

# ***TIMBERPRO***

A Komatsu forestry brand

**TN785D**  
swing machine



Photo may include optional equipment

**Operating weight**  
116,500 lbs. (52,844 kg)

**Rated horsepower**  
390 HP (291 kW) @ 2,100 rpm

# Specifications

## Engine

Model	Cummins L9	
Type	Water-cooled, 4-cycle, XPI Fuel system	
Aspiration	Variable Geometry Turbo, aftercooled, cooled EGR	
No. of cylinders	6	
Bore	4.49 in	114 mm
Stroke	5.86 in	145 mm
Piston displacement	543 in <sup>3</sup>	8.9 L
Horsepower		
SAE J1995	Gross 390HP (291 kW) @ 2,100 rpm	
Fan drive type for radiator cooling	Hydraulic, variable speed, auto reverse	
Governor	All-speed control, electronic	

\*U.S. EPA Tier 4 Final emission certification

## Hydraulic system

Type: Load sense, pressure compensated, open loop system and dedicated closed loop systems

Hydraulic control modes	SAE/US/US Modified, custom attc. settings		
Main pump			
Type	Variable displacement piston type		
Pumps	Boom, arm, swing, travel and auxiliary circuits		
Maximum flow	138 gpm	522 L/min	
Supply for control circuit	Charge pump		
Hydraulic motors			
Travel	2x Hydrostatic motors, closed loop with parking brake		
Swing	2x Hydrostatic motors, closed loop with swing holding brake		
Relief valve setting			
Implement circuits	29.0 MPa	4,200 psi	316 kg/cm <sup>2</sup>
Travel circuit	41.0 MPa	6,000 psi	421 kg/cm <sup>2</sup>
Swing circuit	40.0 MPa	5,800 psi	408 kg/cm <sup>2</sup>
Pilot circuit	2.9 MPa	425 psi	30 kg/cm <sup>2</sup>
Hydraulic cylinders	<i>(bore x stroke x rod diameter)</i>		
Boom (2)	6.5" x 62.0" x 4.3"	165 mm x 1,575 mm x 110 mm	
Arm (2)	5.5" x 65.9" x 3.9"	140 mm x 1,676 mm x 100 mm	
Heel (1) (opt)	5.9" x 40.0" x 3.9"	150 mm x 1,016 mm x 100 mm	

## Drives and brakes

Steering control	Two, bi-directional pedals	
Drive method	Hydrostatic	
Maximum drawbar pull	380 kN, 38,822 kgf, 85,587 lbf	
Maximum grade	35 deg	
Maximum travel speed		
High	4.72 mph	7.6 km/h
Low (auto-shift)	1.54 mph	2.5 km/h
Parking brake	Hydraulic lock	

## Swing system

Drive method	Hydrostatic closed loop
Swing reduction	Planetary gear
Swing circle lubrication	Grease-bathed, dual ball
Holding brake/swing lock	Mechanical wet disc brake
Swing speed	5.3 rpm
Swing torque	150,700 lbs.-ft. (20,835 kg-m)

## Undercarriage

Center frame	X-frame
Track frame	Box-section
Seal of track	Sealed track
Track adjuster	Hydraulic adjusted, spring tensioner
Number of shoes (each side)	57
Track carrier (each side)	One piece slider
Number of track rollers (each side)	12

## Coolant (refilling) and lubricant capacity

Fuel tank	320 gal (1215 L)
Coolant	12.5 gal (47.3 L)
Engine	6.1 gal (23.1 L)
Final drive (each side)	2.6 gal (10 L)
Swing drive	1.9 gal (7.2 L)
Hydraulic tank	102 gal (386 L)
Hydraulic system	140 gal (530 L)
DEF tank	15 gal (23.1 L)

## Operating weight

Truck Loader configuration:

