HITACHI

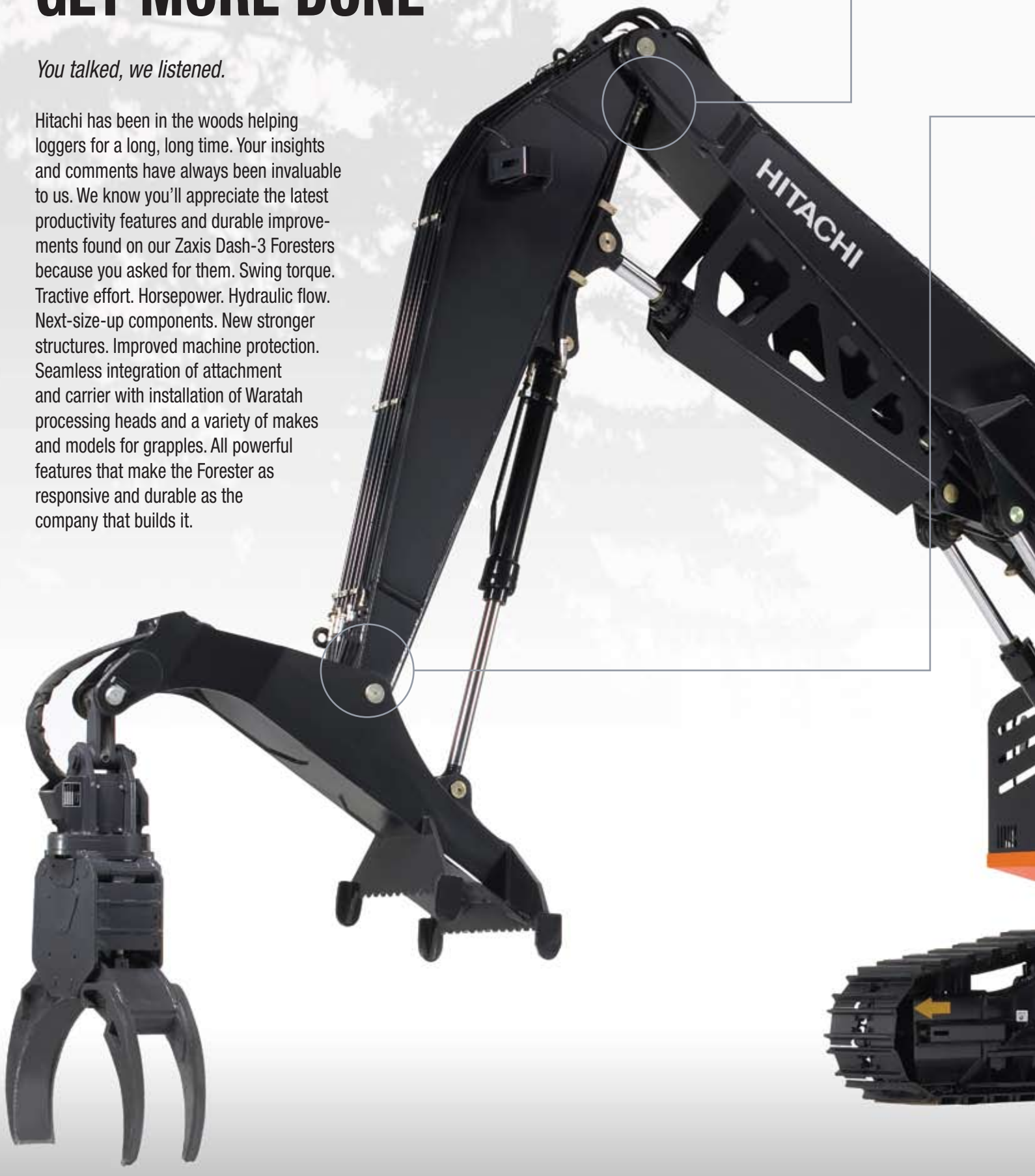
ZAXIS FORESTER 290-3

- **Engine Net Power:** 188 hp (140 kW) @ 2,100 rpm
- **Road Builder, Processor, Live Heel, Butt & Top, and Power Clam Models**

GET MORE DONE

You talked, we listened.

Hitachi has been in the woods helping loggers for a long, long time. Your insights and comments have always been invaluable to us. We know you'll appreciate the latest productivity features and durable improvements found on our Zaxis Dash-3 Foresters because you asked for them. Swing torque. Tractive effort. Horsepower. Hydraulic flow. Next-size-up components. New stronger structures. Improved machine protection. Seamless integration of attachment and carrier with installation of Waratah processing heads and a variety of makes and models for grapples. All powerful features that make the Forester as responsive and durable as the company that builds it.



■ **Robust Booms and Arms:**
New heavy-duty booms and arms are ready to take on all applications, whether it be building roads or processing or handling trees.

■ **Attachments Integration:**
Purpose-built processing fronts and integrated attachments are delivered straight from the factory.

■ **Ease of Service:**
Remote-mounted engine and hydraulic oil filters and dynamic test ports.

■ **Cooling Package Design:**
Laid out side by side by side with swing-out fuel cooler and condenser to make servicing the system a breeze.

■ **Debris Management:**
External screening, sealed cooler compartment, and optional automatic reversing fan help eliminate the downtime associated with cooling system servicing.

■ **Tier-3-Compliant Isuzu Engines:**
Provide the horsepower required to get the job done while delivering excellent fuel efficiency.

■ **Improved Component Protection:**
Three-piece heavy-duty engine enclosure, new under-house protection system, new hydraulic filter guard and muffler protection, and heavier right rear door all work to keep the machine's valuable components safe from damage.

■ **Robust Upper Frame:**
Strong boom-tower arrangement, thick base plates, after-welding machining in critical areas, and large-diameter swing bearings make these machines extremely durable.

■ **Durable Undercarriage:**
Robust structures; next-size-up components and drive systems; and heavy-duty track chains deliver on both productivity and durability.

Engine

Manufacturer and Model ..... Isuzu AH-4HK1XYSA-03, water-cooled with direct injection certified to EPA Tier-3 emissions
Cylinders 4
Displacement ..... 317 cu. in. (5.2 L)
Net Power (ISO9249) ..... 188 hp (140 kW) @ 2,100 rpm
Maximum Net Torque ..... 499 lb•ft (676 Nm) @ 1,500 rpm
Engine Bore and Stroke ..... 4.53 x 4.92 in. (115 x 125 mm)
Aspiration ..... turbocharged, air-to-air charge air cooler
Fuel Filter ..... double filter with water separator, remote mounted
Oil Filter ..... full flow, remote mounted

Cooling

Designed to match the engine, direct drive fan with reversing option, engine coolant and hydraulic oil coolers are now arranged side by side, external debris protection
Engine Coolant Rating ..... -34 °F (-37 °C)

Powertrain

Two-Speed Propel with Automatic Shift
Travel Speed Low, Maximum Speed ..... 1.0 mph (1.6 km/h)
Travel Speed High, Maximum Speed ..... 2.5 mph (4.0 km/h)

Controls

Pilot Levers, Low Effort
Hydraulic Pilot Controls with Shut-Off Lever

Brake

Swing Brake Multiple Wet Disc, Spring Applied, Hydraulically Released
Propel Brake, Spring Applied, Hydraulic Release

Hydraulics

Open Center, Load Sensing
Main Pumps ..... two variable-displacement pumps
Maximum Rated Flow ..... 2 x 65.5 gpm (2 x 248 L/m)
Pilot Pump ..... one gear
Maximum Rated Flow ..... 8.9 gpm (34 L/m)
System Relief Pressure ..... 566 psi (3900 kPa)

System Operating Pressure

Implement Circuits ..... 4,980 psi (34 336 kPa)
Travel Circuits ..... 4,980 psi (34 336 kPa)
Swing Circuits ..... 4,700 psi (32 405 kPa)
Power Boost ..... 5,260 psi (36 266 kPa)
Pilot Circuits @ 8.9 gpm (34 L/m) ..... 566 psi (3900 kPa)

Oil Filtration Full-Flow Return with Bypass and One Pilot Oil Filter

Cylinders

Heat-treated, chrome-plated, polished cylinder rods, hardened steel (replaceable bushings) pivot pins

	Bore	Rod Diameter	Stroke
Boom (2)	5.3 in. (135 mm)	3.7 in. (95 mm)	53.5 in. (1360 mm)
Arm (1)	5.9 in. (150 mm)	4.1 in. (105 mm)	65.3 in. (1659 mm)
Bucket (1)	5.3 in. (135 mm)	3.5 in. (90 mm)	42.1 in. (1070 mm)

Electrical

Voltage ..... 24 volt
Number of Batteries ..... 2 x 12 volt
Reserve Capacity ..... 440 minutes
Alternator Rating ..... 80 amp
Optional Alternator Rating ..... 130 amp

Undercarriage

Carrier Rollers (per side)	2
Track Rollers (per side)	9
Shoes, Double Grousers (per side)	48
Track Shoe Width, Standard	28 in. (700 mm)
Drawbar Pull	67,929 lb. (30 812 kg)
Track Adjustment	hydraulic
Track Guides	full length “ski” type

