

The CASE logo is rendered in a stylized, bold, orange font. The letters are interconnected, with the 'S' and 'E' having a unique, rounded shape. The logo is set against a black background that features a series of vertical bars of varying heights, resembling a barcode or a stylized 'C'.

# 1080 Crawler Excavator



**EXCLUSIVE "CONSTANT FLOW" VARIABLE  
PRESSURE HYDRAULIC SYSTEM**

55 gal (208 L) total system capacity.

**"CRAWLER-TRACTOR" UNDERCARRIAGE**

Maintenance free rollers and idlers. Travel speed up to  
2.4 mph (3.87 km/h) w/optional 2-speed drive.

**CUSTOMIZED VANDAL-RESISTANT CAB**

Featuring stowable front window and easy, logical  
control systems to assure operator efficiency.

**EXCLUSIVE TURNTABLE LEVELER**

Allows the upperstructure to tilt 8½° right or left.

Unit shown is equipped with non-standard items.

**J I Case**

A Tenneco Company

Construction Equipment Division  
700 State Street Racine, WI 53404 U.S.A.



# SPECIFICATIONS

## 1080 CRAWLER EXCAVATOR

### ENGINE

Make and Model	Case A504 BDT Diesel or Detroit Diesel 4-71 N
Fuel	No. 2 diesel
No. of cylinders	
Case A504 BDT	6
Detroit Diesel 4-71 N	4
Bore and Stroke	
Case A504 BDT	4.625" x 5" (117.4 mm x 127 mm)
Detroit Diesel 4-71 N	4.25" x 5" (107.95 mm x 127 mm)
Displacement	
Case A504 BDT	504 in <sup>3</sup> (8 259 cm <sup>3</sup> )
Detroit Diesel 4-71 N	284 in <sup>3</sup> (4 654 cm <sup>3</sup> )
Fuel induction	
Case A504 BDT	Injectors (6)
Detroit Diesel 4-71 N	Injectors (4)
Fuel supply	
Case A504 BDT	Low pressure transfer pump
Detroit Diesel 4-71 N	Pos. displacement gear-type pump
Air cleaner	Dry type
Oil filter	Renewable cartridge
Lubrication	Positive pressure
Cooling system	Pressurized radiator and lubricated bearing impeller pump
Horsepower	
Case A504 BDT	
(1) Gross (SAE)	170 @ 2100 rpm (127 kW @ 2100 rpm)
(2) Net (SAE)	153 @ 2100 rpm (114 kW @ 2100 rpm)
Detroit Diesel 4-71 N	
(1) Gross (SAE)	157 @ 2300 rpm (117 kW @ 2300 rpm)
(2) Net (SAE)	143 @ 2300 rpm (107 kW @ 2300 rpm)
Torque, maximum (SAE)	
Case A504 BDT	485 lbs-ft @ 1600 rpm (658 Nm @ 1600 r/min)
Detroit Diesel 4-71 N	400 lbs-ft @ 1600 rpm (542.33 Nm @ 1600 r/min)
(1) Gross engine horsepower or torque at flywheel per SAE J270 specification.	
(2) Net engine horsepower or torque at flywheel per SAE J270 specification.	

### ELECTRICAL

Starting	24 volt electric
Batteries (2)	625 CCA @ 0° F (- 18° C) at 30 sec rate
Alternator	42 amp

### HYDRAULIC SYSTEM

**Pumps:** Tandem gear-type pumps rated at: 393

Case A504 BDT	104 gpm (393 L/min) @ 2100 rpm
Detroit Diesel 4-71 N	109 gpm (412 L/min) @ 2300 rpm

Relief valve pressure setting ..... 3000 psi (20 647 kPa)  
(total summated system)

**Oil cooler:** Positive, radiator type oil cooler located in front of engine eliminates need for excessive amount of oil, keeps oil at optimum operating temperature.