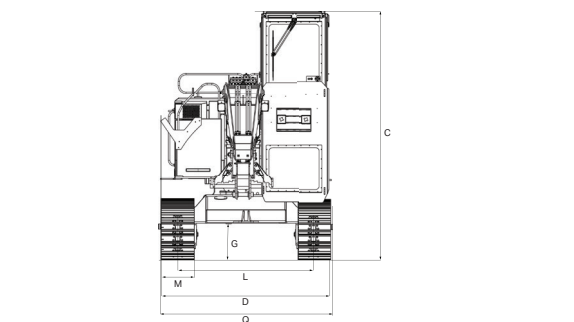
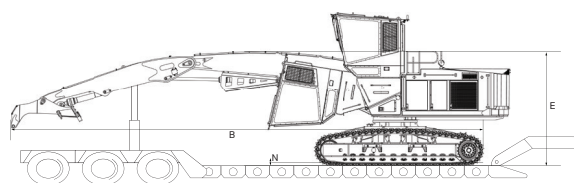
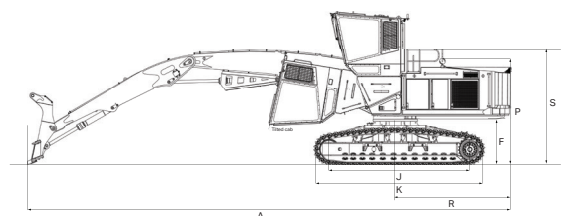
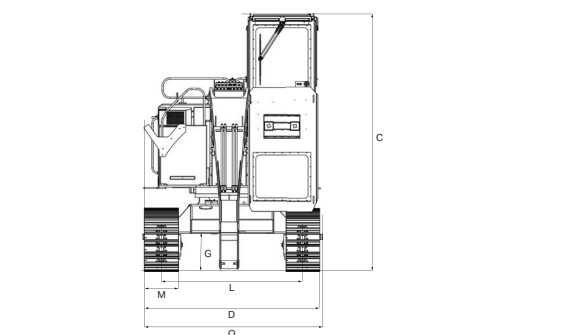
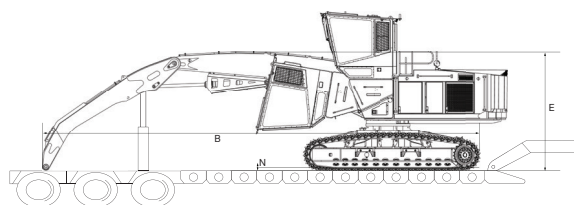
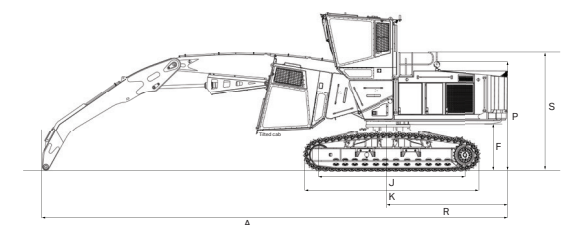
Cab with 51" riser (1,295 mm)  
28" (700 mm) double grouser shoes  
Log loader boom 24.6' (7,493 mm)  
Droop arm 17.9' (5,477 mm)  
Counterweight 5,000 lbs. (2,268 kg)  
Operator and standard equipment (no head)

Operating weight	116,500 lbs.	52,844 kg
Ground pressure	9.6 psi	0.67 kg/cm <sup>2</sup>

Live Heel configuration:

Cab with 51" riser (1,295 mm)  
28" (700 mm) double grouser shoes  
Log loader boom 24.6' (7,493 mm)  
Straight arm 17.9' (5,252 mm)  
Heel 4.4' (1,340 mm)  
Counterweight 5,000 lbs. (2,268 kg)  
Operator and standard equipment (no head)

Operating weight	120,500 lbs.	54,431 kg
Ground pressure	9.8 psi	0.69 kg/cm <sup>2</sup>