Upperstructure

Counterweight, Standard	11,332 lb. (5140 kg)

Swing Mechanism

Swing Speed	8.7 rpm
Swing Torque	82,012 lb•ft (111 194 Nm)

Ground Pressure

28-in. (700 mm) Double-Grouser Shoes	7.98 psi (55.0 kPa)

Operator Station Monitor

	Indicator Light	*Audible Warning*	*Gauge*	*Digital Display*
Alarm Indicator	X			
Alternator, Low Charge	X			
Auto-Idle	X			
Clock			X	
Engine Air Cleaner Restriction	X			
Engine Service Required	X			
Engine Coolant Temperature	X	X	X	
Engine Oil Pressure	X	X		
Engine Preheat	X			
Engine RPM				X
Fault Code Alert	X			
Fuel Level	X		X	
Hourmeter				X
Work Mode Indicator	X			

Serviceability

Hinged, Swing-Out Coolers for easy cleanout, Centralized Lube Banks, and “O” Ring Face Seal Connectors on most hydraulic hoses

Diagnostics

Machine Information Center (MIC), Computerized In-Cab Monitor Information, and Fluid Sampling Ports

Fluid Change Interval, Hours

Engine Oil	500
Hydraulic Oil	5,000

Filters	*Filtration (microns)*	*Service Hours*	*Vertically Mounted*
Engine Oil Filter, Remote Mounted		500	yes
Fuel Filter, Remote Mounted		500	yes
Hydraulic Filter		2,000	yes
Return Oil Filter	10		

Sight Gauges

Hydraulic Reservoir

Engine-Oil Sampling Valve

Serviceability (continued)

Refill Capacities

Fuel Tank	277 gal. (1050 L)
Cooling System	8 gal. (30.3 L)
Engine Oil with Filter	7 gal. (24.6 L)
Hydraulic Tank	64 gal. (243 L)
Hydraulic System	74 gal. (280 L)
Swing Drive	12.5 qt. (11.8 L)
Propel Gearbox (each)	9.0 qt. (8.5 L)
Pump Drive Gearbox	1.2 qt. (1.1 L)

Operating Weights

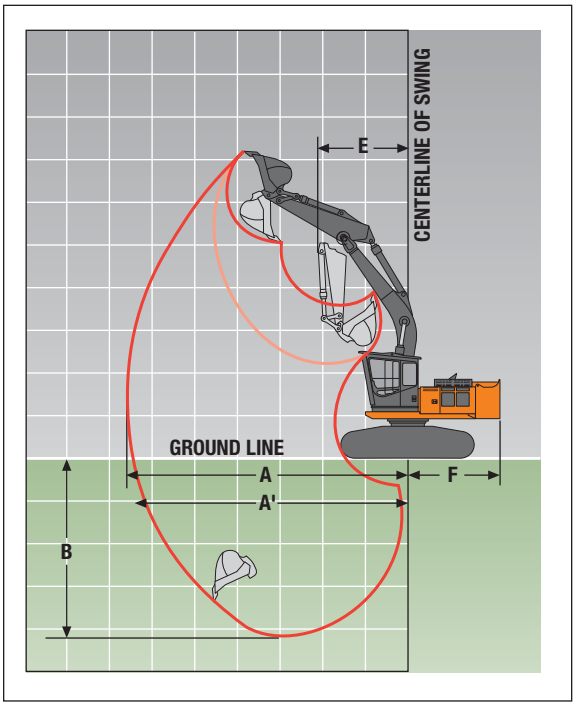
With 1818-lb. (840 kg) Full Fuel Tank; 175-lb. (79 kg) Operator; 1.75-cu.-yd. (1.34 m^3), 42-in. (1065 mm), 2,279-lb. (1034 kg) Bucket; 10-ft. 2-in. (3.11 m) Arm; 11,332-lb. (5140 kg) Counterweight; and 28-in. (700 mm) Double-Grouser Shoes

SAE Operating Weight	75,515 lb. (34 253 kg)

Operating Dimensions

Arm Length 10 ft. 2 in. (3.11 m)

	Arm Force with 28-in. (700 mm)	
	Double-Grouser Shoes (with power boost)	29,517 lb. (131.3 kN)
	Bucket Digging Force with 28-in. (700 mm)	
	Double-Grouser Shoes (with power boost)	37,478 lb. (166.7 kN)
	Lifting Capacity Over Front at Ground Level	
	20-ft. (6.1 m) Reach (with power boost)	20,772 lb. (9422 kg)
A	Maximum Reach	34 ft. 11 in. (10.65 m)
A'	Maximum Reach at Ground Level	34 ft. 2 in. (10.41 m)
B	Maximum Depth	22 ft. (6.70 m)
C	Maximum Height	—
D	Maximum Log Level Height	—
E	Minimum Swing Radius	11 ft. 7 in. (3.52 m)
F	Tail Swing Radius	10 ft. 11 in. (3.32 m)



Machine not exactly as shown.
Illustration for dimensioning purposes only.

Machine Dimensions

ZAXIS FORESTER 290-3 ROAD BUILDER

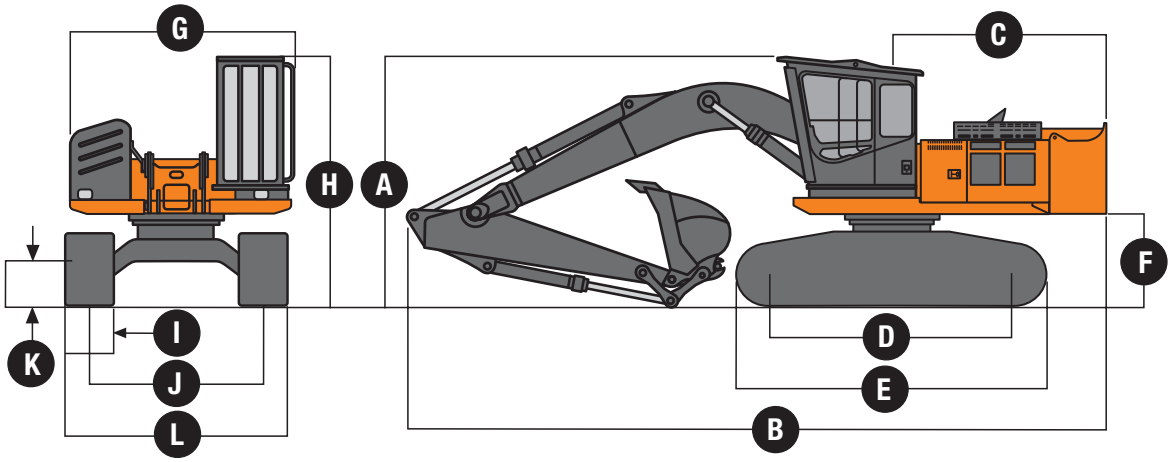


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Illustration for dimensioning purposes only.

A Height.....12 ft. 6 in. (3.82 m)
B Overall Length.....35 ft. 8 in. (10.86 m)
C Rear-End Length/Swing Radius.....10 ft. 11 in. (3.32 m)
D Distance Between Idler/Sprocket Centerline.....13 ft. 4 in. (4.05 m)
E Undercarriage Length.....16 ft. 5 in. (5.01 m)
F Counterweight Clearance.....4 ft. 11 in. (1.49 m)
G Upperstructure Width.....11 ft. 3 in. (3.43 m)
H Cab Height.....12 ft. 8 in. (3.85 m)
I Track Width, Double-Grouser Shoes.....28 in. (0.71 m)
J Gauge Width.....8 ft. 10 in. (2.69 m)
K Ground Clearance.....2 ft. 4 in. (0.71 m)
L Undercarriage Width.....11 ft. 2 in. (3.39 m)

Lift Chart

Boldface italic type indicates hydraulic-limited capacities with power boost on; lightface type indicates stability-limited capacities, in lb. (kg).
Figures do not exceed 87 percent of hydraulic capacity or 75 percent of weight needed to tip machine.

