3,750	12'4"	4,200	13'9"
E Max. vertical wall digging depth	mm	ft in	2,820	9'3"	3,200	10'6"
F Max. cutting height	mm	ft in	6,790	22'3"	7,050	23'2"
G Max. dumping height	mm	ft in	4,960	16'3"	5,220	17'2"
H Min. front swing radius	mm	ft in	2,560	8'5"	2,640	8'8"

#### Digging forces with direct fit bucket

Breakout force (bucket)	SAE J1179	kN	lb	50.7	11,400	50.4	11,330
	ISO 6015	kN	lb	57.2	12,860	56.8	12,770
Tearout force (arm)	SAE J1179	kN	lb	38.9	8,740	33.8	7,600
	ISO 6015	kN	lb	39.8	8,950	34.4	7,730
Rotation angle, bucket			°	190		190	



# Specifications

## LIFTING CAPACITY ECR88D

Lifting capacity at the arm end without bucket.

For lifting capacity including bucket. Simply subtract actual weight of the direct fit bucket or the bucket with quick coupler from the following values.

	Lifting point m ft		1.0 m, 3.3 ft		2.0 m, 6.6 ft		3.0 m, 9.9 ft		4.0 m, 13.2 ft		5.0 m, 16.5 ft		6.0, 19.8 ft		Max. reach		
			Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Along	Across	Max.
Boom 3.55 m, 11'8" Arm 1.7 m, 5'7" Shoe Rubber 450 mm, 1'6" CWT 1,610 kg / 3,550 lb Dozer blade down	5.0 kg								*1,540	*1,540					*1,620	*1,620	4.6 m
	16.5 lb								*3,395	*3,395					*3,571	*3,571	15.0 ft
	4.0 kg								*1,600	*1,600	*1,560	1,530			*1,580	*1,360	5.3 m
	13.2 lb								*3,527	*3,527	*3,439	*3,373			*3,483	*2,998	17.5 ft
	3.0 kg						*2,510	*2,510	*1,920	*1,920	*1,660	1,500			*1,550	*1,180	5.8 m
	9.9 lb						*5,534	*5,534	*4,233	*4,233	*3,660	*3,307			*3,417	*2,601	19.0 ft
	2.0 kg						*3,740	3,110	*2,360	2,030	*1,850	1,460	*1,610	1,100	*1,600	*1,090	6.0 m
	6.6 lb						*8,245	*6,856	*5,203	*4,475	*4,079	*3,219	*3,549	*2,425	*3,527	*2,403	19.7 ft
	1.0 kg								*2,720	1,940	*2,030	1,410	*1,650	1,080	*1,650	*1,070	6.0 m
	3.3 lb								*5,997	*4,277	*4,475	*3,109	*3,638	*2,381	*3,638	*2,359	19.7 ft
	0.0 kg						*3,810	2,930	*2,850	1,900	*2,100	1,380			*1,690	*1,110	5.8 m
	0.0 lb						*8,400	*6,460	*6,283	*4,189	*4,630	*3,042			*3,726	*2,447	19.1 ft
Boom 3.55 m, 11'8" Arm 1.7 m, 5'7" Shoe Rubber 450 mm, 1'6" CWT 1,610 kg / 3,550 lb Dozer blade up	-1.0 kg				*3,570	*3,570	*3,890	2,940	*2,730	1,890	*2,000	1,370			*1,730	*1,230	5.4 m
	-3.3 lb				*7,870	*7,870	*8,576	*6,482	*6,019	*4,167	*4,409	*3,020			*3,814	*2,712	17.7 ft
	-2.0 kg				*4,870	*4,870	*3,240	2,980	*2,310	1,910					*1,740	*1,530	4.7 m
	-6.6 lb				*10,736	*10,736	*7,143	*6,570	*5,093	*4,211					*3,836	*3,373	15.4 ft