## Dimensions CTL Droop arm

A	Overall length	51' (15,538 mm)
B	Length on ground (transport)	48' (14,625 mm)
C	Overall height (highest point on cab)	17'5" (5,303 mm)
D	Overall width (without removable step)	11'11" (3,620 mm)
E	Overall highest point on machine, cab tilted	13'1" (3,996 mm)
E <sup>1</sup>	Overall cab height for transport (riser tilt position – grouser height included)	12'10" (3,913 mm)
F	Ground clearance (revo frame)	5'8" (1,725 mm)
G	Ground clearance (center frame)	2'6" (770 mm)
H	Tail swing radius	13'7" (4,137 mm)
J	Track length on ground	16' (4,869 mm)
K	Track length	19'5" (5,923 mm)
L	Track gauge	9'6" (2,895 mm)
M	Shoe width	2'4" (700 mm)
N	Grouser height	0'2" (50 mm)
	Shoe plate thickness	0'0.6" (15 mm)
P	Machine height (engine hood)	11'1" (3,385 mm)
Q	Machine body width (widest point)	12'2" (3,709 mm)
R	Distance, swing center to rear end	13'2" (4,010 mm)
S	Machine cab height (top of handrail)	13'1" (3,994 mm)

## Dimensions FTL Live Heel

A	Overall length	57' (17,347 mm)
B	Length on ground (transport)	54' (16,433 mm)
C	Overall height (highest point on cab)	17'5" (5,303 mm)
D	Overall width (without removable step)	11'11" (3,620 mm)
E	Overall highest point on machine, cab tilted	13'1" (3,996 mm)
E <sup>1</sup>	Overall cab height for transport (riser tilt position – grouser height included)	12'10" (3,913 mm)
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R	Distance, swing center to rear end	13'2" (4,010 mm)
S	Machine cab height (top of handrail)	13'1" (3,994 mm)

# TN785D

## Lifting capacity CTL droop arm

A: Reach from swing center  
B: Bucket hook height  
C: Lifting capacity

Cf: Rating over front  
Cs: Rating over side

Conditions:  
• Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load  
• Lifting mode: On

\* load is limited by hydraulic capacity rather than tipping. Ratings are based on SAE standard No. J1097

Unit: lbs. kg

B	A	15' 4.57 m		20' 6.10 m		25' 7.62 m		30' 9.14 m		35' 10.67 m		40' 12.19 m		MAX	MAX	
		Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	⊗	Cf	Cs
45'	13.72 m			* 22,774	* 22,774									20.1'	* 22,472	* 22,472
				* 10,330	* 10,330									6.14 m	* 10,193	* 10,193
40'	12.19 m					* 22,565	* 22,565							26.9'	* 18,853	* 18,953
						* 10,235	* 10,235							8.18 m	* 8,597	* 8,597
35'	10.67 m					* 25,999	23,784	* 20,726	17,479					31.5'	* 17,266	15,990
						* 11,793	10,788	* 9,401	7,928					9.59 m	* 7,832	7,253
30'	9.14 m					* 25,993	23,745	* 23,962	17,641					34.8'	* 16,346	13,541
						* 11,790	10,770	* 10,869	8,002					10.62 m	* 7,422	6,142
25'	7.62 m			* 30,114	* 30,114	* 26,750	23,336	* 24,254	17,461	* 22,002	13,504			37.3'	* 15,919	12,057
				* 13,659	* 13,659	* 12,133	10,585	* 11,002	7,920	* 9,980	6,125			11.36 m	* 7,221	5,469
20'	6.10 m			* 32,467	31,895	* 28,092	22,628	* 24,966	17,067	* 22,589	13,504			38.9'	* 15,800	11,128
				* 14,727	14,467	* 12,742	10,264	* 11,324	7,742	* 10,246	6,051			11.86 m	* 7,167	5,047
15'	4.57 m	* 44,745	* 44,745	* 35,468	30,249	* 29,778	21,714	* 25,891	16,542	22,763	13,062			39.9'	* 15,957	10,573
		* 20,296	* 20,296	* 16,088	13,721	* 13,507	9,849	* 11,744	7,503	10,325	5,925			12.16 m	* 7,238	4,796
10'	3.05 m	* 50,414	* 43,407	* 38,457	28,491	* 31,449	20,739	* 26,791	15,973	22,415	12,744	* 17,640	10,415	40.3'	* 16,384	10,310
		* 22,867	* 19,869	* 17,444	12,923	* 14,265	9,407	* 12,152	7,245	10,167	5,781	* 8,001	4,724	12.27 m	* 7,432	4,676
5'	1.52 m	* 37,064	* 37,064	* 40,597	26,994	* 32,667	19,870	* 27,375	15,456	22,096	12,454	* 17,237	10,316	40.0'	* 17,117	10,308
		* 16,812	* 16,812	* 18,415	12,244	* 14,817	9,013	* 12,417	7,011	10,023	5,649	* 7,819	4,679	12.20 m	* 7,764	4,676
0'	-0 m	* 27,821	* 27,821	* 41,196	25,989	* 32,980	19,232	27,156	15,067	21,872	12,249			37.1'	27,821	11,327
		* 12,619	* 12,619	* 18,686	11,789	* 14,959	8,724	12,318	6,834	9,921	5,556			11.31 m	9,153	5,138
-5'	-1.52 m			* 39,762	25,500	* 31,912	18,884	* 26,078	14,862					30.3'	* 25,759	14,667
				* 18,036	11,567	* 14,475	8,566	* 11,829	6,741					9.24 m	* 11,684	6,653