**Control valves:** Mono-block, self-centering.

**Cylinders:** Double-acting hydraulic cylinders for hoist, crowd, tool, swing and auxiliary fast hoist:

Boom cylinder	6.5" x 54.5" (165 mm x 1.38 m)
Dipper cylinder	6.5" x 47.5" (165 mm x 1.21 m)
Bucket cylinder	5.5" x 36.0" (140 mm x 914 mm)

**Cylinders:** Single-acting hydraulic cylinders for leveler and track adjusting:

Leveler cylinder	6.25" (159 mm)
Track adjusting cylinder	3.0" (76 mm)

### Cylinder cycle time: (w/Case 504 BDT)

Hoist cylinder (full stroke)	
Extended	9.0 sec
(with last hoist feature)	4.5 sec
Retracted	5.6 sec
Crowd cylinder (full stroke)	
Extended	7.8 sec
Retracted:	
"E" Boom	4.9 sec
"Y" Boom	5.6 sec
Bucket cylinder (full stroke)	
Extended	4.3 sec
Retracted	2.5 sec

**Swing system:** 360° hydraulic swing system has positive operator control with combination of hydraulic motor, disc brake and 22.17:1 gear reducer. Brake provides positive swing lock when setting or swinging heavy pipe, or when transporting.

**Swing:** Continuous @ 6.1 rpm

**Track drives** Fully independent. Each track features hydraulic drive motor, integral disc braking system and completely enclosed final drive gear box.

Track adjustment	Hydraulic
Track effort (Drawbar pull):	
Standard	32,320 lbs (99.2 kN)
Optional	43,450 lbs (133.3 kN)

### CRAWLER UNDERCARRIAGE

Track length	12'6" (3.81m)
Track gauge	7'5" (2 261 mm)
Track height	2'11" (889 mm)
Track pad width	
Standard	24" (610 mm)
Optional	30" (762 mm)
Track rollers (per side) permanently sealed	8
Top carrier rollers (per side)	2
Crawler track speed	
Standard single-speed	Infinite to 1.5 mph (2.42 km/h)
Optional 2-speed	Infinite to 2.4 mph (3.87 km/h)
*Gradeability	60%
Ground pressure	
24" (610 mm) standard shoes	6.61 psi (45.59 kPa)
30" (762 mm) optional shoes	5.29 psi (36.49 kPa)

\*Gradeability is a measure of the tractive effort only and does not represent grades on which the machine can operate.

### SERVICE CAPACITIES

	U.S.	Litres
Fuel tank	75 gals	284
Hydraulic system (complete)	55 gals	208
Hydraulic reservoir	25 gals	95
Drive transmissions (each)	12 qts	11.4
Swing gearbox	17 qts	16.1
Engine crankcase (w/filter) - Case A504 BDT	23 qts	21.7
Engine crankcase (w/filter) - Detroit 4-71 N	16 qts	15.2
Cooling system	8.5 gals	32.2

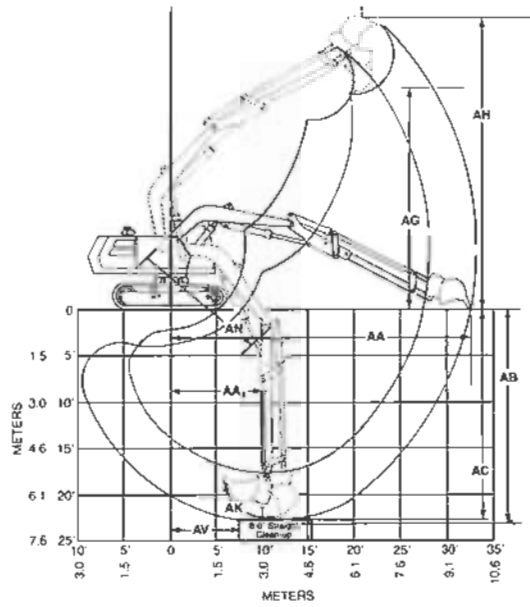
### WEIGHTS

*Operating weight	40,950 lbs (18 575 kg)
Leveler weight	1,098 lbs (498 kg)
Counterweight	8,650 lbs (3 924 kg)