	-3.0 kg						*1,930	*1,930							*1,540	*1,540	3.4 m
	-9.9 lb						*4,255	*4,255							*3,395	*3,395	11.3 ft
	5.0 kg								*1,540	*1,540					*1,620	*1,620	4.6 m
	16.5 lb								*3,395	*3,395					*3,571	*3,571	15.0 ft
	4.0 kg								*1,600	*1,600	*1,560	1,450			*1,580	*1,290	5.3 m
	13.2 lb								*3,527	*3,527	*3,439	*3,197			*3,483	*2,844	17.5 ft
	3.0 kg						*2,510	*2,510	*1,920	*1,920	*1,660	1,420			*1,410	*1,120	5.8 m
	9.9 lb						*5,534	*5,534	*4,233	*4,233	*3,660	*3,131			*3,109	*2,469	19.0 ft
Boom 3.55 m, 11'8" Arm 1.7 m, 5'7" Shoe Rubber 450 mm, 1'6" CWT 1,610 kg / 3,550 lb Dozer blade down	2.0 kg						*3,740	2,920	*2,360	1,920	1,740	1,380	1,320	1,030	*1,310	*1,030	6.0 m
	6.6 lb						*8,245	*6,437	*5,203	*4,233	*3,836	*3,042	*2,910	*2,271	*2,888	*2,271	19.7 ft
	1.0 kg								2,340	1,830	1,690	1,330	1,300	1,020	*1,290	*1,010	6.0 m
	3.3 lb								*5,159	*4,034	*3,726	*2,932	*2,866	*2,249	*2,844	*2,227	19.7 ft
	0.0 kg						3,580	2,740	2,290	1,780	1,660	1,300			*1,340	*1,050	5.8 m
	0.0 lb						*7,893	*6,041	*5,049	*3,924	*3,660	*2,866			*2,954	*2,315	19.1 ft
	-1.0 kg				*3,570	*3,570	3,590	2,750	2,280	1,770	1,650	1,290			*1,490	*1,160	5.4 m
	-3.3 lb				*7,870	*7,870	*7,915	*6,063	*5,027	*3,902	*3,638	*2,844			*3,285	*2,557	17.7 ft
	-2.0 kg				*4,870	*4,870	*3,240	2,790	2,300	1,800					*1,740	*1,440	4.7 m
	-6.6 lb				*10,736	*10,736	*7,143	*6,151	*5,071	*3,968					*3,836	*3,175	15.4 ft
	-3.0 kg						*1,930	*1,930							*1,540	*1,540	3.4 m
	-9.9 lb						*4,255	*4,255							*3,395	*3,395	11.3 ft
Boom 3.55 m, 11'8" Arm 2.1 m, 6'11" Shoe Rubber 450 mm, 1'6" CWT 1,610 kg / 3,550 lb Dozer blade down	6.0 kg														*1,520	*1,520	4.0 m
	19.8 lb														*3,351	*3,351	13.0 ft
	5.0 kg										*1,400	*1,400			*1,330	*1,330	5.1 m
	16.5 lb										*3,086	*3,086			*2,932	*2,932	16.7 ft
	4.0 kg										*1,360	*1,360			*1,230	*1,190	5.8 m
	13.2 lb										*2,998	*2,998			*2,712	*2,623	19.0 ft
	3.0 kg								*1,660	*1,660	*1,490	*1,490	*1,410	1,110	*1,210	*1,050	6.2 m
	9.9 lb								*3,660	*3,660	*3,285	*3,285	*3,109	*2,447	*2,668	*2,315	20.3 ft
	2.0 kg						*3,190	3,170	*2,120	2,040	*1,700	1,450	*1,490	1,080	*1,250	980	6.4 m
	6.6 lb						*7,033	*6,989	*4,674	*4,497	*3,748	*3,197	*3,285	*2,381	*2,756	*2,161	20.9 ft
	1.0 kg						*3,640	2,950	*2,540	1,930	*1,910	1,390	*1,580	1,060	*1,330	960	6.4 m
	3.3 lb						*8,025	*6,504	*5,600	*4,255	*4,211	*3,064	*3,483	*2,337	*2,932	*2,116	21.0 ft
