Volvo Construction Equipment





Volvo Compact Excavators 3.5 t / 7,780 lb 24.8 hp



EC35D in detail

Engine		
Engine		Volvo D1.7A
Max. power at	r/min (r/	(s) 2,200 (36.7)
Gross	kW (h	p) 18.5 (24.8)
		r according to ISO 2534
Max. torque	Nm (ft I	
at engine speed	r/m	nin 1,600
No. of cylinders		3
Displacement	cm ³ (ir	
Bore	mm (i	
Stroke	mm (i	
Compression ratio		20.5
Electrical System		
Voltage	V	12
Battery	V	1 x 12
Battery capacity	Ah	74
Alternator	V/Ah	12/60
Swing System		
Max, slew speed	r/min	9
Max, slew torque	daNm (ft lbf)	710 (5,237)
Undercarriage		
Rubber track width	mm (in)	300 (11.8)
Steel track width	mm (in)	300 (11.8)
Bottom/top rollers per side		4/1
Track tension		
Blade (width x height)	mm (in)	1 650 x 368 (65 x 14.5)
Digging Performances		
Standard bucket width (blade, W/O sid	e	600 (02 6)
cutter)	۳m (in)	600 (23.6)
Standard bucket mass	kg (lb)	90 (198)
Standard bucket rated capacity	I (ft ³)	114 (4)
Bucket rotation	0	199
Bucket breakout force (ISO)	daN (lbf)	3,289 (7,394)
Short arm tearout force (ISO)	daN (lbf)	2,371 (5,330)
With short arm	mm (ft in)	1 400 (4' 7")
Long arm tearout force (ISO)	daN (lbf)	2,060 (4,631)
With long arm	mm (ft in)	1 700 (5' 7")

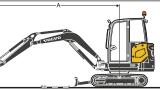
Weight and Ground Pressure		
Operating weight according to ISC	0 6,016 kg (lb)	3,530 (7,782)
Ground pressure (cab)	kPa (psi)	32.5 (4.7)
Ground pressure (canopy)	kPa (psi)	31.3 (4.5)
Transport weight	kg (lb)	3,455 (7,617)
With heated cab	0.00	
With direct-fit bucket		
With rubber tracks	mm (in)	300 (11.8)
With short arm	mm (in)	1 400 (55)
With fuel tank capacity	%	100
With thumb	+kg (+lb)	64 (141)
With canopy	-kg (-lb)	135 (298)
With extra counterweight	+kg (+lb)	170 (375)
With long arm	+kg (+lb)	15 (33.1)
With steel tracks	+kg (+lb)	66 (146)
Hydraulic System	x · · ·	· ·
Maximum system flow	l/min (gal/min)	103 (27.2)
Maximum flow for accessories	l/min (gal/min)	65 (17.2)
Maximum pressure for accessories	MPa (psi)	22 (3,191)
Maximum flow for 2nd accessory circuit (option)	l/min (gal/min)	23 (6.1)
Maximum operating pressure	MPa (psi)	24 (3,481)
Travel system	4 2	., ,
Max, drawbar pull	daN (lbf)	3,100 (6,969)
Max. travel speed low	km/h (mi/h)	2.7 (1.7)
Max. travel speed high	km/h (mi/h)	4.5 (2.8)
Gradeability	0	20
Service Refill		
Fuel tank	l (gal)	64 (16.9)
Hydraulic system, total	l (gal)	62 (16.3)
Hydraulic tank	l (gal)	32 (8.5)
Engine oil	l (gal)	7 (1.8)
Engine coolant	l (gal)	7 (1.8)
Travel reduction unit	l (gal)	2 x 0.7 (2 x 0.185)
Sound Level		
Interior sound level according to IS		
LpA	dB(A)	78
External sound level according to 1 (2000/14/EC) and 474-1:2006		bise Directive
LwA	dB(A)	93

LIFTING CAPACITY EC35D

These capacities are given for a machine equipped with a cabin, 300 mm (1' 0") rubber tracks and without a bucket or quick-coupler.