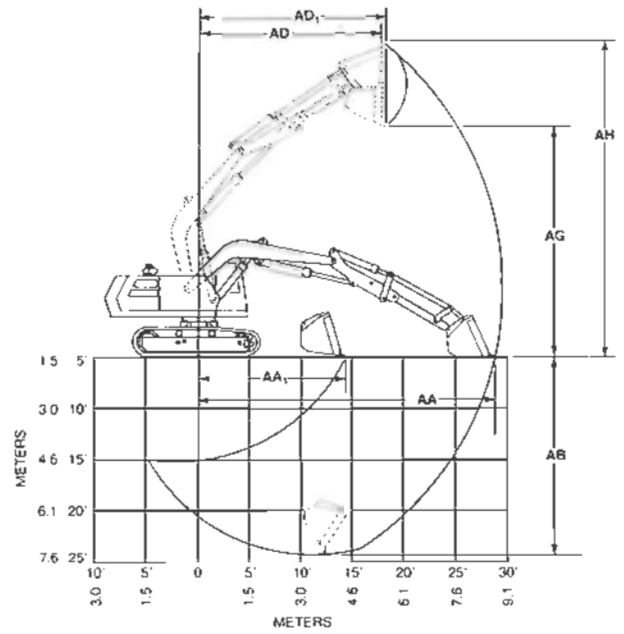
\*NOTE: Unit equipped with 1,200 lbs (544 kg) bucket, 9' (2.74 m) dipperstick, 24" (610 mm) shoes, leveler and counterweight.



**WRIST-O-TWIST® & DITCH FORMING BUCKET**



**FRONT LOADING BUCKET w/EXTENSION RETRACTED**



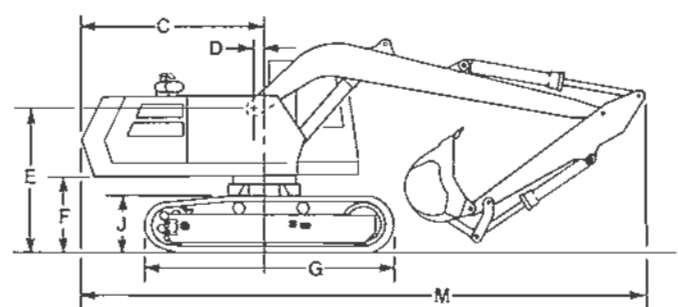
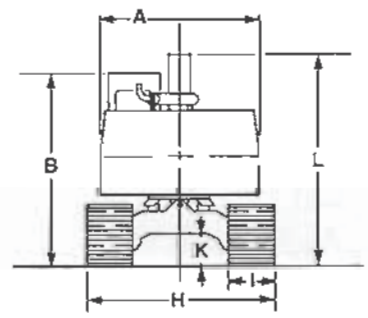
	w/DITCH BUCKET	w/BACKHOE BUCKET
AA	Maximum reach at grade level . . . . . 32' 1" (9.78 m)	33' 6" (10.21 m)
AA <sub>1</sub>	Minimum reach at grade level . . . . . 10' 0" (3.05 m)	9' 4" (2.85 m)
AB	Maximum digging depth . . . . . 22' 6" (6.86 m)	24' 0" (7.32 m)
AC	Maximum depth of cut for 8' (2.44 m) level bottom (straight clean-up) . . . . . 22' 2" (6.76 m)	23' 8" (7.21 m)
AG	Minimum vertical clearance of bucket from grade at maximum height . . . . . 24' 5" (7.44 m)	23' 2" (7.06 m)
AH	Cutting edge distance from grade end of highest dump . . . . . 30' 8" (9.35 m)	31' 2" (9.50 m)
AK	Bucket sweep angle . . . . . 147°	147°
AN	Boom length from boom hinge pin to tool boom hinge pin . . . . . 14' 4" (4.37 m)	14' 4" (4.37 m)
AV	Minimum radius of 8' (2.44 m) bottom at maximum depth . . . . . 7' 6" (2.29 m)	7' 4" (2.24 m)