Boom 3.55 m, 11'8" Arm 2.1 m, 6'11" Shoe Rubber 450 mm, 1'6" CWT 1,610 kg / 3,550 lb Dozer blade up	0.0 kg						*3,950	2,870	*2,770	1,860	*2,040	1,350	*1,610	1,040	*1,490	980	6.2 m
	0.0 lb						*8,708	*6,327	*6,107	*4,101	*4,497	*2,976	*3,549	*2,293	*3,285	*2,161	20.4 ft
	-1.0 kg				*2,670	*2,670	*3,090	*3,090	*4,040	2,860	*2,750	1,840	*2,020	1,330	*1,570	*1,070	5.8 m
	-3.3 lb				*5,886	*5,886	*6,812	*6,812	*8,907	*6,305	*6,063	*4,057	*4,453	*2,932	*3,461	*2,359	19.1 ft
	-2.0 kg				*3,990	*3,990	*4,950	*4,950	*3,540	2,890	*2,470	1,850	*1,750	1,340	*1,600	*1,280	5.2 m
	-6.6 lb				*8,796	*8,796	*10,913	*10,913	*7,804	*6,371	*5,445	*4,079	*3,858	*2,954	*3,527	*2,822	17.0 ft
	-3.0 kg						*3,940	*3,940	*2,550	*2,550	*1,690	*1,690			*1,560	*1,560	4.1 m
	-9.9 lb						*8,686	*8,686	*5,622	*5,622	*3,726	*3,726			*3,439	*3,439	13.6 ft
	6.0 kg														*1,520	*1,520	4.0 m
	19.8 lb														*3,351	*3,351	13.0 ft
	5.0 kg										*1,400	*1,400			*1,330	*1,330	5.1 m
	16.5 lb										*3,086	*3,086			*2,932	*2,932	16.7 ft
	4.0 kg										*1,360	*1,360			*1,230	*1,130	5.8 m
	13.2 lb										*2,998	*2,998			*2,712	*2,491	19.0 ft
	3.0 kg								*1,660	*1,660	*1,490	1,420	1,330	1,050	*1,210	990	6.2 m
	9.9 lb								*3,660	*3,660	*3,285	*3,131	*2,932	*2,315	*2,668	*2,183	20.3 ft
	2.0 kg						*3,190	2,980	*2,120	1,920	*1,700	1,370	1,300	1,020	*1,180	920	6.4 m
	6.6 lb						*7,033	*6,570	*4,674	*4,233	*3,748	*3,020	*2,866	*2,249	*2,601	*2,028	20.9 ft
	1.0 kg						*3,600	2,760	*2,330	1,820	1,670	1,310	1,270	990	*1,160	900	6.4 m
	3.3 lb						*7,937	*6,085	*5,137	*4,012	*3,682	*2,888	*2,800	*2,183	*2,557	*1,984	21.0 ft
	0.0 kg						3,520	2,680	2,260	1,750	1,630	1,270	1,250	970	*1,190	930	6.2 m
	0.0 lb						*7,760	*5,908	*4,982	*3,858	*3,594	*2,800	*2,756	*2,138	*2,623	*2,050	20.4 ft
	-1.0 kg				*2,670	*2,670	*3,090	*3,090	3,510	2,670	2,230	1,720	1,610	1,250	*1,300	*1,010	5.8 m
	-3.3 lb				*5,886	*5,886	*6,812	*6,812	*7,738	*5,886	*4,916	*3,792	*3,549	*2,756	*2,866	*2,227	19.1 ft
	-2.0 kg				*3,990	*3,990	*4,950	*4,950	*3,540	2,700	2,240	1,740	1,630	1,270	*1,550	*1,210	5.2 m
	-6.6 lb				*8,796	*8,796	*10,913	*10,913	*7,804	*5,952	*4,938	*3,836	*3,594	*2,800	*3,417	*2,668	17.0 ft
	-3.0 kg						*3,940	*3,940	*2,550	*2,550	*1,690	*1,690			*1,560	*1,560	4.1 m
	-9.9 lb						*8,686	*8,686	*5,622	*5,622	*3,726	*3,726			*3,439	*3,439	13.6 ft