## Lifting capacity FTL live heel

A: Reach from swing center  
B: Bucket hook height  
C: Lifting capacity

Cf: Rating over front  
Cs: Rating over side

Conditions:  
• Rated loads do not exceed 87% of hydraulic lift capacity or 75% of tipping load  
• Lifting mode: On

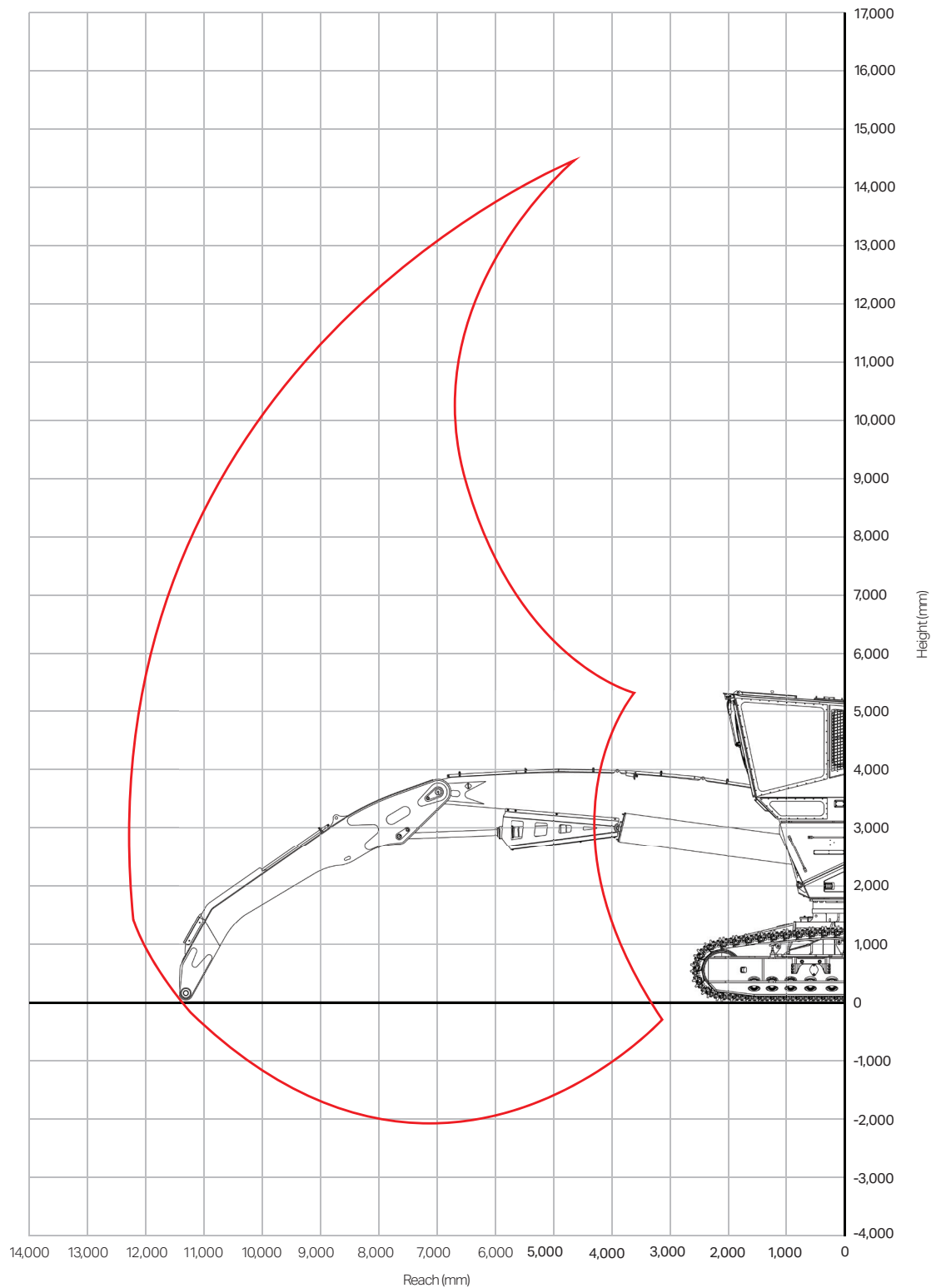
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Unit: lbs. kg