AA	Maximum reach at grade level . . . . . 28' 9" (8.76 m)
AA <sub>1</sub>	Minimum reach at grade level . . . . . 14' 4" (4.37 m)
AB	Maximum depth — tip of teeth . . . . . 19' 2" (5.84 m)
AD	Radius to dipper teeth at maximum attachment elevation . . . . . 17' 0" (5.18 m)
AD <sub>1</sub>	Radius to dipper teeth @ end of highest dump . . . . . 18' 1" (5.51 m)
AG	Clearance height @ end of dump . . . . . 22' 5" (6.83 m)
AH	Maximum cutting height . . . . . 30' 7" (9.32 m)

**DIMENSIONAL DATA**

A.	Width of revolving superstructure . . . . . 7' 11" (2.41 m)
B.	Maximum height of cab above grade . . . . . 9' 10 1/2" (3.00 m)
C.	Swing clearance (radius of rear end from axis of rotation) . . . . . 10' (3.05 m)
D.	Distance of boom pivot pin to axis of rotation . . . . . 1' 1/2" (322 mm)
E.	Height of boom pivot pin above grade . . . . . 6' 3" (1.91 m)
F.	Distance under counterweight to grade . . . . . 3' 4 1/2" (1.01 m)
G.	Overall length of crawler . . . . . 12' 6" (3.81 m)
H.	Overall width of crawler: Standard 24" (610 mm) shoes . . . . . 9' 5" (2.87 m) Optional 30" (762 mm) shoes . . . . . 9' 11" (3.02 m)
I.	Width of crawler track shoes: Standard . . . . . 24" (610 mm) Optional . . . . . 30" (762 mm)
J.	Overall height of crawler tread belt . . . . . 2' 11" (889 mm)
K.	Minimum clearance under crawler base to grade . . . . . 1' 6 1/2" (470 mm)
L.	Overall height in travel position: "E" Boom . . . . . w/Lev - 11' 0" (3.35 m) w/o - 10' 10" (3.30 m) "Y" Boom . . . . . w/Lev - 12' 2" (3.71 m) w/o - 11' 10" (3.61 m)
M.	Overall length in travel position: "E" Boom . . . . . 30' 0" (9.14 m) "Y" Boom . . . . . 35' 3" (10.74 m)

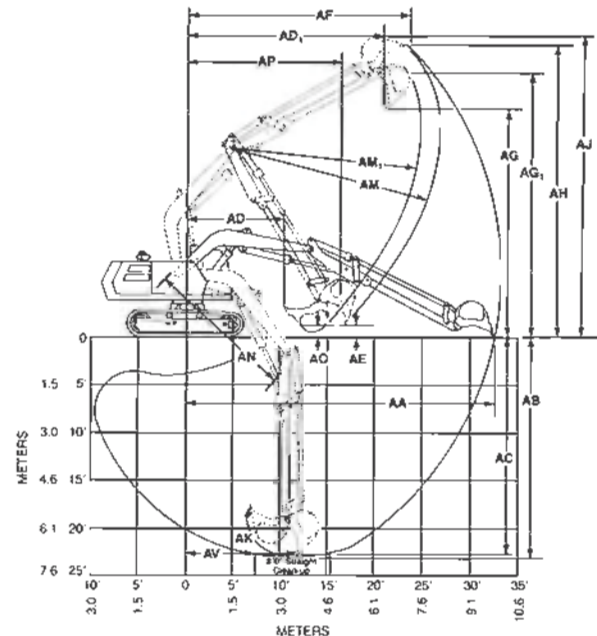
NOTE: For units equipped with leveler add 5 1/2" (140 mm) to all height dimensions.