Notes: 1. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards. 2. Rated loads do not exceed 87% of hydraulic lifting capacity or 75% of tipping load. 3. Rated loads marked with an asterisk (\*) are limited by hydraulic capacity rather than tipping load.



# Equipment

## STANDARD EQUIPMENT

### Engine

Low-emission Tier 4f / Stage V diesel engine  
Standard cooling system  
Two-stage air filter  
Fuel filter and water separator  
Alternator, 70 A  
Full auto regeneration  
ECO mode

### Electric / Electronic control system

Safe engine start function  
Automatic idling system  
Halogen working lights:  
2ea on Cab front top LH/RH each  
Battery, 12 V / 100 Ah  
Start motor, 12 V / 2.5 kW  
Travel alarm  
Monitor and keypad  
Master electrical disconnect switch

### Frame

1 610kg (3,549 lb) Heavy counterweight  
Under cover  
Dozer blade

### Undercarriage

Greased and sealed track link  
450mm rubber track

### Hydraulic system

Automatic two speed travel motors  
Cylinder cushioning  
Hydraulic fluid mineral 46  
ISO/SAE pilot control pattern change

### Cab and interior

Canopy  
Cup holder  
Seat belt, 2 inch retractable  
Seat belt alarm  
Control joystick  
Master key  
Hour meter (non analog)  
PVC operator seat with suspension  
Travel pedals and hand levers

### Digging equipment

Boom: 3.55m (11'8"), Arm: 1.7m (5'7")  
Linkage

### Service

Tool kit-daily maintenance

### Official approval

Object handling device conforming to ISO20474-1 and ISO20474-5 standards (when equipped)  
FOPS Level 2 conforming to ISO3449 standard (when equipped)  
ROPS conforming to ISO12117-2 standards  
TOPS conforming to ISO12117 and EN13531 standards  
FOG Level 2 conforming to ISO10262 standard and SAE J1356 standard (when equipped)

## OPTIONAL EQUIPMENT

### Electric / Electronic control system

Fuel filler pump: 35 l/min, with automatic shut-off  
Auto engine shutdown  
LED light  
Extra working lights:  
1ea on Cab rear  
1ea on boom LH  
1ea on boom LH (1st boom) for 2-piece boom

Caretrack  
Travel alarm  
Anti theft, code-lock  
Rotating warning beacon

### Frame

Rearview mirror  
Rearview Camera  
Dozer blade with floating function  
Wide dozer blade for 600mm (24") shoe

### Undercarriage

450mm (18"), 600mm (24") steel track  
450mm (18") rubber pad

### Hydraulic system

Hydraulic piping:  
Breaker & shear  
- Max. flow: 118 l/min (31 gal/min) (X1 single) / 68 l/min (18 gal/min) (X1 double)  
- Pressure: 21.6 MPa (3,132 psi) (X1 single) / 29.4 Mpa (4,264psi) (X1 double)  
Slope & rotator  
- Max. flow and pressure: 28 l/min (7.4 gal/min)  
- Pressure: 14.7 MPa (2,130 psi)

Grapple  
Quick coupler  
Hose rupture valve for boom and arm  
Overload warning device  
Hydraulic oil, ISO VG 32, 68  
Hydraulic oil, biodegradable 46  
Hydraulic oil, longlife oil 46

### Cab and interior

Carecab  
Fabric operator seat with heater  
PVC operator seat without heater  
PVC operator seat with heater  
Fabric operator seat with heater with Air suspension  
PVC operator seat with heater with Air suspension  
Headrest

Heater and air-conditioner  
Control joystick, X3 proportional  
Seat belt, 3 inch retractable

Rain visor  
Boom swing pedal  
AM/FM stereo  
Radio with MP3/AUX  
Digital hour meter  
Cab mounted FOG (Falling Object Guard)  
FOPS (Falling Object Protection Structure)  
Sun screen, front/roof

### Safety net

### Digging equipment

Arm: 2.1m (6'11")