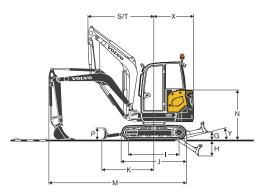
The below values are in compliance with ISO standard 10567. They do not exceed 75% of the tipping load or

87% of the hydraulic limit with the machine on firm level ground. Loads market with an asterisk (*) are limited by machine's hydraulic lifting capacity rather than tipping load. Caution: In accordance with standard EN 474-5, the machine must be equipped to carry out handling operations. It is the operator's obligation to know and follow the applicable national and local safety regulations.

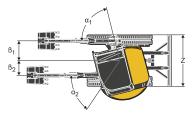


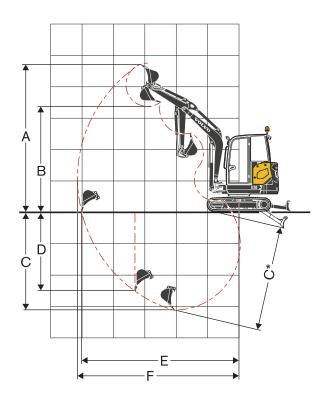
			Lifting point radius (A)								
			2.0 m	2.0 m (6.5 ft) 3.0 m (9.8 ft) 4.0 m (13.1 ft)			Max. reach		Max.		
	Lifting point height (B) m		ė		Ľ		ŀ		Ŀ	G •	m
A	3 (9.8)	kg (lb)	-	-	-	-	-	-	645 (1,422)	589 (1,299)	3.9 (12' 9")
Arm: 1.400 mm	2 (6.5)	kg (lb)	-	-	*891 (1,964)	860 (1,896)	609 (1,343)	556 (1,226)	536 (1,182)	489 (1,078)	4.3 (14' 3")
(4' 7")	1 (3.3)	kg (lb)		-	895 (1,973)	808 (1,781)	590 (1,301)	537 (1,184)	502 (1,107)	457 (1,008)	4.5 (14' 8")
+ Dozer	0 (0)		1,595 (3,516)		858 (1,892)	773 (1,704)	574 (1,265)	522 (1,151)	517 (1,140)	471 (1,038)	4.3 (14' 2")
blade up	-1 (-3.3)		1,602 (3,532)		851 (1,876)	766 (1,689)	-	-	603 (1,329)	547 (1,206)	3.9 (12' 8")
·	-2 (-6.5)		1,642 (3,620)	1,442 (3,179)	-	-	-	-	924 (2,037)	832 (1,834)	2.9 (9' 6")
Arm:	3 (9.8)	kg (lb)	-	-	- *746 (1,645)	*746 (1.645)	628 (1,385)	574 (1,265)	573 (1,263)	523 (1,153)	4.2 (13' 10")
1,700 mm	2 (6.5)	kg (lb)	1,674 (3,691)			816 (1,043)	616 (1,358) 592 (1,305)	562 (1,239) 539 (1,188)	488 (1,076) 459 (1,012)	445 (,981) 418 (,922)	4.6 (15' 2") 4.7 (15' 7")
(5' 7")	0 (0)		1,579 (3,481)		855 (1.885)	770 (1,698)	571 (1,259)	519 (1,144)	469 (1,034)	418 (,922)	4.6 (15' 1")
+ Dozer	-1 (-3.3)		1,573 (3,468)			754 (1,662)	564 (1,243)	512 (1,129)	532 (1.173)	483 (1.065)	4.2 (13' 9")
blade up			1,606 (3,541)			768 (1,693)	-	-	734 (1,618)	664 (1,464)	3.4 (11' 0")
Arm:	3 (9.8)	kg (lb)	-	-	-	-	-	-	*784 (1,728)	589 (1,299)	3.9 (12' 9")
1.400 mm		kg (lb)	-	-	*891 (1,964)	860 (1,896)	*825 (1,819)	556 (1,226)	*835 (1.841)	489 (1,078)	4.3 (14' 3")
(4' 7")	1 (3.3)	kg (lb)	-	-	*1,270 (2,800)		*956 (2,108)	537 (1,184)	*899 (1.982)	457 (1.008)	4.5 (14' 8")
+ Dozer	0 (0)		*1,752 (3,862)				*1,066 (2,350)		*980 (2,161)	471 (1,038)	4.3 (14' 2")
blade	-1 (-3.3)		*2,728 (6,014)				-	-	*1,086 (2,394)	547 (1,206)	3.9 (12' 8")
down	-2 (-6.5)	kg (lb)	*2,094 (4,616)	1,442 (3,179)		- 1	-	-	*1,237 (2,727)	832 (1,834)	2.9 (9' 6")
Arm:	3 (9.8)	kg (lb)	-	-	-	-	*671 (1,479)	574 (1,265)	*711 (1,567)	523 (1,153)	4.2 (13' 10")
1,700 mm		kg (lb)	-	-	*746 (1,645)	*746 (1,645)	*735 (1,620)	562 (1,239)	*760 (1,676)	445 (,981)	4.6 (15' 2")
(5' 7")	1 (3.3)		*2,178 (4,802)				*886 (1,953)	539 (1,188)	*819 (1,806)	418 (,922)	4.7 (15' 7")
+ Dozer	0 (0)		*1,828 (4,030)				*1,028 (2,266)	519 (1,144)	*892 (1,967)	427 (,941)	4.6 (15' 1")
blade							*1,061 (2,339)	512 (1,129)	*989 (2,180)	483 (1,065)	4.2 (13' 9")
down]-2 (-6.5)	kg (lb)	*2,368 (5,221)	1,407 (3,102)	*1,361 (3,000)	/68 (1,693)	-	-	*1,126 (2,482)	664 (1,464)	3.4 (11'0")