# OPERATING DATA - "Y" BOOM

## PERFORMANCE SPECIFICATIONS

	EXTENSION EXTENDED	EXTENSION RETRACTED
AA Maximum reach at grade level	32' 8" (9.96 m)	28' 6" (8.69 m)
AB Maximum digging depth (tip of teeth)	23' 1" (7.04 m)	18' 9" (5.72 m)
AC Maximum depth of cut for 8' (2.44 m) level bottom (straight clean-up)	22' 9" (6.93 m)	18' 3" (5.56 m)
AD Radius of bucket teeth at maximum boom elevation — dipper arm and bucket swing fully in	8' 11" (2.72 m)	6' 7" (2.01 m)
AD <sub>1</sub> Radius of bucket teeth at maximum boom elevation — dipper arm fully extended, bucket swing fully in	19' 4" (5.89 m)	15' 6" (4.72 m)
AE Minimum vertical clearance of bottom of dipper from grade at maximum boom elevation	1' 2" (356 mm)	5' 0" (1.52 m)
AF Maximum clearance of bucket teeth at maximum boom elevation	23' 10" (7.26 m)	19' 11" (6.07 m)
AG Minimum vertical clearance of bucket teeth from grade with attachment at maximum height	23' 9" (7.24 m)	21' 9" (6.63 m)
AG <sub>1</sub> Vertical clearance of bucket teeth relative to dimension AF	28' 0" (8.53 m)	26' 1" (7.95 m)
AH Bucket teeth distance from grade at end of highest dump	30' 7" (9.32 m)	28' 9" (8.76 m)
AJ Maximum height of attachment	31' 9" (9.68 m)	29' 10" (9.09 m)
AK Bucket sweep angle	131° & 158°	131° & 158°
AL Bucket sweep radius	4' 4" (1.32 m)	4' 4" (1.32 m)
AM Dipperstick sweep radius over teeth — extended	21' 8" (6.60 m)	17' 7" (5.36 m)
AM <sub>1</sub> Dipperstick sweep radius — retracted	19' 11" (6.07 m)	15' 11" (4.85 m)
AN Boom length from boom foot pin to boom point pin	14' 4" (4.37 m)	14' 4" (4.37 m)
AO Vertical clearance for highest dumping sweep of bucket teeth	1' 11" (584 mm)	3' 6" (1.07 m)
AP Maximum attachment radius with boom at maximum elevation and dipper arm and bucket swing fully in	14' 10" (4.52 m)	12' 6" (3.81 m)
AV Minimum radius of 8' (2.44 m) level bottom at maximum depth	7' 3" (2.21 m)	7' 3" (2.21 m)



## "Y" BOOM BREAKOUT FORCE

Stick	12,295 lbs (5 577 kg)
Bucket (131° Rotation)	27,780 lbs (12 600 kg)
Bucket (158° Rotation)	22,715 lbs (10 303 kg)

NOTE: For units equipped with turntable leveler, add 5.5" (140 mm) to all above ground dimensions and subtract 5.5" (140 mm) from all below ground dimensions.

## "Y" BOOM LIFT EFFORTS

Above & Below Groundline Dimensions	Distance from centerline of rotation							
	10' (3.05 m)		15' (4.57 m)		20' (6.10 m)		25' (7.62 m)	
	Side	End	Side	End	Side	End	Side	End
+ 10' (3.05 m)	—	—	—	—	—	—	4,600 lbs (2 087 kg)	4,600 lbs (2 087 kg)
+ 5' (1.52 m)	—	—	—	—	5,800 lbs (2 631 kg)	5,800 lbs (2 631 kg)	5,200 lbs (2 359 kg)	5,200 lbs (2 359 kg)
Groundline 0	—	—	9,100 lbs (4 128 kg)	9,100 lbs (4 128 kg)	7,000 lbs (3 175 kg)	7,000 lbs (3 175 kg)	*5,500 lbs (2 495 kg)	5,900 lbs (2 676 kg)
- 5' (1.52 m)	16,500 lbs (7 484 kg)	16,500 lbs (7 484 kg)	10,800 lbs (4 899 kg)	10,800 lbs (4 899 kg)	*7,700 lbs (3 493 kg)	7,950 lbs (3 600 kg)	*5,300 lbs (2 404 kg)	6,100 lbs (2 767 kg)
- 10' (3.05 m)	17,600 lbs (7 983 kg)	17,600 lbs (7 983 kg)	11,500 lbs (5 216 kg)	11,500 lbs (5 216 kg)	*7,400 lbs (3 357 kg)	8,200 lbs (3 719 kg)	*5,200 lbs (2 359 kg)	5,900 lbs (2 676 kg)

NOTE: Lifting capacities based on unit with "Y" boom and 24" (610 mm) track shoes. Capacities include 1,200 lbs (544 kg) 24" (610 mm) bucket. All specifications comply with SAE J1097. Rated loads do not exceed 87% of hydraulic capacity or 75% of stability.