Load Point Height	10 ft. (3.1 m) Over Front	10 ft. (3.1 m) Over Side	15 ft. (4.6 m) Over Front	15 ft. (4.6 m) Over Side	20 ft. (6.1 m) Over Front	20 ft. (6.1 m) Over Side	25 ft. (7.6 m) Over Front	25 ft. (7.6 m) Over Side	30 ft. (9.1 m) Over Front	30 ft. (9.1 m) Over Side
With 10-ft. 2-in. (3.11 m) Arm, 2,279-lb. (1035 kg) Bucket, and 28-in. (700 mm) Double-Grouser Shoes										
20 ft. (6.1 m)							10,110	10,110		
							(4586)	***(4586)***		
15 ft. (4.6 m)					***11,760***	***11,760***	***11,000***	10,980	***8,350***	7,780
					(5334)	***(5334)***	***(4990)***	(4980)	***(3788)***	(3529)
10 ft. (3.1 m)			***20,480***	***20,480***	***14,960***	***14,960***	***12,600***	10,490	***11,530***	7,590
			(9290)	***(9290)***	***(6786)***	***(6786)***	***(5715)***	(4758)	***(5230)***	(3443)
5 ft. (1.5 m)			***27,310***	21,580	***18,320***	14,120	***14,430***	9,980	***12,450***	7,330
			(12 388)	(9789)	***(8310)***	(6405)	***(6545)***	(4527)	***(5647)***	(3325)
Ground Line			***28,600***	20,730	***20,770***	13,440	***15,960***	9,560	12,260	7,120
			(12 973)	(9403)	***(9421)***	(6096)	***(7239)***	(4336)	(5561)	(3230)
–5 ft. (–1.5 m)	***14,460***	***14,460***	***30,270***	20,590	***21,880***	13,130	16,130	9,340	12,160	7,030
	(6559)	***(6559)***	***(13 730)***	(9340)	***(9925)***	(5956)	(7317)	(4237)	(5516)	(3189)
–10 ft. (–3.1 m)	***23,290***	***23,290***	***29,070***	20,760	***21,570***	13,130	16,120	9,330		
	(10 564)	***(10 564)***	***(13 186)***	(9417)	***(9784)***	(5956)	(7312)	(4232)		
–15 ft. (–4.6 m)	***29,500***	***29,500***	***25,800***	21,230	***19,420***	13,420				
	(13 381)	***(13 381)***	***(11 703)***	(9630)	***(8809)***	(6087)				

Engine

Manufacturer and Model ..... Isuzu AH-4HK1XYSA-03, water-cooled with direct injection certified to EPA Tier-3 emissions
Cylinders 4
Displacement ..... 317 cu. in. (5.2 L)
Net Power (ISO9249) ..... 188 hp (140 kW) @ 2,100 rpm
Maximum Net Torque ..... 499 lb•ft (676 Nm) @ 1,500 rpm
Engine Bore and Stroke ..... 4.53 x 4.92 in. (115 x 125 mm)
Aspiration ..... turbocharged, air-to-air charge air cooler
Fuel Filter ..... double filter with water separator, remote mounted
Oil Filter ..... full flow, remote mounted

Cooling

Designed to match the engine, direct drive fan with reversing option, engine coolant and hydraulic oil coolers are now arranged side by side, external debris protection
Engine Coolant Rating ..... -34 °F (-37 °C)

Powertrain

Two-Speed Propel with Automatic Shift
Travel Speed Low, Maximum Speed ..... 1.0 mph (1.6 km/h)
Travel Speed High, Maximum Speed ..... 2.5 mph (4.0 km/h)

Controls
- Pilot Levers, Low Effort
- Hydraulic Pilot Controls with Shut-Off Lever

Brake
- Swing Brake Multiple Wet Disc, Spring Applied, Hydraulically Released
- Propel Brake, Spring Applied, Hydraulic Release

Hydraulics

Open Center, Load Sensing
Main Pumps ..... two variable-displacement pumps
- Maximum Rated Flow ..... 2 x 65.5 gpm (2 x 248 L/m)

Pilot Pump ..... one gear
- Maximum Rated Flow ..... 8.9 gpm (34 L/m)
- System Relief Pressure ..... 566 psi (3900 kPa)

System Operating Pressure
- Implement Circuits ..... 4,980 psi (34 336 kPa)
- Travel Circuits ..... 4,980 psi (34 336 kPa)
- Swing Circuits ..... 4,700 psi (32 405 kPa)
- Power Boost ..... 5,260 psi (36 266 kPa)
- Pilot Circuits @ 8.9 gpm (34 L/m) ..... 566 psi (3900 kPa)

Oil Filtration Full-Flow Return with Bypass and One Pilot Oil Filter

Cylinders

Heat-treated, chrome-plated, polished cylinder rods, hardened steel (replaceable bushings) pivot pins

	Bore	Rod Diameter	Stroke
Boom (2)	5.3 in. (135 mm)	3.7 in. (95 mm)	53.5 in. (1360 mm)
Arm (1)	5.9 in. (150 mm)	4.1 in. (105 mm)	65.3 in. (1659 mm)

Electrical

Voltage ..... 24 volt
Number of Batteries ..... 2 x 12 volt
Reserve Capacity ..... 440 minutes
Alternator Rating ..... 80 amp
Optional Alternator Rating ..... 130 amp

Undercarriage

Carrier Rollers (per side)	2
Track Rollers (per side)	9
Shoes, Double Grousers (per side)	48
Track Shoe Width, Standard	28 in. (700 mm)
Drawbar Pull	67,929 lb. (30 812 kg)
Track Adjustment	hydraulic
Track Guides	full length “ski” type

Upperstructure

Counterweight, Standard	11,332 lb. (5140 kg)

Swing Mechanism

Swing Speed	8.7 rpm
Swing Torque	82,012 lb•ft (111 194 Nm)

Ground Pressure

28-in. (700 mm) Double-Grouser Shoes	8.59 psi (59.3 kPa)

Operator Station Monitor

	Indicator Light	*Audible Warning*	*Gauge*	*Digital Display*
Alarm Indicator	X			
Alternator, Low Charge	X			
Auto-Idle	X			
Clock			X	
Engine Air Cleaner Restriction	X			
Engine Service Required	X			
Engine Coolant Temperature	X	X	X	
Engine Oil Pressure	X	X		
Engine Preheat	X			
Engine RPM				X
Fault Code Alert	X			
Fuel Level	X		X	
Hourmeter				X
Work Mode Indicator	X			

Serviceability

Hinged, Swing-Out Coolers for easy cleanout, Centralized Lube Banks, and “O” Ring Face Seal Connectors on most hydraulic hoses

Diagnostics

Machine Information Center (MIC), Computerized In-Cab Monitor Information, and Fluid Sampling Ports

Fluid Change Interval, Hours

Engine Oil	500
Hydraulic Oil	5,000

Filters	*Filtration (microns)*	*Service Hours*	*Vertically Mounted*
Engine Oil Filter, Remote Mounted		500	yes
Fuel Filter, Remote Mounted		500	yes
Hydraulic Filter		2,000	yes
Return Oil Filter	10		

Sight Gauges

Hydraulic Reservoir

Engine-Oil Sampling Valve

Serviceability (continued)

Refill Capacities

Fuel Tank	277 gal. (1050 L)
Cooling System	8 gal. (30.3 L)
Engine Oil with Filter	7 gal. (24.6 L)
Hydraulic Tank	64 gal. (243 L)
Hydraulic System	74 gal. (280 L)
Swing Drive	12.5 qt. (11.8 L)
Propel Gearbox (each)	9.0 qt. (8.5 L)
Pump Drive Gearbox	1.2 qt. (1.1 L)

Operating Weights

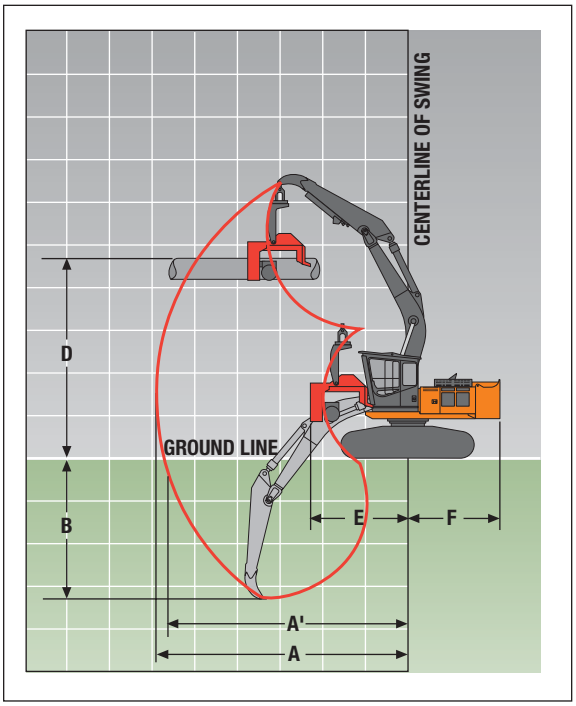
With 1,818-lb. (840 kg) Full Fuel Tank; 175-lb. (79 kg) Operator; 7,600-lb. (3450 kg) Processor Head, 11,332-lb. (5140 kg) Counterweight; and 28-in. (700 mm) Double-Grouser Shoes

SAE Operating Weight	81,351 lb. (36 900 kg)

Operating Dimensions

Arm Length 11 ft. 9 in. (3.58 m)

	Lifting Capacity Over Front at Ground Level	
	20-ft. (6.1 m) Reach (with power boost)	14,533 lb. (6592 kg)
A	Maximum Reach	30 ft. 9 in. (9.37 m)
A'	Maximum Reach at Ground Level	29 ft. 10 in. (9.09 m)
B	Maximum Digging Depth	16 ft. 4 in. (4.97 m)
C	Maximum Height	—
D	Maximum Log Level Height	25 ft. (7.62 m)
E	Minimum Swing Radius	11 ft. 7 in. (3.53 m)
F	Tail Swing Radius	10 ft. 11 in. (3.32 m)