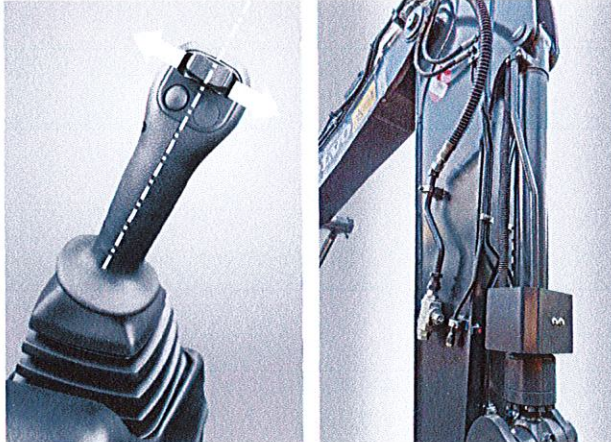
### Service

Tool kit, full scale  
Spare parts

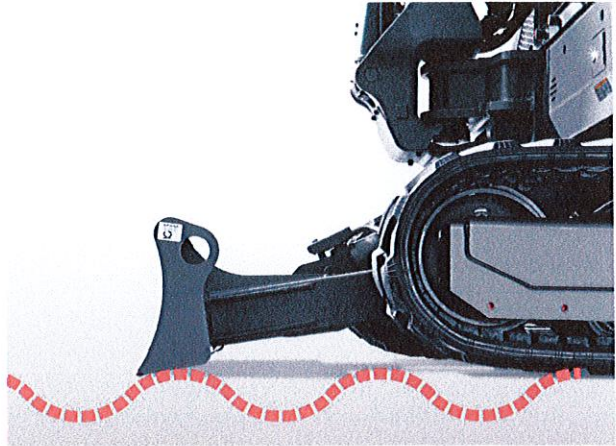


## SELECTION OF VOLVO OPTIONAL EQUIPMENT

Slope and rotator piping



Dozer float



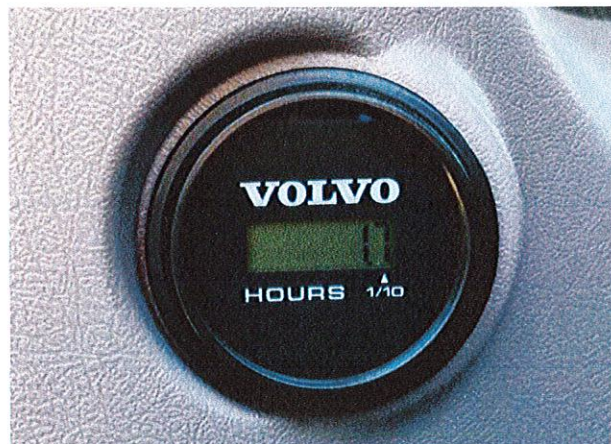
Caretrack



Fuel filler pump



Digital hour meter



Rearview Camera



Not all products are available in all markets. Under our policy of continuous improvement, we reserve the right to change specifications and design without prior notice. The illustrations do not necessarily show the standard version of the machine.