Weight of machine, equipped as shown above, is 40,840 lbs (18 525 kg).

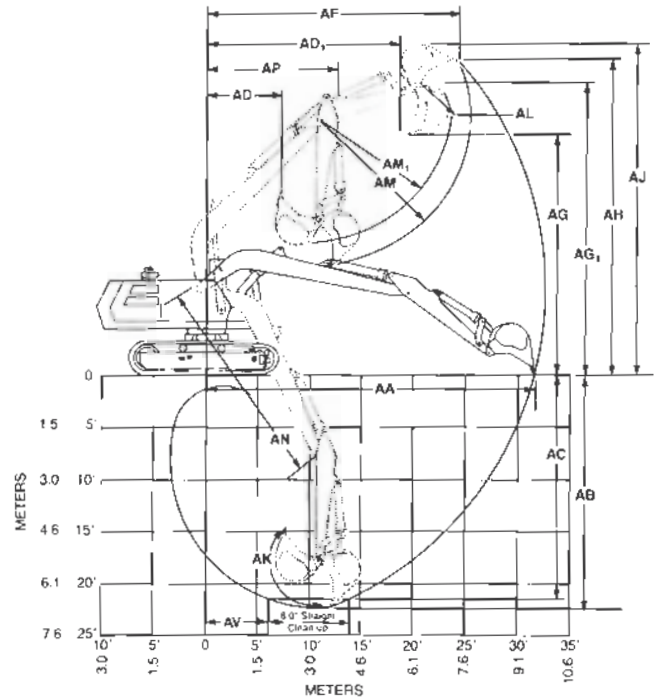
\*Indicates Tip

# OPERATING DATA - "E" BOOM

## PERFORMANCE SPECIFICATIONS

	9' (2.74 m) DIPPER	10'5" (3.17 m) DIPPER
AA Maximum reach at grade level	30'5" (9.27 m)	31'10" (9.70 m)
AB Maximum digging depth (tip of teeth)	21'0" (6.40 m)	22'5" (6.83 m)
AC Maximum depth of cut for 8' (2.44 m) level bottom (straight clean-up)	20'6" (6.25 m)	21'11" (6.68 m)
AD Radius of bucket teeth at maximum boom elevation — dipperstick and bucket swing fully in	6'1" (1.85 m)	5'11" (1.80 m)
AD <sub>1</sub> Radius of bucket teeth at maximum boom elevation — dipperstick fully extended, bucket swing fully in	17'5" (5.31 m)	18'6" (5.64 m)
AE Minimum vertical clearance of bottom of dipper from grade at max. boom elevation	11'0" (3.35 m)	9'8" (2.95 m)
AF Maximum clearance of bucket teeth at maximum boom elevation	22'3" (6.78 m)	23'5" (7.14 m)
AG Minimum vertical clearance of bucket teeth from grade with attachment at max. height	22'3" (6.78 m)	23'0" (7.01 m)
AG <sub>1</sub> Vertical clearance of bucket teeth relative to dimension AF	26'6" (8.08 m)	27'5" (8.36 m)
AH Bucket teeth distance from grade at end of highest dump	29'0" (8.84 m)	29'6" (8.99 m)
AJ Maximum height of attachment	30'3" (9.22 m)	30'11" (9.42 m)
AK Bucket sweep angle	131° & 158°	131° & 158°
AL Bucket sweep radius	4'4" (1.32 m)	4'4" (1.32 m)
AM Dipperstick sweep radius over teeth — extended	13'4" (4.06 m)	14'9" (4.50 m)
AM <sub>1</sub> Dipperstick sweep radius — retracted	11'7" (3.53 m)	12'11" (3.94 m)
AN Boom length from boom hinge pin to dipperstick pin	19'8" (5.99 m)	19'8" (5.99 m)
AO Vertical clearance for highest dumping sweep of bucket teeth	9'3" (2.82 m)	7'10" (2.39 m)
AP Maximum attachment radius with boom at maximum elevation and dipperstick and bucket swing fully in	11'6" (3.51 m)	11'3" (3.43 m)
AV Minimum radius of 8' (2.44 m) level bottom at maximum depth	8'9" (2.67 m)	8'9" (2.67 m)

NOTE: For units equipped with turntable leveler, add 5.5" (140 mm) to all above ground dimensions and subtract 5.5" (140 mm) from all below ground dimensions.