Specifications









Description Unit				35D
١rm		mm (ft in)	1 400 (4' 7")	1 700 (5' 7")
A	Maximum cutting height	mm (ft in)	4 690 (15' 5")	4 853 (15' 11")
В	Maximum dump height	mm (ft in)	3 347 (11'0")	3 514 (11' 6")
С	Digging depth	mm (ft in)	3 131 <mark>(10' 3")</mark>	3 431 (11' 3")
C*	Maximum digging depth	mm (ft in)	3 339 (10' 11")	3 632 (11' 11")
D	Maximum vertical wall digging depth	mm (ft in)	2 521 (8' 3")	2 814 (9' 3")
E	Maximum digging reach at ground level	mm (ft in)	5 031 (16' 6")	5 320 (17' 5")
F	Maximum digging reach	mm (ft in)	5 153 (16' 11")	5 434 (17' 10")
G	Highest position dozer blade	mm (ft in)	370 ([1' 3")
Н	Lowest position dozer blade	mm (ft in)	525 (
1	Tumbler length	mm (ft in)	1 604	(5' 3")
J	Track length	mm (ft in)	2 055	(6' 9")
K	Dozer blade, maximum reach at ground level	mm (ft in)	1 648	
L	Overall width with 300 mm (1' 0") rubber tracks	mm (ft in)	1 780 (
М	Overall length	mm (ft in)	4 660 (15' 3")	4 555 (14' 11")
M*	Transport length	mm (ft in)	5 435 (17' 10")	5 380 (17' 8")
N	Overall height of engine hood	mm (ft in)	1 573	
0	Minimum ground clearance	mm (ft in)	285 (0	
Р	Dozer blade height	mm (ft in)	368 (
Q	Shoe width (rubber)	mm (ft in)	300 ((1' 0")
R	Ground clearance to superstructure	mm (ft in)	557 (1' 10")	
S	Front slew radius	mm (ft in)	2 394 (7' 10")	2 418 (7' 11")
Т	Front slew radius with maximum offset	mm (ft in)	1 869 (6' 2")	1 889 (6' 2")
U	Overall height	mm (ft in)	2 481	
W	Overall width of superstructure	mm (ft in)	1 575	
Х	Tail slew radius	mm (ft in)	885 (2' 11")	970 (3' 2")
X1	Additional counterweight overhang	mm (ft in)	85 (0' 3")	(incl.)
Y	Angle of approach	0		4
Z	Dozer blade width	mm (ft in)		(5' 10")
α,	Maximum boom swing angle to the left	0	76 (0	
β	Maximum boom offset to the right	mm (ft in)	995 (
α	Maximum boom swing angle to the right	0		(56)
βź	Maximum boom offset to the left	mm (ft in)	787 (2'7")