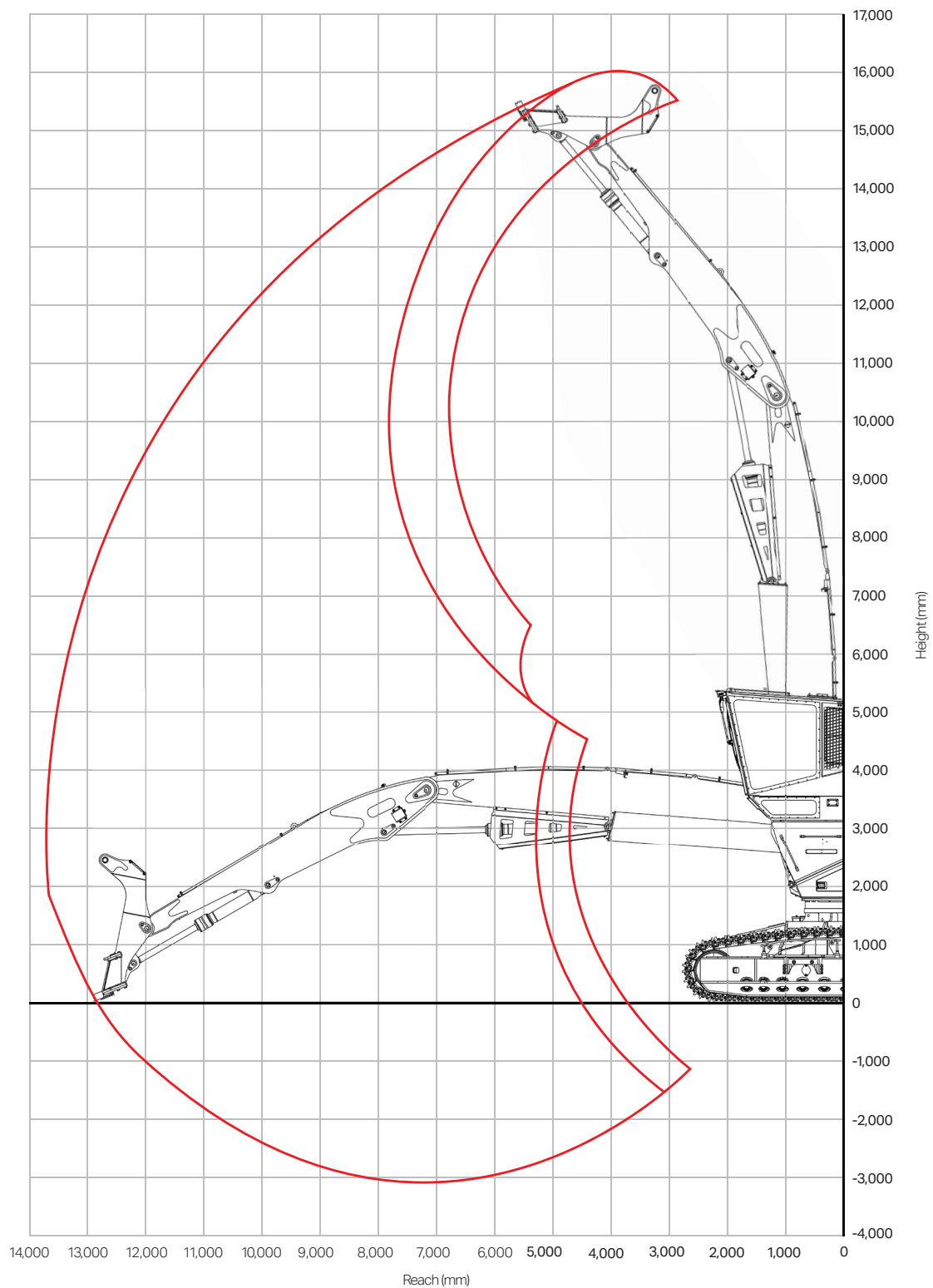
B	A	15' 4.57 m		20' 6.10 m		25' 7.62 m		30' 9.14 m		35' 10.67 m		40' 12.19 m		MAX	MAX	
		Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	Cf	Cs	⊗	Cf	Cs
45'	13.72 m					* 19,492	* 19,492							27.5'	* 15,509	* 15,509
						* 8,841	* 8,841							8.37 m	* 7,035	* 7,035
40'	12.19 m					* 21,805	* 21,805	* 18,191	16,493					32.7'	* 13,427	* 13,427
						* 9,890	* 9,890	* 8,251	7,481					9.98 m	* 6,091	* 6,091
35'	10.67 m							* 20,045	16,996	* 15,965	12,392			36.7'	* 12,256	11,057
								* 9,092	7,696	* 7,242	5,621			11.17 m	* 5,559	5,016
30'	9.14 m							* 20,034	17,019	* 18,673	12,634			39.6'	* 11,564	9,522
								* 9,087	7,720	* 8,470	5,731			12.07 m	* 5,245	4,319
25'	7.62 m					* 22,585	* 22,585	* 20,512	16,782	* 18,838	12,570			41.7'	* 11,176	8,531
						* 10,245	* 10,245	* 21,362	7,612	* 8,545	5,702			12.72 m	* 5,069	3,869
20'	6.10 m					* 24,000	22,628	* 21,362	16,312	* 19,289	12,317	17,532	9,437	43.2'	* 11,014	7,889
						* 10,886	10,126	* 9,689	7,399	* 8,749	5,587	7,953	4,280	13.18 m	* 4,996	3,579
15'	4.57 m			* 28,534	* 28,534	* 25,808	21,261	* 22,443	15,672	* 19,893	11,941	17,340	9,258	44.1'	* 11,041	7,503
				* 12,943	* 12,943	* 11,706	9,644	* 10,180	7,108	* 9,023	5,416	7,953	4,200	13.45 m	* 5,008	3,403
10'	3.05 m			* 33,851	28,427	* 27,720	20,048	* 23,569	14,945	* 20,505	11,506	17,088	9,026	44.5'	* 11,247	7,324
				* 15,354	12,894	* 12,573	9,093	* 10,691	6,779	* 9,301	5,219	7,751	4,094	13.55 m	* 5,102	3,322
5'	1.52 m			* 36,653	26,372	* 29,360	18,872	* 24,506	14,234	20,801	11,077	16,839	8,796	44.0'	* 12,767	7,404
				* 16,625	11,962	* 13,317	8,560	* 11,116	6,456	9,435	5,025	7,638	3,990	13.41 m	* 5,791	3,358
0'	-0 m	* 24,996	* 24,996	* 38,283	24,784	* 30,339	17,908	* 24,982	13,637	20,409	10,720	16,650	8,621	41.7'	15,652	8,058
		* 11,338	* 11,338	* 17,365	11,242	* 13,761	8,123	* 11,332	6,186	9,257	4,862	7,552	3,910	12.70 m	7,100	3,655
-5'	-1.52 m	* 23,077	* 23,077	* 38,275	23,798	* 30,273	17,256	* 24,667	13,225	20,157	10,490			37.3'	18,355	9,518
		* 10,467	* 10,467	* 17,361	10,795	* 13,732	7,827	* 11,189	5,999	9,143	4,758			11.37 m	8,326	4,318
-10'	-3.05 m					* 28,705	16,948							25.1'	* 28,629	16,889
						* 13,020	7,687							7.64 m	* 12,986	7,661