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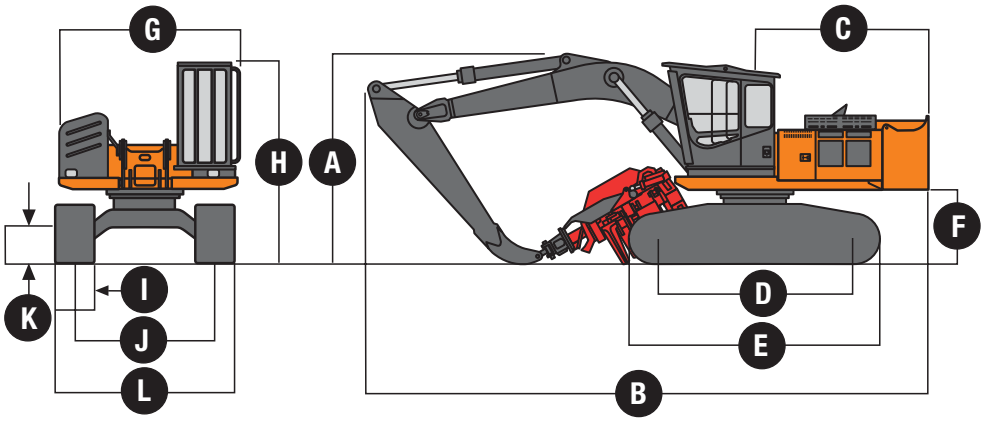
Machine Dimensions

ZAXIS FORESTER 290-3 PROCESSOR



Machine not exactly as shown.
Illustration for dimensioning purposes only.

A Height.....13 ft. 2 in. (4.01 m)
B Overall Length.....35 ft. 4 in. (10.77 m)
C Rear-End Length/Swing Radius.....10 ft. 11 in. (3.32 m)
D Distance Between Idler/Sprocket Centerline.....13 ft. 4 in. (4.05 m)
E Undercarriage Length.....16 ft. 5 in. (5.01 m)
F Counterweight Clearance.....4 ft. 11 in. (1.49 m)
G Upperstructure Width.....11 ft. 3 in. (3.43 m)
H Cab Height.....12 ft. 8 in. (3.85 m)
I Track Width, Double-Grouser Shoes.....28 in. (0.71 m)
J Gauge Width.....8 ft. 10 in. (2.69 m)
K Ground Clearance.....2 ft. 4 in. (0.71 m)
L Undercarriage Width.....11 ft. 2 in. (3.39 m)

Lift Chart

Boldface italic type indicates hydraulic-limited capacities with power boost on; lightface type indicates stability-limited capacities, in lb. (kg).
Figures do not exceed 87 percent of hydraulic capacity or 75 percent of weight needed to tip machine.

Load Point Height	10 ft. (3.1 m) Over Front	10 ft. (3.1 m) Over Side	15 ft. (4.6 m) Over Front	15 ft. (4.6 m) Over Side	20 ft. (6.1 m) Over Front	20 ft. (6.1 m) Over Side	25 ft. (7.6 m) Over Front	25 ft. (7.6 m) Over Side	30 ft. (9.1 m) Over Front	30 ft. (9.1 m) Over Side
With Processor Arm, 7,600-lb. (3450 kg) Attachment, and 28-in. (700 mm) Double-Grouser Shoes										
30 ft. (9.1 m)					5,400	5,400				
					(2449)	***(2449)***				
25 ft. (7.6 m)					***4,900***	***4,900***	***4,000***	***4,000***		
					(2223)	***(2223)***	***(1814)***	***(1814)***		
20 ft. (6.1 m)					***6,000***	***6,000***	***6,000***	***6,000***		
					(2722)	***(2722)***	***(2722)***	***(2722)***		
15 ft. (4.6 m)	***16,200***	***16,200***	***10,600***	***10,600***	***8,300***	***8,300***	***7,100***	***7,100***	***3,500***	***3,500***
	(7348)	***(7348)***	***(4808)***	***(4808)***	***(3765)***	***(3765)***	***(3221)***	***(3221)***	***(1588)***	***(1588)***
10 ft. (3.1 m)	***33,200***	***33,200***	***16,700***	***16,700***	***11,300***	***11,300***	***8,700***	***8,700***	***6,600***	***6,600***
	(15 059)	***(15 059)***	***(7575)***	***(7575)***	***(5126)***	***(5126)***	***(3946)***	***(3946)***	***(2994)***	***(2994)***
5 ft. (1.5 m)	***41,900***	***41,900***	***22,000***	***22,000***	***14,100***	***14,100***	***10,300***	9,600	***8,100***	6,300
	(19 006)	***(19 006)***	***(9979)***	***(9979)***	***(6396)***	***(6396)***	***(4672)***	(4355)	***(3674)***	(2858)
Ground Line	***42,600***	***42,600***	***24,800***	24,700	***16,200***	14,500	***11,600***	9,300	***6,700***	6,200
	(19 323)	***(19 323)***	***(11 249)***	(11 204)	***(7348)***	(6577)	***(5262)***	(4218)	***(3039)***	(2812)
–5 ft. (–1.5 m)	***41,000***	***41,000***	***25,500***	24,500	***17,100***	14,300	***12,200***	9,100		
	(18 597)	***(18 597)***	***(11 567)***	(11 113)	***(7757)***	(6486)	***(5534)***	(4128)		
–10 ft. (–3.1 m)	***37,000***	***37,000***	***24,200***	***24,200***	***16,500***	14,300	***11,400***	9,200		
	(16 783)	***(16 783)***	***(10 977)***	***(10 977)***	***(7484)***	(6486)	***(5171)***	(4173)		
–15 ft. (–4.6 m)	***31,500***	***31,500***	***20,600***	***20,600***	***13,500***	***13,500***				
	(14 288)	***(14 288)***	***(9344)***	***(9344)***	***(6124)***	***(6124)***				

Engine

Manufacturer and Model ..... Isuzu AH-4HK1XYSA-03, water-cooled with direct injection certified to EPA Tier-3 emissions
Cylinders 4
Displacement ..... 317 cu. in. (5.2 L)
Net Power (ISO9249) ..... 188 hp (140 kW) @ 2,100 rpm
Maximum Net Torque ..... 499 lb•ft (676 Nm) @ 1,500 rpm
Engine Bore and Stroke ..... 4.53 x 4.92 in. (115 x 125 mm)
Aspiration ..... turbocharged, air-to-air charge air cooler
Fuel Filter ..... double filter with water separator, remote mounted
Oil Filter ..... full flow, remote mounted

Cooling

Designed to match the engine, direct drive fan with reversing option, engine coolant and hydraulic oil coolers are now arranged side by side, external debris protection
Engine Coolant Rating ..... -34 °F (-37 °C)

Powertrain

Two-Speed Propel with Automatic Shift
Travel Speed Low, Maximum Speed ..... 1.0 mph (1.6 km/h)
Travel Speed High, Maximum Speed ..... 2.5 mph (4.0 km/h)

Controls

Pilot Levers, Low Effort
Hydraulic Pilot Controls with Shut-Off Lever

Brake

Swing Brake Multiple Wet Disc, Spring Applied, Hydraulically Released
Propel Brake, Spring Applied, Hydraulic Release

Hydraulics

Open Center, Load Sensing
Main Pumps ..... two variable-displacement pumps
Maximum Rated Flow ..... 2 x 65.5 gpm (2 x 248 L/m)
Pilot Pump ..... one gear
Maximum Rated Flow ..... 8.9 gpm (34 L/m)
System Relief Pressure ..... 566 psi (3900 kPa)

System Operating Pressure

Implement Circuits ..... 4,980 psi (34 336 kPa)
Travel Circuits ..... 4,980 psi (34 336 kPa)
Swing Circuits ..... 4,700 psi (32 405 kPa)
Power Boost ..... 5,260 psi (36 266 kPa)
Pilot Circuits @ 8.9 gpm (34 L/m) ..... 566 psi (3900 kPa)

Oil Filtration Full-Flow Return with Bypass and One Pilot Oil Filter

Cylinders

Heat-treated, chrome-plated, polished cylinder rods, hardened steel (replaceable bushings) pivot pins

	Bore	Rod Diameter	Stroke
Boom (2)	5.9 in. (150 mm)	4.1 in. (105 mm)	51.5 in. (1307 mm)
Arm (1)	6.7 in. (170 mm)	4.5 in. (115 mm)	68.5 in. (1740 mm)
Heel (1)	5.3 in. (135 mm)	3.5 in. (90 mm)	42.1 in. (1070 mm)

Electrical

Voltage ..... 24 volt
Number of Batteries ..... 2 x 12 volt
Reserve Capacity ..... 440 minutes
Alternator Rating ..... 80 amp
Optional Alternator Rating ..... 130 amp

Undercarriage

Carrier Rollers (per side)	2
Track Rollers (per side)	9
Shoes, Double Grousers (per side)	48
Track Shoe Width, Standard	28 in. (700 mm)
Drawbar Pull	67,929 lb. (30 812 kg)
Track Adjustment	hydraulic
Track Guides	full length “ski” type

Upperstructure

Counterweight, Standard	16,557 lb. (7510 kg)

Swing Mechanism

Swing Speed	8.7 rpm
Swing Torque	82,012 lb•ft (111 194 Nm)