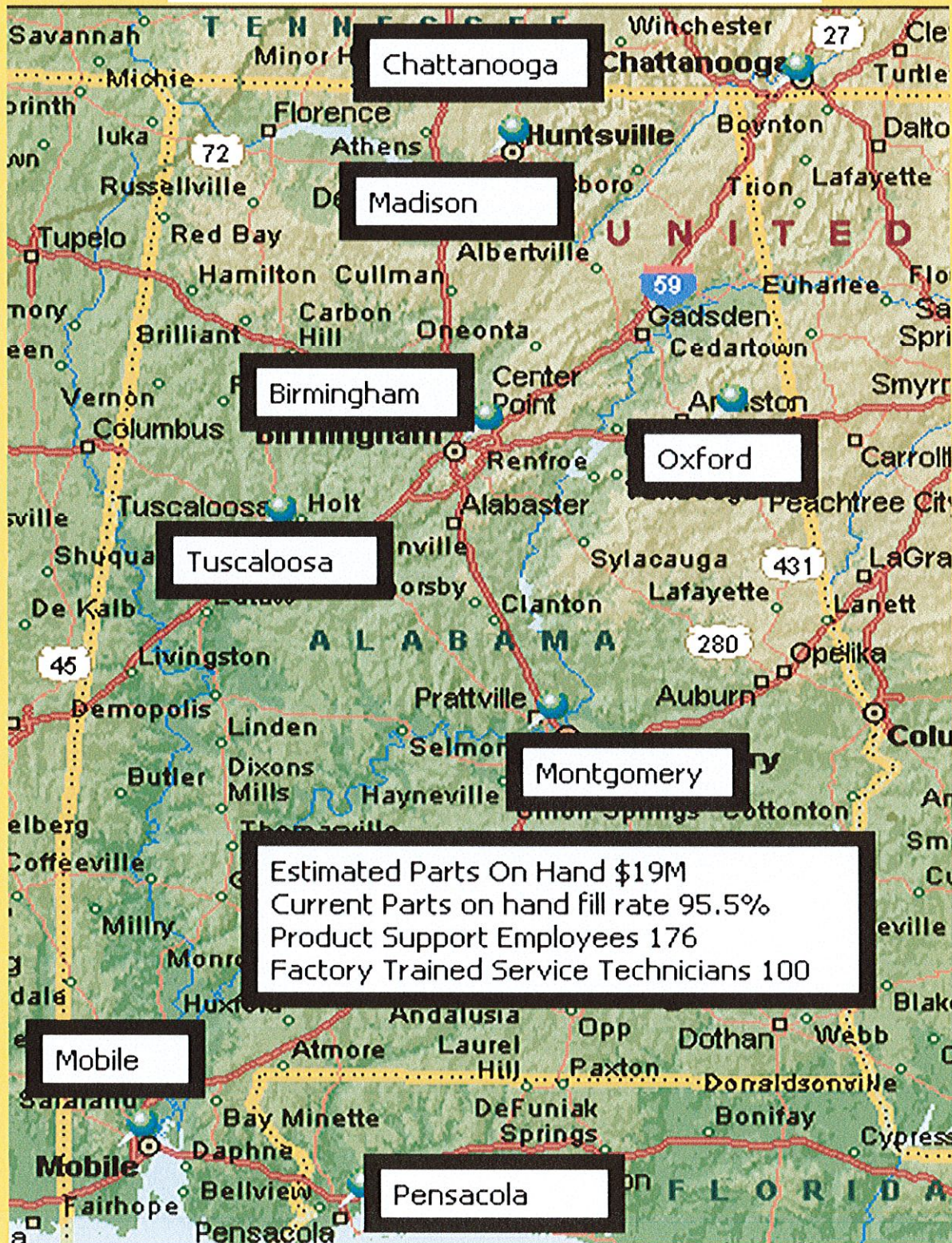


**V O L V O**





**COWIN**  
EQUIPMENT COMPANY, INC.







Company ID Number: 505216

**THE E-VERIFY PROGRAM FOR EMPLOYMENT VERIFICATION  
MEMORANDUM OF UNDERSTANDING**

**ARTICLE I**

**PURPOSE AND AUTHORITY**

This Memorandum of Understanding (MOU) sets forth the points of agreement between the Department of Homeland Security (DHS) and Cowin Equipment Co Inc (Employer) regarding the Employer's participation in the Employment Eligibility Verification Program (E-Verify). This MOU explains certain features of the E-Verify program and enumerates specific responsibilities of DHS, the Social Security Administration (SSA), and the Employer. E-Verify is a program that electronically confirms an employee's eligibility to work in the United States after completion of the Employment Eligibility Verification Form (Form I-9). For covered government contractors, E-Verify is used to verify the employment eligibility of all newly hired employees and all existing employees assigned to Federal contracts or to verify the entire workforce if the contractor so chooses.

Authority for the E-Verify program is found in Title IV, Subtitle A, of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. 104-208, 110 Stat. 3009, as amended (8 U.S.C. § 1324a note). Authority for use of the E-Verify program by Federal contractors and subcontractors covered by the terms of Subpart 22.18, "Employment Eligibility Verification", of the Federal Acquisition Regulation (FAR) (hereinafter referred to in this MOU as a "Federal contractor with the FAR E-Verify clause") to verify the employment eligibility of certain employees working on Federal contracts is also found in Subpart 22.18 and in Executive Order 12989, as amended.