Range of motion chart TN785 CTL



Range of motion chart TN785 FTL



# Equipment

## Engine and related components

Engine, Cummins L9, Tier 4 Final Gross HP	
J1995: 390HP (291 kW)	
Selective catalytic reduction (SCR)	●
After-cooled, turbocharged direct injection	●
Air cleaner, double element	●
Fuel pre-filter, 10 microns	●

## Cooling system

Radiator/oil cooler	●
Variable pitch, automatic reversing fan	●

## Electrical system

Alternator (12V/100A)	●
Large capacity batteries (2x12 V)	●
Starter motor (24 V/7.8 kW)	●
Working lights, LED lighting	●
Battery disconnect switch	●
Extra LED working lights	●

## Undercarriage

High/wide forestry undercarriage	●
Heavy-duty revolving frame	●
28" (700 mm) double grouser shoes	●
Track rollers, heavy-duty, 12/side	●
Carrier slides, 1 / side	●
Heavy-duty recoil spring	●
Heavy-duty tow hooks	●
Track guard full-length ski-type	●
Planetary reduction final drives	●
2-speed auto shift travel system	●

## Guards and covers

Perforated radiator and oil cooler hinged covers	●
Boom cylinder guard	●
Arm cylinder guard	●
Heavy-duty access doors	●
Heavy-duty under guard .24" (6mm) thick	●
Side guards/walkways	●
Tree deflector side guard	●
Pump/engine partition cover	●
Forestry debris screens	●

## Operator environment

Raised tilting cab	●
Automatic climate control system	●
1.25" (32 mm) polycarbonate front window	●
ROPS/OPS/TOPS/FOPS/WCB/Oregon OSHA certified	●
Low vibration cab mounts	●
Monitor panel, LCD, high-resolution color	●
Iqan control system	●
Seat, heated, high back, air suspension, lumbar adjust	●
Radio with Bluetooth connectivity	●
Adjustable arm rests	●
Rear view camera system with dedicated monitor	●
Cup holder	●

## Work equipment

Dual-ball, grease bathed, swing bearing mechanism	●
Log loader boom, 24.6' (7,493 mm)	●
Droop arm, 17.9' (5,477 mm)	●
Straight arm, 17.2' (5,252 mm)	○
Heel, 4.4' (1,340 mm)	○
Heel piping package	○

## Hydraulic controls

Hydrostatic swing motors (2)	●
Hydrostatic travel motors (2)	●
Variable displacement implement pump	●
Dedicated swing pump	●
Electrohydraulic proportion control valves	●
Variable displacement auxiliary pump	●
Return filter, tank mounted (2)	●
Charge filter, remote mounted	●
Case drain filter, high pressure filtration, tank mounted	●
Electric hydraulic fluid fill pump	●
Engine/hydraulic overheat prevention system	●

## Drive and brake system

Multi disk oil bath swing brake	●
Hydraulic travel/Park brake	●

## Other equipment

Electronically fold-down service platforms (rear)	●
4-point operator's harness	●
Tie-off points for service	●
Fire suppression	●

Standard equipment	●
Optional equipment	○

TimberPro Inc reserves the right to change specifications without notice or obligation. Product illustrations may be equipped with optional equipment.

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