Ground Pressure

28-in. (700 mm) Double-Grouser Shoes	9.56 psi (65.9 kPa)

Operator Station Monitor

	Indicator Light	*Audible Warning*	*Gauge*	*Digital Display*
Alarm Indicator	X			
Alternator, Low Charge	X			
Auto-Idle	X			
Clock			X	
Engine Air Cleaner Restriction	X			
Engine Service Required	X			
Engine Coolant Temperature	X	X	X	
Engine Oil Pressure	X	X		
Engine Preheat	X			
Engine RPM				X
Fault Code Alert	X			
Fuel Level	X		X	
Hourmeter				X
Work Mode Indicator	X			

Serviceability

Hinged, Swing-Out Coolers for easy cleanout, Centralized Lube Banks, and “O” Ring Face Seal Connectors on most hydraulic hoses

Diagnostics

Machine Information Center (MIC), Computerized In-Cab Monitor Information, and Fluid Sampling Ports

Fluid Change Interval, Hours

Engine Oil	500
Hydraulic Oil	5,000

Filters	*Filtration (microns)*	*Service Hours*	*Vertically Mounted*
Engine Oil Filter, Remote Mounted		500	yes
Fuel Filter, Remote Mounted		500	yes
Hydraulic Filter		2,000	yes
Return Oil Filter	10		

Sight Gauges

Hydraulic Reservoir

Engine-Oil Sampling Valve

Serviceability (continued)

Refill Capacities

Fuel Tank	277 gal. (1050 L)
Cooling System	8 gal. (30.3 L)
Engine Oil with Filter	7 gal. (24.6 L)
Hydraulic Tank	64 gal. (243 L)
Hydraulic System	82 gal. (310 L)
Swing Drive	12.5 qt. (11.8 L)
Propel Gearbox (each)	9.0 qt. (8.5 L)
Pump Drive Gearbox	1.2 qt. (1.1 L)

Operating Weights

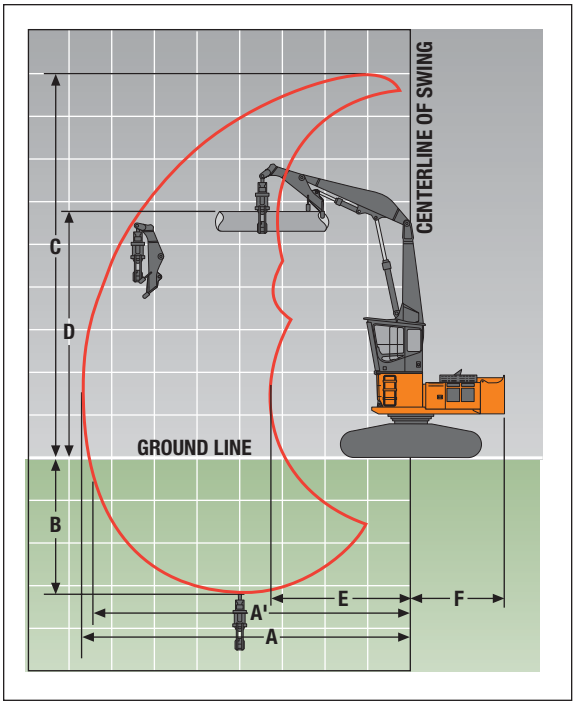
With 1818-lb. (840 kg) Full Fuel Tank; 175-lb. (79 kg) Operator; 16,557-lb. (7510 kg) Counterweight; 2,400-lb. (1090 kg) Grapple; and 28-in. (700 mm) Double-Grouser Shoes

SAE Operating Weight	90,500 lb. (41 050 kg)

Operating Dimensions

Lifting Capacity Over Front at Ground Level

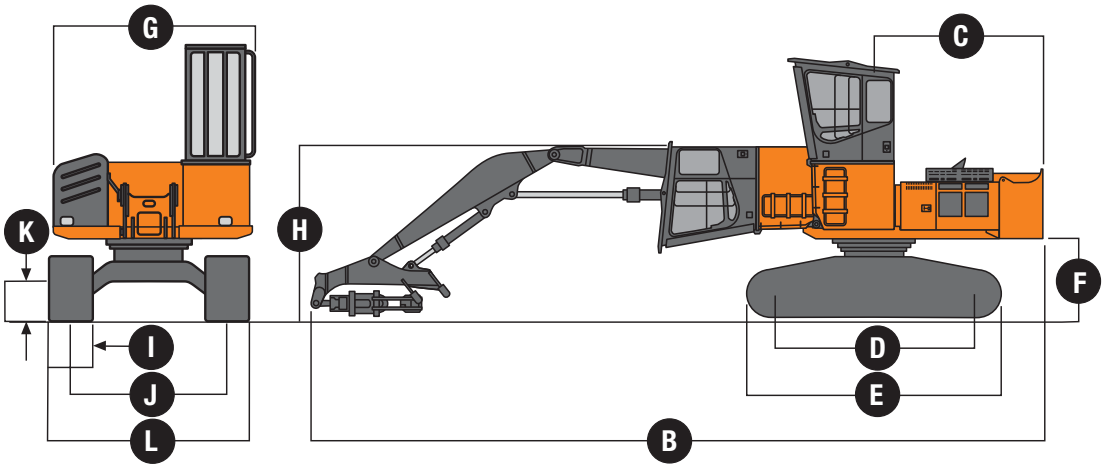
	20-ft. (6.1 m) Reach (with power boost)	27,029 lb. (12 260 kg)
A	Maximum Reach	41 ft. 4 in. (12.60 m)
A'	Maximum Reach at Ground Level	40 ft. 8 in. (12.39 m)
B	Maximum Depth	16 ft. 7 in. (5.05 m)
C	Maximum Height	47 ft. 9 in. (14.54 m)
D	Maximum Log Level Height	30 ft. 6 in (9.31 m)
E	Minimum Swing Radius	16 ft. 2 in. (4.92 m)
F	Tail Swing Radius	11 ft. (3.36 m)



Machine not exactly as shown.
Illustration for dimensioning purposes only.

Machine Dimensions

ZAXIS FORESTER 290-3 LIVE HEEL



Machine not exactly as shown.
Illustration for dimensioning purposes only.

A Height.....—
B Overall Length.....49 ft. 11 in (15.21 m)
C Rear-End Length/Swing Radius.....10 ft. 11 in. (3.32 m)
D Distance Between Idler/Sprocket Centerline.....13 ft. 4 in. (4.05 m)
E Undercarriage Length.....16 ft. 5 in. (5.01 m)
F Counterweight Clearance.....4 ft. 11 in. (1.49 m)
G Upperstructure Width.....11 ft. 3 in. (3.43 m)
H Cab Height.....11 ft. 8 in. (3.55 m)
I Track Width, Double-Grouser Shoes.....28 in. (0.71 m)
J Gauge Width.....9 ft. 7 in. (2.92 m)
K Ground Clearance.....2 ft. 7 in. (0.78 m)
L Undercarriage Width.....11 ft. 11 in. (3.62 m)

Lift Chart

Boldface italic type indicates hydraulic-limited capacities with power boost on; lightface type indicates stability-limited capacities, in lb. (kg).
Figures do not exceed 87 percent of hydraulic capacity or 75 percent of weight needed to tip machine.

Load Point Height	15 ft. (4.6 m) Over Front	15 ft. (4.6 m) Over Side	20 ft. (6.1 m) Over Front	20 ft. (6.1 m) Over Side	25 ft. (7.6 m) Over Front	25 ft. (7.6 m) Over Side	30 ft. (9.1 m) Over Front	30 ft. (9.1 m) Over Side	35 ft. (10.7 m) Over Front	35 ft. (10.7 m) Over Side	40 ft. (12.2 m) Over Front	40 ft. (12.2 m) Over Side
With 2,400-lb. (1090 kg) Grapple and 28-in. (700 mm) Double-Grouser Shoes												
45 ft. (13.7 m)	27,500	27,500										
	(12 474)	***(12 474)***										
40 ft. (12.2 m)	***26,200***	***26,200***	***23,000***	22,800								
	(11 884)	***(11 884)***	***(10 433)***	(10 342)								
35 ft. (10.7 m)			***19,600***	***19,600***	***17,700***	16,200	***15,200***	12,100				
			(8891)	***(8891)***	***(8029)***	(7348)	***(6895)***	(5489)				
30 ft. (9.1 m)			***18,900***	***18,900***	***16,800***	***16,800***	***15,100***	11,500				
			(8573)	***(8573)***	***(7620)***	***(7620)***	***(6849)***	(5216)				
25 ft. (7.6 m)			***19,200***	***19,200***	***16,900***	***16,900***	***14,900***	12,000	***12,900***	9,200		
			(8709)	***(8709)***	***(7666)***	***(7666)***	***(6759)***	(5443)	***(5851)***	(4173)		
20 ft. (6.1 m)			***20,700***	***20,700***	***17,600***	17,200	***15,200***	12,000	***12,900***	8,900		
			(9389)	***(9389)***	***(7983)***	(7802)	***(6895)***	(5443)	***(5851)***	(4037)		
15 ft. (4.6 m)			***22,900***	***22,900***	***18,800***	16,700	***15,600***	11,800	13,000	8,900	10,100	6,700
			(10 387)	***(10 387)***	***(8528)***	(7575)	***(7076)***	(5352)	(5897)	(4037)	(6700)	(3039)
10 ft. (3.1 m)			***24,200***	***24,200***	***19,900***	16,000	***16,000***	11,500	12,900	8,800	10,000	6,600
			(10 977)	***(10 977)***	***(9027)***	(7258)	***(7258)***	(5216)	(5851)	(3992)	(4536)	(2994)
5 ft. (1.5 m)					***20,600***	15,400	***16,200***	11,400	12,700	8,600	***9,600***	6,500
					(9344)	(6985)	***(7348)***	(5171)	(5761)	(3901)	***(4355)***	(2948)
Ground Line			***27,000***	21,400	***20,400***	15,000	***15,900***	11,000	***12,300***	8,300	***7,900***	6,400
			(12 247)	(9707)	***(9253)***	(6804)	***(7212)***	(4990)	***(5579)***	(3765)	***(3583)***	(2903)
–5 ft. (–1.5 m)			***24,800***	20,700	***19,000***	14,500	***14,600***	10,700	***10,700***	8,200		
			(11 249)	(9389)	***(8618)***	(6577)	***(6623)***	(4853)	***(4853)***	(3719)		
–10 ft. (–3.1 m)			***20,100***	***20,100***	***15,900***	14,300	***11,900***	10,600	***7,400***	***7,400***		
			(9117)	***(9117)***	***(7212)***	(6486)	***(5398)***	(4808)	***(3357)***	***(3357)***		