**ARTICLE II**

**FUNCTIONS TO BE PERFORMED**

**A. RESPONSIBILITIES OF SSA**

1. SSA agrees to provide the Employer with available information that allows the Employer to confirm the accuracy of Social Security Numbers provided by all employees verified under this MOU and the employment authorization of U.S. citizens.
2. SSA agrees to provide to the Employer appropriate assistance with operational problems that may arise during the Employer's participation in the E-Verify program. SSA agrees to provide the Employer with names, titles, addresses, and telephone numbers of SSA representatives to be contacted during the E-Verify process.
3. SSA agrees to safeguard the information provided by the Employer through the E-Verify program procedures, and to limit access to such information, as is appropriate by law, to individuals responsible for the verification of Social Security Numbers and for evaluation of the E-Verify program or such other persons or entities who may be authorized by SSA as governed





Company ID Number: 505216

To be accepted as a participant in E-Verify, you should only sign the Employer's Section of the signature page. If you have any questions, contact E-Verify at 888-464-4218.

Employer **Cowin Equipment Co Inc**

**Tracy Womack**

Name (Please Type or Print)

Title

**Electronically Signed**

**02/15/2012**

Signature

Date

Department of Homeland Security – Verification Division

**USCIS Verification Division**

Name (Please Type or Print)

Title

**Electronically Signed**

**02/15/2012**

Signature

Date

Information Required for the E-Verify Program

Information relating to your Company:

Company Name: **Cowin Equipment Co Inc**

Company Facility Address: **2238 Pinson Valley Parkway**

**Birmingham, AL 35217**

Company Alternate  
Address: **PO Box 10624**

**Birmingham, AL 35202**

County or Parish: **JEFFERSON**

Employer Identification  
Number: **630141942**



# VOLVO

## Volvo Construction Equipment North America

### Warranty – Disclaimers – Limitations

#### Limited Warranty for Governmental / Municipalities

Volvo Construction Equipment North America ("Volvo CE") hereby extends to its authorized dealers ("Dealer") and the Dealer's Governmental / Municipalities customers ("Customer", and both Dealer and Customer are referred to herein as a "Buyer"), who purchase a new Volvo construction equipment machine ("Machine") or new Volvo part ("Part", both of which are referred to herein as a "Product") from Volvo the following limited warranty:

Subject to the exceptions and limitations set forth below, Volvo CE or Dealer will repair or replace any part of a new Machine or new Part which proves to be defective in material or workmanship during the following periods (the "Warranty Period"):

**Volvo Wheel Loaders**

- 12 months/2500 hours

**Volvo Articulated Haulers**

- 12 months/2500 hours

**Volvo Rigid Haulers**

- 12 months/5000 hours

**Volvo Hydraulic Excavators**

- 12 months/2500 hours

**Volvo Pavers (ABG)**

- 12 months/2500 hours

**Volvo Landfill Compactors**

- 12 months/2500 hours

**Volvo Compact Diesel Excavators (less than 11 metric tons)**

- 12 months/2500 hours

**Volvo Compact Electric Excavators (less than 11 metric tons)**

- 12 months/2500 hours

**Volvo Compact Diesel Wheel Loaders (up to 100 net hp.)**

- 12 months/2500 hours

**Volvo Compact Electric Wheel Loaders**

- 12 months/2500 hours

**Volvo Compactors**

- 12 months/2500 hours

**Volvo Attachments**

- 12 months

**Volvo Parts**

- 12 months/2500 hours from the original purchase date from an authorized Volvo CE Dealer

**Volvo Remanufactured Components**

- 12 months/2500 hours from purchase date or install date if a VCE dealer completed the install.

**The Warranty Period commences immediately following the delivery of said Product to the Buyer who first puts said Product into use.** The foregoing limited warranty shall include the labor cost to accomplish the repair or replacement of the defective part provided that the repair or replacement was performed by a Dealer.

The foregoing warranty does not cover: (i) any Product found to have been damaged by abuse, accident, other casualty or a failure to maintain or use the warranted Product in accordance with the applicable manuals or instructions (**Buyer is required to use only original equipment manufacturer filters during the Warranty Period**); (ii) the labor costs to repair or replace defective Parts after the expiration of the Warranty Period of the Machine in which such Part is located; (iii) overtime labor premiums; (iv) costs and expenses associated with the transportation of Dealer's service personnel to and from the location of the warranted Product; (v) any parts, components, attachments or accessories for which Buyer receives a separate warranty by the manufacturer or producer thereof (in specified cases said warranty may be administered by Volvo CE); (vi) maintenance items or ground engaging parts that have achieved their normal service life.