## "E" BOOM BREAKOUT FORCE

9' Stick	17,420 lbs (7 902 kg)
10'5" Stick	15,710 lbs (7 126 kg)
Bucket (131° Rotation)	27,780 lbs (12 600 kg)
Bucket (158° Rotation)	22,715 lbs (10 303 kg)

## "E" BOOM LIFT EFFORTS

Above & Below Groundline Dimensions	Distance from centerline of rotation							
	10' (3.05 m)		15' (4.57 m)		20' (6.10 m)		25' (7.62 m)	
	Side	End	Side	End	Side	End	Side	End
+ 10' (3.05 m)	14,800 lbs (6 713 kg)	14,800 lbs (6 713 kg)	9,600 lbs (4 354 kg)	9,600 lbs (4 354 kg)	7,400 lbs (3 357 kg)	7,400 lbs (3 357 kg)	*5,700 lbs (2 585 kg)	6,100 lbs (2 767 kg)
+ 5' (1.52 m)	12,500 lbs (5 670 kg)	12,500 lbs (5 670 kg)	11,000 lbs (4 990 kg)	11,000 lbs (4 990 kg)	*7,800 lbs (3 538 kg)	8,000 lbs (3 629 kg)	*5,500 lbs (2 495 kg)	6,300 lbs (2 858 kg)
Groundline 0	14,000 lbs (6 350 kg)	14,000 lbs (6 350 kg)	11,400 lbs (5 171 kg)	11,400 lbs (5 171 kg)	*7,500 lbs (3 402 kg)	8,300 lbs (3 765 kg)	*5,400 lbs (2 449 kg)	*6,200 lbs (2 812 kg)
- 5' (1.52 m)	15,400 lbs (6 985 kg)	15,400 lbs (6 985 kg)	11,000 lbs (4 990 kg)	11,000 lbs (4 990 kg)	*7,300 lbs (3 311 kg)	8,000 lbs (3 629 kg)	*5,300 lbs (2 409 kg)	5,900 lbs (2 676 kg)
- 10' (3.05 m)	13,000 lbs (5 897 kg)	13,000 lbs (5 897 kg)	9,500 lbs (4 309 kg)	9,500 lbs (4 309 kg)	*6,900 lbs (3 130 kg)	6,900 lbs (3 130 kg)	—	—

NOTE: Lifting capacities based on unit with "E" boom, 24" (610 mm) track shoes and 9' (2.74 m) "E" boom dipperstick. Capacities include 1,200 lbs (544 kg) 24" (610 mm) bucket. All specifications comply with SAE J1097. Rated loads do not exceed 87% of hydraulic capacity or 75% of stability.

Weight of machine, equipped as shown above, is 40,950 lbs (18 575 kg).

\*Indicates Tip



# EQUIPMENT ATTACHMENTS

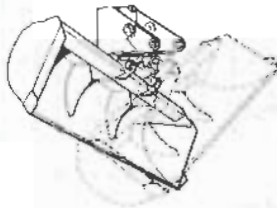
## BUCKETS

WIDTH	WEIGHT	SAE CAPACITY (STRUCK)
General Purpose Type—Plate Lip		
24" (610 mm)	1,250 lbs (567 kg)	1/2 yd <sup>3</sup> (.37 m <sup>3</sup> )
30" (762 mm)	1,400 lbs (635 kg)	5/8 yd <sup>3</sup> (.46 m <sup>3</sup> )
36" (914 mm)	1,520 lbs (689 kg)	3/4 yd <sup>3</sup> (.58 m <sup>3</sup> )
42" (1.1 m)	1,720 lbs (780 kg)	1 yd <sup>3</sup> (.76 m <sup>3</sup> )
Severe Duty—Cast Lip		
24" (610 mm)	1,200 lbs (544 kg)	1/2 yd <sup>3</sup> (.37 m <sup>3</sup> )
36" (914 mm)	1,485 lbs (673 kg)	3/4 yd <sup>3</sup> (.58 m <sup>3</sup> )
High Capacity		
36" (914 mm)	1,720 lbs (780 kg)	7/8 yd <sup>3</sup> (.67 m <sup>3</sup> )
Ditch Forming		
60" (1.5 m)	1,090 lbs (490 kg)	3/4 yd <sup>3</sup> (.58 m <sup>3</sup> )
72" (1.8 m)	1,230 lbs (553 kg)	1 yd <sup>3</sup> (.76 m <sup>3</sup> )
Front Loader		
60" (1.5 m)	1,550 lbs (703 kg)	1-1/2 yd <sup>3</sup> (1.15 m <sup>3</sup> )