Engine

Manufacturer and Model ..... Isuzu AH-4HK1XYSA-03, water cooled with direct injection certified to EPA Tier-3 emissions
Cylinders 4
Displacement ..... 317 cu. in. (5.2 L)
Net Power (ISO9249) ..... 188 hp (140 kW) @ 2,100 rpm
Maximum Net Torque ..... 499 lb•ft (676 Nm) @ 1,500 rpm
Engine Bore and Stroke ..... 4.53 x 4.92 in. (115 x 125 mm)
Aspiration ..... turbocharged, air-to-air charge air cooler
Fuel Filter ..... double filter with water separator, remote mounted
Oil Filter ..... full flow, remote mounted

Cooling

Designed to match the engine, direct drive fan with reversing option, engine coolant and hydraulic oil coolers are now arranged side by side, external debris protection
Engine Coolant Rating ..... -34 °F (-37 °C)

Powertrain

Two-Speed Propel with Automatic Shift
Travel Speed Low, Maximum Speed ..... 1.0 mph (1.6 km/h)
Travel Speed High, Maximum Speed ..... 2.5 mph (4.0 km/h)

Controls

Pilot Levers, Low Effort
Hydraulic Pilot Controls with Shut-Off Lever

Brake

Swing Brake Multiple Wet Disc, Spring Applied, Hydraulically Released
Propel Brake, Spring Applied, Hydraulic Release

Hydraulics

Open Center, Load Sensing
Main Pumps ..... two variable-displacement pumps
Maximum Rated Flow ..... 2 x 65.5 gpm (2 x 248 L/m)
Pilot Pump ..... one gear
Maximum Rated Flow ..... 8.9 gpm (34 L/m)
System Relief Pressure ..... 566 psi (3900 kPa)

System Operating Pressure

Implement Circuits ..... 4,980 psi (34 336 kPa)
Travel Circuits ..... 4,980 psi (34 336 kPa)
Swing Circuits ..... 4,700 psi (32 405 kPa)
Power Boost ..... 5,260 psi (36 266 kPa)
Pilot Circuits @ 8.9 gpm (34 L/m) ..... 566 psi (3900 kPa)

Oil Filtration Full-Flow Return with Bypass and One Pilot Oil Filter

Cylinders

Heat-treated, chrome-plated, polished cylinder rods, hardened steel (replaceable bushings) pivot pins

	Bore	Rod Diameter	Stroke
Boom (2)	5.9 in. (150 mm)	4.1 in. (105 mm)	51.5 in. (1307 mm)
Arm (1)	6.7 in. (170 mm)	4.5 in. (115 mm)	68.5 in. (1740 mm)
Tilt (1)	5.3 in. (135 mm)	3.5 in. (90 mm)	42.1 in. (1070 mm)

Electrical

Voltage ..... 24 volt
Number of Batteries ..... 2 x 12 volt
Reserve Capacity ..... 440 minutes
Alternator Rating ..... 80 amp
Optional Alternator Rating ..... 130 amp

Undercarriage

Carrier Rollers (per side)	2
Track Rollers (per side)	9
Shoes, Double Grousers (per side)	48
Track Shoe Width, Standard	28 in. (700 mm)
Drawbar Pull	67,929 lb. (30 812 kg)
Track Adjustment	hydraulic
Track Guides	full length “ski” type

Upperstructure

Counterweight, Standard	16,557 lb. (7510 kg)

Swing Mechanism

Swing Speed	8.7 rpm
Swing Torque	82,012 lb•ft (111 194 Nm)

Ground Pressure

28-in. (700 mm) Double-Grouser Shoes	9.57 psi (66.0 kPa)

Operator Station Monitor

	Indicator Light	*Audible Warning*	*Gauge*	*Digital Display*
Alarm Indicator	X			
Alternator, Low Charge	X			
Auto-Idle	X			
Clock			X	
Engine Air Cleaner Restriction	X			
Engine Service Required	X			
Engine Coolant Temperature	X	X	X	
Engine Oil Pressure	X	X		
Engine Preheat	X			
Engine RPM				X
Fault Code Alert	X			
Fuel Level	X		X	
Hourmeter				X
Work Mode Indicator	X			

Serviceability

Hinged, Swing-Out Coolers for easy cleanout, Centralized Lube Banks, and “O” Ring Face Seal Connectors on most hydraulic hoses

Diagnostics

Machine Information Center (MIC), Computerized In-Cab Monitor Information, and Fluid Sampling Ports

Fluid Change Interval, Hours

Engine Oil	500
Hydraulic Oil	5,000

Filters	*Filtration (microns)*	*Service Hours*	*Vertically Mounted*
Engine Oil Filter, Remote Mounted		500	yes
Fuel Filter, Remote Mounted		500	yes
Hydraulic Filter		2,000	yes
Return Oil Filter	10		

Sight Gauges

Hydraulic Reservoir

Engine-Oil Sampling Valve

Serviceability (continued)

Refill Capacities

Fuel Tank	277 gal. (1050 L)
Cooling System	8 gal. (30.3 L)
Engine Oil with Filter	7 gal. (24.6 L)
Hydraulic Tank	64 gal. (243 L)
Hydraulic System	82 gal. (310 L)
Swing Drive	12.5 qt. (11.8 L)
Propel Gearbox (each)	9.0 qt. (8.5 L)
Pump Drive Gearbox	1.2 qt. (1.1 L)

Operating Weights

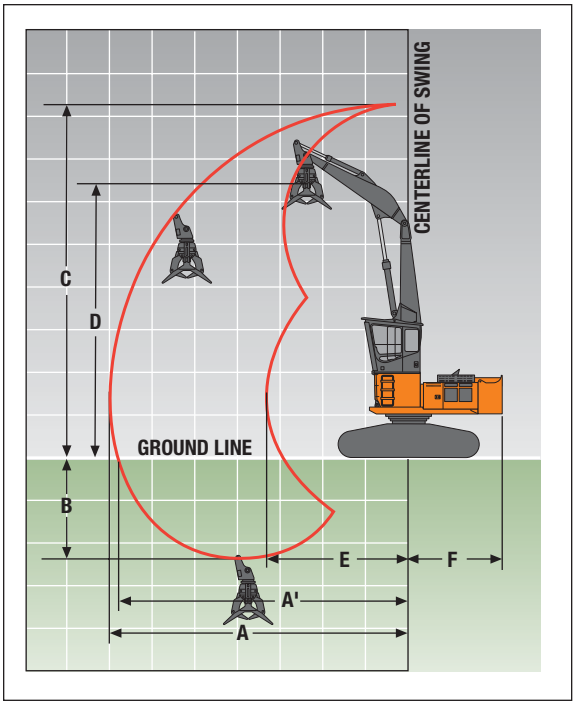
With 1818-lb. (840 kg) Full Fuel Tank; 175-lb. (79 kg) Operator; 16,557-lb. (7510 kg) Counterweight; 5,000-lb. (2267 kg) Grapple; and 28-in. (700 mm) Double-Grouser Shoes

SAE Operating Weight	90,610 lb. (41 100 kg)