¹: Option

Equipment

STANDARD EQUIPMENT
Engine
Low emission, direct injection, water-cooled, Volvo 4-cylinder diesel engine.
Engine restart prevention system. Starter motor is protected against ignition
when engine is already running.
Dry-type single element air filter.
Plastic fuel tank with drain plug. Protective strainer on the fuel suction pipe inside the tank
Water separator.
Translucent fuel filter.
Electric/Electronic control system
Maintenance free battery. IP67 protected electrical system and high quality connectors.
Removable battery cut-off switch.
In-cab 12V power socket.
Hydraulic system
Large hinged and key-locked access panel. Variable displacement, load-sensing piston pump.
Closed centre flow-sharing main control valve.
Cushoning on cylinders:
Boom up
Arm out
Patented filtering and filling element. Single layer cooling system.
Double-acting hydraulic circuit for accessories.
Hammer / shear valve.
Plastic tank with drain plug.
Swing system Padial piston hydraulic motor with direct angagement on the ball internal
Radial piston hydraulic motor with direct engagement on the ball internal crown wheel (no reduction gears).
Integrated shockless valve.
Automatic multi-disc slew brake.
Centralized and remote lubrication of crown wheel & ball bearing.
Drivetrain Axial piston hydraulic motors equipped with an epicyclic reduction gears.
Automatic two speed travel
Bottom flanged rollers lubricated for life.
Grease tensioning wheel lubricated for life.
"X" shape, box welded fabricated frame with sloping side members.
2 Tie-down points on the dozer blade.
2 Tie-down points on the frame.
2 Integrated lifting points.
Sturdy removeable protecting covers for track motors and slew system.
400HB weld-on edge on dozer blade Digging Equipment
Monobloc box welded boom.
Boom cylinder rod protection.
Integrated lifting point on the boom.
Monobloc box welded arm. Long-life steel bushings.
Hardened, pre-lubricated and corrosion resistant pins.
50 hours greasing intervals.
Canopy
FOPS level 1 on top (Falling Objects Protective Structure) TOPS (Tip-Over Protective Structure)
ROPS (Roll-Over Protective Structure)
Cushionned operator station
Large and roomy uncluttered floor
Left hand-rail access
Seat-belt with warning indicator Right rear-view mirror
Cab
FOPS on top level 1 (Falling Object Protective Structure).
TOPS (Tip-Over Protective Structure).
ROPS (Roll-Over Protective Structure). Cushioned operator station.
Large door access.
Large and roomy uncluttered floor.
Gas-strutt assisted front window opening.
Full opening front bay with in-cab storage for the front lower window.
Front windscreen wiper and washer nozzle. Right hand side sliding window.
Heating systems.
Multiple adjustable air vents.
Filtered air inlet.
Cab inside light.
Seat-belt with warning indicator. Right rear-view mirror.
raght four now filling.

STANDARD EQUIPMENT
Two working lights on top front of the cab.
Machine controls
Finger tip control for boom offset.
Finger tip control for auxiliary circuit.
Breaker toggle switch on right joystick
Automatic locking device for pilot controls and travel levers when the left console is raised.
Engine starting safety device: the left console must be raised to operate the starter.
Pressure accumulator to lower the equipment on the ground when the engine is switched off.
High torque / automatic two speed change over button on the keypad.
High speed toggle switch on the dozer blade lever.
Large travel pedals.
Instrumentation and monitoring
Water temperature and fuel level gauges.
Warning lights for hydraulic filter and air filter restriction.
Self-acting emergency engine shutdown. Prevents failures in case of coolant
overheating or too low engine oil pressure.
Several warning lights, coupled to an audible signal, in the event of
malfunction (overheating, drop in oil pressure, low battery voltage)
Official approval
Machine conforming to European directive 2006/42/EC.
Noise emissions in the environment conforming to directive 2000/14/EC.
Hand Arm Vibrations - Whole Body Vibrations compliant
with directive 2002/44/EC.
Electromagnetic compatibility (EMC) conforming to European directive
2004/108/EC and its amendments.
Object handling device conforming to EN 474-1 and EN 474-5 standards.
FOPS on top level 1 conforming to ISO 10262 standard.
TOPS conforming to ISO 12117 and EN 13531 standards.
ROPS conforming to ISO 3471-1 and / SAE J1040 standards.

EQUIPMENT

• = Standard • = Option

I	Basic	Standard
Operator environment		
Canopy	0	0
Cab with heater	0	0
Cab with heater and air conditioning		0
Vinyl or textile seat, with mechanical suspension, low- back seat and 2" seat belt	0	0
Vinyl or textile seat, height adjustable, with mechanical suspension, high back and 2" or 3" retractable seat belt	0	0
Storage box		•
Cab roof		0
ISO / SAE control pattern change (in-cab electric switch)	0	0
Travel alarm	0	0
Radio preparation (cab)	•	•
Radio, AUX, USB, Bluetooth		0
Anti-theft device	0	0
Digital hour meter	•	•
Extra hour meter (mechanical)	0	0
Cup holder		0
Machine exterior		
Right rearview mirror	•	•
Left rearview mirror	0	0
Protected work light on the boom	0	0
Rear work light	0	0
Rotating beacon	0	0
Additional counterweight	0	0
Front canopy guard (OPG1)	0	0
Severe-duty guards for cab or canopy (OPG2, front & top)	0	0
Several level of paint customization (RAL specifications) to match with your corporate identity	0	0
Digging equipment		
Short arm	0	0
Short arm + thumb bracket	0	0
Long arm	0	0
Long arm + thumb bracket	0	0

EQUIPMENT		
• = Standard		
$\circ = Option$		
	Basic	Standard
Undercarriage equipment		·
300 mm (1' 0") rubber tracks	0	0
300 mm (1' 0") steel tracks	0	0
Standard dozer blade	•	0
Hydraulic angle blade		0
Hydraulic equipment		
Proportional finger tip control for boom offset		•
On / Off finger tip control for boom offset	٠	
Proportional finger tip control for accessories		•
On / off finger tip control for accessories	٠	
Accessory flow adjustment with 3 function oriented		
button and user-defined settings.		•
Secondary relief valves for auxiliaries	•	•
Hydraulic drain for accessories		0
Breaker and clamshell auxiliaries		0
Second accessory circuit		0
Flat face hydraulic quick couplings	0	0
Single acting circuit for quick couplers	0	0
Double acting circuit for quick couplers	0	0
Boom & arm safety lifting valves with overload	0	0
indicator	U	U
Boom, arm and dozer blade safety lifting valves with overload indicator	0	0
Float blade	•	•
Safety valve certification	0	0
Mineral hydraulic oil VG46	0	0
Bio hydraulic oil VG46 (PANOLIN®)	0	0
Mineral hydraulic oil VG68	0	0
Mineral hydraulic oil VG32	0	0
Bio hydraulic oil VG32 (PANOLIN®)	0	0

EQUIPMENT		
• = Standard		
○ = Option		1
	Basic	Standard
Engine		
Manual engine control	•	
Digital engine control with two preset engine speed buttons (user adjustable)		•
Engine auto idling with time adjustment		0
ECO mode		•
Engine auto shut-down with time adjustment		0
Dual stage air filter	0	0
Service and maintenance		
In-cab air filter clog warning lamp	•	•
In-cab engine overheating warning indicator	٠	•
Tool kit	0	0
Electronic service reminder		•
V-CADS pro		•
Telematics		
Care Track		0
Attachments		
Volvo quick coupler mechanical (pin-on)	0	0
Volvo hydraulic quick coupler (pin-on)	0	0
Extra pin kit	0	0
Lehnhoff [®] Quick Coupler Mechanical (MS03)	0	0
S-type hydraulic quick coupler (S40)	0	0
Thumb with short clamp (for direct fit bucket)	0	0
Thumb with long clamp (when using quick coupler)	0	0
General purpose buckets (300 mm (1' 0") / 52 l (14 gal) up to 750 mm (2' 6")/ 148 L (39 gal))	0	0
Bolt-on side cutters	0	0
Fix ditching buckets (1,300 mm (4' 3") / 150 (40 gal))	0	0
Tiltable ditching buckets (1,200 mm (3' 11") / 125 l (33 gal))	0	0
Hydraulic breaker HB03LN	0	0

SELECTION OF VOLVO OPTIONAL EQUIPMENT

Anti theft



OPG



Auto engine shutdown



Air conditioning



Additional auxiliary piping



Angle blade



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.



Volvo Construction Equipment

Description	Article
Volvo EC35D Compact Excavator	EC35D
Standard Arm 55" (1400mm) w/ Thumb Bracket	CX11023
Dozer blade	CX12001
12" rubber tracks	CX21004
Engine D1.7A 18,5kW T4f - St V	CX30007
Auto idling	CX31001
Dual stage air filter	CX32001
Canopy ROPS, FOPS & TOPS	CX40001
Seat, vinyl deluxe w/ 3" retractable seat belt	CX41009
ISO Ctrl Patern Sel+Travel Al	CX42006
Box for user manual	CX43004
Left Rear View Mirror	CX43010
Cup Holder	CX43012
Hour Meter	CX45001
Work light on boom	CX50002
Hydraulic oil ISO VG46 14°F to 86°F (-10°C to 30°C)	CX60001
X1 Double and Single Acting Hydraulics	CX61006
2X flat face hyd. couplings; 2 for machine end (2 for attachment shipped	CX65003
Manual, English	CX70002
Safety manual	CX70101
Standard paint, Volvo colors	CX82001
US marking	CX83002
Standard pin on Bucket configuration	CX90004

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, whichever first occurs Volvo articulated haulers: 12 months/2500 hours, whichever first occurs Volvo hydraulic excavators: 12 months/2500 hours, whichever first occurs Volvo motor graders: 12 months/2500 hours, whichever first occurs Volvo compactors: 12 months/1500 hours, whichever first occurs 24 months unlimited hours on DD90 and larger compactors

Volvo pavers: 12 months/1500 hours, whichever first occurs 24 months unlimited hours on 6000 / 7000 series pavers
Volvo milling: 12 months/1500 hours, whichever first occurs
Volvo compact wheel loaders (up to 100 net hp.): 12 months/unlimited hours
Volvo skid steer loaders: 12 months/unlimited hours; Lifetime arm for one-sided
Volvo compact hydraulic excavators (less than 11 metric tons): 12 months/unlimited hours
Volvo backhoe loaders: 12 months/unlimited hours
Volvo engines: 12 months/2500 hours, whichever first occurs
Volvo parts: 6 months/1500 hours, whichever first occurs
Volvo remanufactured components: 12 months/2500 hours, whichever first occurs
Volvo Attachments: 12 months

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.

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.

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