## INFORMATION SYSTEMS

The customer/machine owner is aware that the Volvo CE machine is equipped with one or more systems which may gather and store information about the Volvo CE machine (the "Information Systems"), including but not limited to information relating to machine condition and performance, and information relating to the operation of the machine (together, the "Machine Data"). The customer/machine owner agrees not to interfere with the operation of the Information Systems in any way.

Notwithstanding any termination or expiry of this agreement, the customer/machine owner acknowledges and agrees that Volvo CE may: (i) access the Information Systems at any time (including remote access); (ii) gather the Machine Data; (iii) store the Machine Data on AB Volvo Group systems; (iv) use the Machine Data in order to provide services to the customer/machine owner, as well as for its own internal and other reasonable business purposes; and (v) share the Machine Data within the AB Volvo Group and with selected third parties.

This standard warranty is conditional upon Volvo CE being able to gather and access the Machine Data at any time.

## DISCLAIMER OF IMPLIED WARRANTIES AND LIMITATION OF REMEDIES

THE FOREGOING WARRANTY TO BUYER IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, AND THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

REMEDIES AVAILABLE TO BUYER ARE LIMITED TO MAKING A CLAIM UNDER THE FOREGOING WARRANTY AND ARE EXCLUSIVE AND EXPRESSLY LIMITED TO OBTAINING THE PARTS AND LABOR IN ACCORDANCE WITH THE TERMS OF SAID WARRANTY.

# Warranty – Disclaimers – Limitations

## LIMITATIONS OF LIABILITY AND DAMAGES

Regardless of whether a claim against Volvo CE or Dealer is based on the foregoing warranty or is an action in contract, tort (negligence or strict liability) or otherwise, their respective liability for losses, damages or expenses of any kind arising from the design, manufacture, repair or sale of the Products is limited, unless otherwise prohibited by law, to an amount not exceeding the cost performing the obligations contained in the foregoing warranty, and in no event shall their respective or joint liability exceed the value of the Product or part thereof giving rise to such liability.

## CONSEQUENTIAL AND SIMILAR DAMAGES NOT RECOVERABLE

Except for performing the obligations of the foregoing warranty in accordance with its terms, Volvo CE and Dealer shall have no liability for loss, damage, or expense, directly or indirectly, attributable to a loss of use of a Product, loss or damage to property other than the Product, loss or damage to the Product or any part thereof or any other economic or commercial loss, including, without limitation, lost profits or special or consequential damages (except liability for any type of consequential damages which by law may not be disclaimed). The parties intend that this prohibition against consequential and similar damages will survive and be effective even if the limitation of remedies in the foregoing sections is found to fail of its essential purpose under section 2-719 of the Uniform Commercial Code.



## ALLOCATION OF RISK

The foregoing warranty disclaimers, limitations of liability and limitation of remedies are bargained allocations of risks among (i) the Customer who purchased the Product; (ii) the Dealer who sold the Product, and (iii) Volvo CE, which is a third party beneficiary of the contract of sale between the Customer and the Dealer. The Buyer of the Product accepts the foregoing warranty and the other bargained for allocations of risk as part of the agreed price for the purchase of the Product to which the foregoing warranty applies. Volvo CE is prepared to offer different warranties and other allocations of risk for other prices. However, any such change in the warranty or the allocation of risks must be confirmed in writing by Volvo CE.

## STATUTE OF LIMITATIONS

Any action by a Buyer of a Product for breach of contract, for breach of warranty arising under, or for a cause of action arising out of the sale of a Product, whether based on contract, tort (negligence or strict liability) or otherwise, shall be commenced within one (1) year after the cause of action has accrued. Any such cause of action shall be deemed to have accrued at the earlier of (i) the discovery of the defect or breach, or (ii) the expiration of the applicable Warranty Period.