Operating Dimensions

Lifting Capacity Over Front at Ground Level

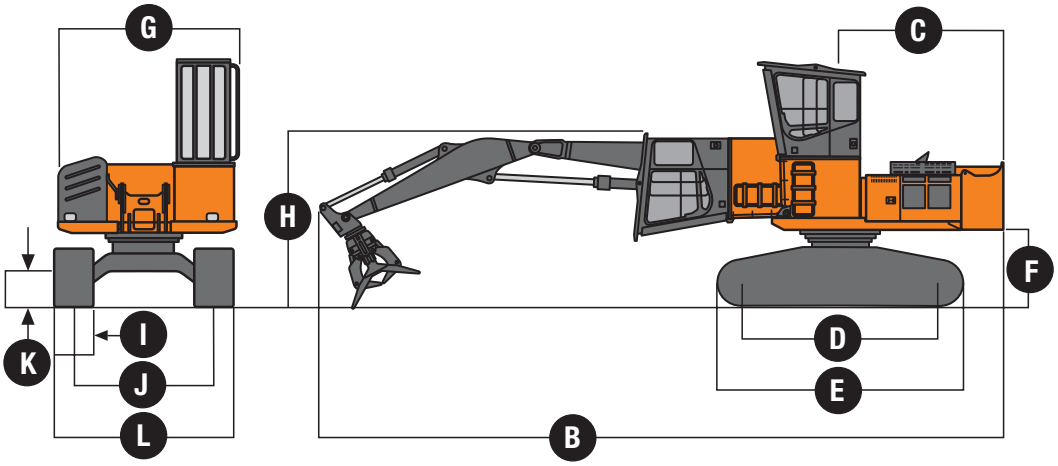
	20-ft. (6.1 m) Reach (with power boost)	27,029 lb. (12 260 kg)
A	Maximum Reach	36 ft. 6 in. (11.12 m)
A'	Maximum Reach at Ground Level	36 ft. 2 in. (11.01 m)
B	Maximum Depth	11 ft. 9 in. (3.59 m)
C	Maximum Height	43 ft. (13.12 m)
D	Maximum Log Level Height	33 ft. 11 in (10.35 m)
E	Minimum Swing Radius	16 ft. 6 in. (5.03 m)
F	Tail Swing Radius	11 ft. (3.36 m)



Machine not exactly as shown.
Illustration for dimensioning purposes only.

Machine Dimensions

ZAXIS FORESTER 290-3 BUTT & TOP



Machine not exactly as shown.
Illustration for dimensioning purposes only.

A Height.....—
B Overall Length.....49 ft. 6 in. (15.09 m)
C Rear-End Length/Swing Radius.....10 ft. 11 in. (3.32 m)
D Distance Between Idler/Sprocket Centerline.....13 ft. 4 in. (4.05 m)
E Undercarriage Length.....16 ft. 5 in. (5.01 m)
F Counterweight Clearance.....4 ft. 11 in. (1.49 m)
G Upperstructure Width.....11 ft. 3 in. (3.43 m)
H Cab Height.....11 ft. 8 in. (3.55 m)
I Track Width, Double-Grouser Shoes.....28 in. (0.71 m)
J Gauge Width.....9 ft. 7 in. (2.92 m)
K Ground Clearance.....2 ft. 7 in. (0.78 m)
L Undercarriage Width.....11 ft. 11 in. (3.39 m)

Lift Chart

Boldface italic type indicates hydraulic-limited capacities with power boost on; lightface type indicates stability-limited capacities, in lb. (kg).
Figures do not exceed 87 percent of hydraulic capacity or 75 percent of weight needed to tip machine.

Load Point Height	15 ft. (4.6 m) Over Front	15 ft. (4.6 m) Over Side	20 ft. (6.1 m) Over Front	20 ft. (6.1 m) Over Side	25 ft. (7.6 m) Over Front	25 ft. (7.6 m) Over Side	30 ft. (9.1 m) Over Front	30 ft. (9.1 m) Over Side	35 ft. (10.7 m) Over Front	35 ft. (10.7 m) Over Side
With 5,000-lb. (2267 kg) Grapple and 28-in. (700 mm) Double-Grouser Shoes										
40 ft. (12.2 m)	29,000	29,000								
	(13 154)	***(13 154)***								
35 ft. (10.7 m)	***24,200***	***24,200***	***20,400***	***20,400***						
	(10 977)	***(10 977)***	***(9253)***	***(9253)***						
30 ft. (9.1 m)			***19,100***	***19,100***	***16,800***	15,700				
			(8664)	***(8664)***	***(7620)***	(7121)				
25 ft. (7.6 m)			***19,200***	***19,200***	***16,600***	15,800	***14,400***	10,700		
			(8709)	***(8709)***	***(7530)***	(7167)	***(6532)***	(4853)		
20 ft. (6.1 m)	***25,300***	***25,300***	***20,400***	***20,400***	***17,100***	15,500	***14,400***	10,600		
	(11 476)	***(11 476)***	***(9253)***	***(9253)***	***(7757)***	(7031)	***(6532)***	(4808)		
15 ft. (4.6 m)	***29,600***	***29,600***	***22,400***	***22,400***	***18,000***	15,000	***14,700***	10,400	11,300	7,300
	(13 426)	***(13 426)***	***(10 161)***	***(10 161)***	***(8165)***	(6804)	***(6668)***	(4717)	(5126)	(3311)
10 ft. (3.1 m)			***24,500***	21,400	***18,800***	14,300	***14,900***	10,100	11,200	7,200
			(11 113)	(9707)	***(8528)***	(6486)	***(6759)***	(4581)	(5080)	(3266)
5 ft. (1.5 m)			***25,700***	20,200	***19,100***	13,700	***14,600***	9,700	***10,460***	7,000
			(11 657)	(9163)	***(8664)***	(6214)	***(6623)***	(4400)	***(4745)***	(3175)
Ground Line	***35,100***	31,400	***24,900***	19,400	***18,400***	13,200	***13,500***	9,500	***8,400***	7,000
	(15 921)	(14 243)	***(11 295)***	(8800)	***(8346)***	(5987)	***(6124)***	(4309)	***(3810)***	(3175)
–5 ft. (–1.5 m)	***29,700***	***29,700***	***21,900***	18,900	***16,000***	12,900	***11,000***	9,300		
	(13 472)	***(13 472)***	***(9,934)***	(8573)	***(7258)***	(5851)	***(4990)***	(4218)		
–10 ft. (–3.1 m)	***21,400***	***21,400***	***16 400***	***16,400***	***11,500***	***11,500***				
	(9707)	***(9707)***	***(7439)***	***(7439)***	***(5216)***	***(5216)***				

Engine

Manufacturer and Model ..... Isuzu AH-4HK1XYSA-03, water cooled with direct injection certified to EPA Tier-3 emissions
Cylinders 4
Displacement ..... 317 cu. in. (5.2 L)
Net Power (ISO9249) ..... 188 hp (140 kW) @ 2,100 rpm
Maximum Net Torque ..... 499 lb•ft (676 Nm) @ 1,500 rpm
Engine Bore and Stroke ..... 4.53 x 4.92 in. (115 x 125 mm)
Aspiration ..... turbocharged, air-to-air charge air cooler
Fuel Filter ..... double filter with water separator, remote mounted
Oil Filter ..... full flow, remote mounted

Cooling

Designed to match the engine, direct drive fan with reversing option, engine coolant and hydraulic oil coolers are now arranged side by side, external debris protection
Engine Coolant Rating ..... -34 °F (-37 °C)

Powertrain

Two-Speed Propel with Automatic Shift
Travel Speed Low, Maximum Speed ..... 1.0 mph (1.6 km/h)
Travel Speed High, Maximum Speed ..... 2.5 mph (4.0 km/h)

Controls

Pilot Levers, Low Effort
Hydraulic Pilot Controls with Shut-Off Lever

Brake

Swing Brake Multiple Wet Disc, Spring Applied, Hydraulically Released
Propel Brake, Spring Applied, Hydraulic Release

Hydraulics

Open Center, Load Sensing
Main Pumps ..... two variable-displacement pumps
Maximum Rated Flow ..... 2 x 65.5 gpm (2 x 248 L/m)
Pilot Pump ..... one gear
Maximum Rated Flow ..... 8.9 gpm (34 L/m)
System Relief Pressure ..... 566 psi (3900 kPa)

System Operating Pressure

Implement Circuits ..... 4,980 psi (34 336 kPa)
Travel Circuits ..... 4,980 psi (34 336 kPa)
Swing Circuits ..... 4,700 psi (32 405 kPa)
Power Boost ..... 5,260 psi (36 266 kPa)
Pilot Circuits @ 8.9 gpm (34 L/m) ..... 566 psi (3900 kPa)

Oil Filtration Full-Flow Return with Bypass and One Pilot Oil Filter

Cylinders

Heat-treated, chrome-plated, polished cylinder rods, hardened steel (replaceable bushings) pivot pins

	Bore	Rod Diameter	Stroke
Boom (2)	5.9 in. (150 mm)	4.1 in. (105 mm)	51.5 in. (1307 mm)
Arm (1)	6.7 in. (170 mm)	4.5 in. (115 mm)	68.5 in. (1740 mm)
Tilt (1)	5.3 in. (135 mm)	3.5 in. (90 mm)	42.1 in. (1070 mm)

Electrical

Voltage ..... 24 volt
Number of Batteries ..... 2 x 12 volt
Reserve Capacity ..... 440 minutes
Alternator Rating ..... 80 amp
Optional Alternator Rating ..... 130 amp

Undercarriage

Carrier Rollers (per side)	2
Track Rollers (per side)	9
Shoes, Double Grousers (per side)	48
Track Shoe Width, Standard	28 in. (700 mm)
Drawbar Pull	67,929 lb. (30 812 kg)
Track Adjustment	hydraulic
Track Guides	full length “ski” type

Upperstructure

Counterweight, Standard	16,557 lb. (7510 kg)

Swing Mechanism

Swing Speed	8.7 rpm
Swing Torque	82,012 lb•ft (111 194 Nm)

Ground Pressure

28-in. (700 mm) Double-Grouser Shoes	9.57 psi (66.0 kPa)

Operator Station Monitor

	Indicator Light	*Audible Warning*	*Gauge*	*Digital Display*
Alarm Indicator	X			
Alternator, Low Charge	X			
Auto-Idle	X			
Clock			X	
Engine Air Cleaner Restriction	X			
Engine Service Required	X			
Engine Coolant Temperature	X	X	X	
Engine Oil Pressure	X	X		
Engine Preheat	X			
Engine RPM				X
Fault Code Alert	X			
Fuel Level	X		X	
Hourmeter				X
Work Mode Indicator	X			

Serviceability

Hinged, Swing-Out Coolers for easy cleanout, Centralized Lube Banks, and “O” Ring Face Seal Connectors on most hydraulic hoses

Diagnostics

Machine Information Center (MIC), Computerized In-Cab Monitor Information, and Fluid Sampling Ports

Fluid Change Interval, Hours

Engine Oil	500
Hydraulic Oil	5,000

Filters	*Filtration (microns)*	*Service Hours*	*Vertically Mounted*
Engine Oil Filter, Remote Mounted		500	yes
Fuel Filter, Remote Mounted		500	yes
Hydraulic Filter		2,000	yes
Return Oil Filter	10		

Sight Gauges

Hydraulic Reservoir

Engine-Oil Sampling Valve

Serviceability (continued)

Refill Capacities

Fuel Tank	277 gal. (1050 L)
Cooling System	8 gal. (30.3 L)
Engine Oil with Filter	7 gal. (24.6 L)
Hydraulic Tank	64 gal. (243 L)
Hydraulic System	82 gal. (310 L)
Swing Drive	12.5 qt. (11.8 L)
Propel Gearbox (each)	9.0 qt. (8.5 L)
Pump Drive Gearbox	1.2 qt. (1.1 L)

Operating Weights

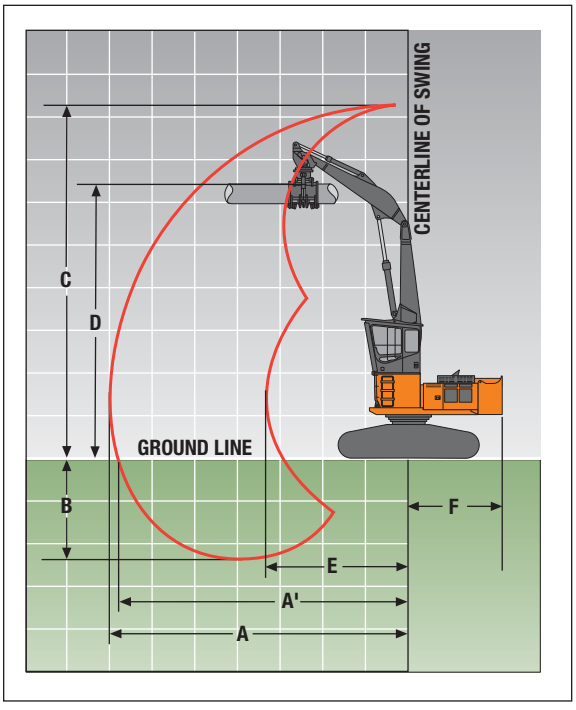
With 1818-lb. (840 kg) Full Fuel Tank; 175-lb. (79 kg) Operator; 16,557-lb. (7510 kg) Counterweight; 5,000-lb. (2267 kg) Grapple; and 28-in. (700 mm) Double-Grouser Shoes

SAE Operating Weight	90,610 lb. (41 100 kg)

Operating Dimensions

Lifting Capacity Over Front at Ground Level

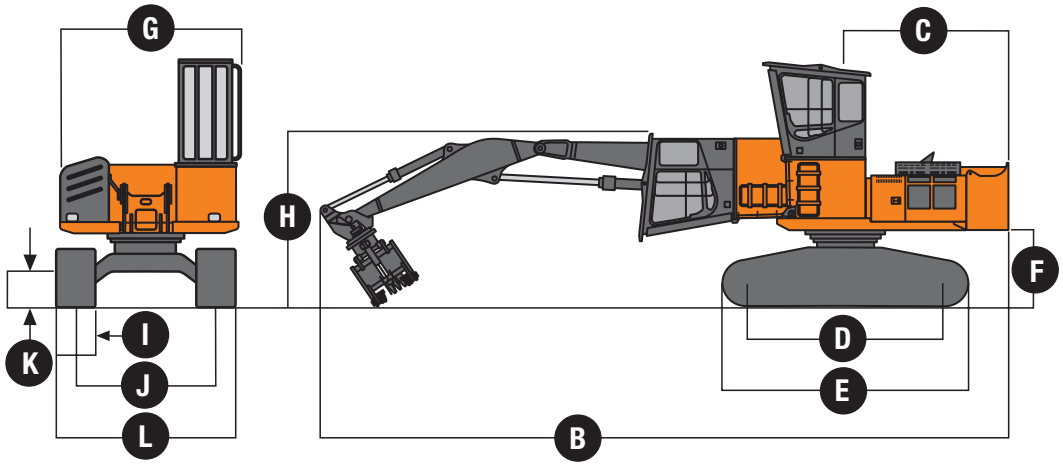
	20-ft. (6.1 m) Reach (with power boost)	27,029 lb. (12 260 kg)
A	Maximum Reach	36 ft. 6 in. (11.12 m)
A'	Maximum Reach at Ground Level	36 ft. 2 in. (11.01 m)
B	Maximum Depth	11 ft. 9 in. (3.59 m)
C	Maximum Height	43 ft. (13.12 m)
D	Maximum Log Level Height	29 ft. 5 in (8.97 m)
E	Minimum Swing Radius	16 ft. 6 in. (5.03 m)
F	Tail Swing Radius	11 ft. (3.36 m)



Machine not exactly as shown.
Illustration for dimensioning purposes only.

Machine Dimensions

ZAXIS FORESTER 290-3 POWER CLAM



A	Height	—
B	Overall Length	49 ft. 6 in. (15.09 m)
C	Rear-End Length/Swing Radius	10 ft. 11 in. (3.32 m)
D	Distance Between Idler/Sprocket Centerline	13 ft. 4 in. (4.05 m)
E	Undercarriage Length	16 ft. 5 in. (5.01 m)
F	Counterweight Clearance	4 ft. 11 in. (1.49 m)
G	Upperstructure Width	11 ft. 3 in. (3.43 m)
H	Cab Height	11 ft. 8 in. (3.55 m)
I	Track Width, Double-Grouser Shoes	28 in. (0.71 m)
J	Gauge Width	9 ft. 7 in. (2.92 m)
K	Ground Clearance	2 ft. 7 in. (0.78 m)
L	Undercarriage Width	11 ft. 11 in. (3.39 m)

Machine not exactly as shown.
Illustration for dimensioning purposes only.

HITACHI

Control Owning and Operating Costs

Customer Personal Service (CPS) is part of Hitachi's proactive, fix-before-fail strategy on machine maintenance that will help control costs, increase profits, and reduce stress. Included in this comprehensive lineup of ongoing programs and services are:

Fluid analysis program – tells you what's going on inside all of your machine's major components so you'll know if there's a problem before you see a decline in performance. Fluid analysis is included in most extended coverage and preventive-maintenance agreements.

Component life-cycle data – gives you vital information on the projected life span of components and lets you make informed decisions on machine maintenance by telling you approximately how many hours of use you can expect from an engine, transmission, or hydraulic pump. This information can be used to preempt catastrophic downtime by servicing major components at about 80 percent of their life cycle.

Preventive Maintenance (PM) agreements – give you a fixed cost for maintaining a machine for a given period of time. They also help you avoid downtime by ensuring that critical maintenance work gets done right and on schedule. On-site preventive maintenance service performed where and when you need it helps protect you from the expense of catastrophic failures and lets you avoid waste-disposal hassles.

Extended coverage – gives you a fixed cost for machine repairs for a given period of time so you can effectively manage costs. Whether you work in a severe-service setting or just want to spread the risk of doing business, this is a great way to custom-fit coverage for your operation. And an extended coverage contract also travels well because it's backed by Hitachi and is honored by all Hitachi construction dealers.

Customer Support Advisors (CSAs) – Hitachi believes the CSA program lends a personal quality to Customer Personal Service (CPS). Certified CSAs have the knowledge and skills for helping make important decisions on machine maintenance and repair. Their mission is to help you implement a plan that's right for your business and take the burden of machine maintenance off your shoulders.

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