NOTE: For heaped capacities, add approximately 20%.

### WRIST-O-TWIST®

Wrist-o-twist gives 40° twist action of the bucket to either side of center. Excellent for grading, precision sloping, cleaning ditches, working in close quarters. Exceptional bucket controls.



### STANDARD EQUIPMENT

Crawler tractor-type undercarriage with fully enclosed independently controlled track drives offering counter-rotation and travel speeds to 1.5 mph (2.4 km/h) • 24" (610 mm) triple bar grousers • Sealed brakes • Track rollers and front idlers are permanently lubricated • Total-vision vandal resistant cab with tinted windows • Adjustable bucket seat • Hourmeter • Two windshield wipers • Electric fuel gauge and signal horn • Dry type air filter • Positive oil cooler • Hydraulic oil filtration system • Swing brake • All gear hydraulic track drive • Crawler drive brake • Engine warning instruments • Cold weather start kit • "E" Boom 9' (2.7 m) dipperstick • Case A504 BDT diesel engine • Pilot operated power assisted controls • Remote lube systems for boom, drives and swing gear.

### OPTIONAL EQUIPMENT

Turntable leveler • Two-speed drive • 30" (762 mm) 3-bar grouser shoes • 10'5" (3.2 m) dipperstick for "E" Boom • "Y" Boom with adjustable tool boom extension • Detroit Diesel 4-71 N diesel engine.

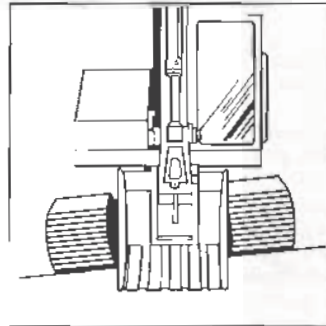
NOTE: All specifications are stated in accordance with PCSA Definitions or SAE Standards of Recommended Practices, where applicable.

### IMPORTANT

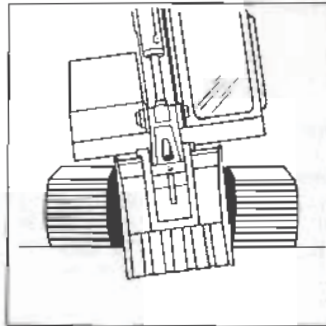
J I Case reserves the right to change these specifications without notice and without incurring any obligation relating to such change.



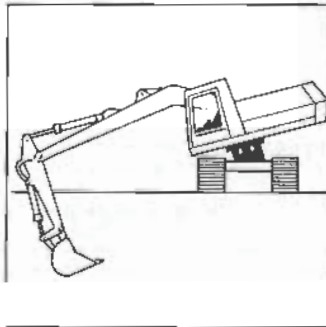
## TURNTABLE LEVELER



Tilts upper-structure 8½° right or left. Makes slope work easy, more comfortable for the operator. No pre-leveling of terrain is necessary. Easy to dig flat bottom trench on slope.



Taper a ditch, reduce cave-ins, dig at an angle — hydraulically tilt upper-structure to match digging requirements. Increase digging penetration for ripping frost.



When working over the side, tilting upper-structure down lets you dig 2' (610 mm) deeper — or gain 2' (610 mm) in dumping or casting height by tilting upper-structure up. Tilting upper-structure also makes servicing easier.

NOTE: Turntable leveler is optional.

Sold and serviced by: