



# Case

# 480C Construction King.



#### **43 SAE NET HORSEPOWER**

Case-built 188 c.i.d. high-torque diesel.

#### **SYNCHRONIZED TRANSMISSION**

8-speed mechanical shuttle.

#### **CHOICE OF BACKHOES**

Standard 12' backhoe or optional 12'-15' telescoping Extendahoe.

#### **3,000 LB. LIFT CAPACITY LOADER**

Dual-lever controls, in-line linkage with 5700 lb. breakout.

#### **UNITIZED MAIN FRAME**

Absorbs heavy shock loads, maintains power train alignment, simplifies servicing.

#### **COMPONENTIZED POWER TRAIN**

Permits servicing of individual components without disturbing the rest of the drive line.

#### **OPERATOR CONVENIENCE**

Roomy work platform, sloping hood and grille improve visibility and operating efficiency.

Unit shown is equipped with non-standard items.  
Manufactured by J I Case Company, Racine, Wisconsin 53404, U.S.A.

**J I Case**

A Tenneco Company



# SPECIFICATIONS

## 480C TRACTOR

### CONSTRUCTION KING

#### ENGINE

Make and model	Case G188D diesel
Fuel	No. 2 diesel
Number of cylinders	4
Bore and stroke	3.812" x 4.125" (96,8 mm x 104,8 mm)
Displacement	188 in <sup>3</sup> (3081 cm <sup>3</sup> )
Electrical system	12V
Battery	300 amps (90 sec. diesel rating)
Alternator	35 amps.
Compression ratio	16.5 to 1
Fuel induction	Injectors
Fuel supply	Injection pump
Air cleaner	Dry type-replaceable element
Oil filter-full flow	Replaceable cartridge
Lubrication	Positive pressure
Cooling system	Pressurized - 4 psi (0,28 kPa)
Horsepower	
(1) Mfg. rated	48 @ 1900 rpm (36 kW @ 1900 r/min)
(2) SAE net	43 @ 1900 rpm (32 kW @ 1900 r/min)
Maximum torque, ft.-lb. (m-kg)	
(1) Mfg. rated	135 @ 1350 rpm (183 Nm @ 1350 r/min)
(2) SAE net	125 @ 1350 rpm (169 Nm @ 1350 r/min)

- (1) Manufacturer's rating of maximum engine horsepower or torque at flywheel when equipped with oil and water pumps. Fuel set at maximum quantity for this application. Corrected to sea level 29.92" (760 mm) Hg. and 60° F. (16° C) dry air.
- (2) SAE net flywheel horsepower or torque of engine as applied to this vehicle when equipped with operating accessories including oil and water pumps, alternator, air cleaner, fan and muffler. Corrected to 500' (152,4 m) altitude with .38" (10 mm) Hg. vapor pressure 29.38" (746 mm) Hg. observed barometer and 85° F. (29° C) per SAE J816a specifications.

#### POWER TRAIN

Standard Transmission: 8-speed synchronized sliding spur-gear with dual range lever and synchronized shuttle shift. Permits on-the-go shifting up from 2nd to 3rd to 4th and down from 4th to 3rd in both Hi and Lo ranges.

Clutch: Foot-operated, mechanical, single plate, dry disc, 11" (279,4 mm) diameter with ferrometallic lining.

Reversing unit: Manual — synchronized sliding gear.

Brakes: Individual or simultaneous foot-actuated, hydraulic self-adjusting, 6.5" (165 mm) bands and disc with over-center type parking brake.

Differential lock.

#### FRONT AXLE RATING

Dynamic	36,000 lbs. (16329 kg)
Static	9,000 lbs. (4082 kg)

#### REAR AXLE RATING

Dynamic	54,000 lbs. (24494 kg)
Static	13,500 lbs. (6123 kg)

#### STEERING

Power steering	Hydrostatic
Turning ratio (stop to stop)	2-3/4 turns
Cylinders - two, double acting	1.5" dia. x 6.5" stroke (38,1 mm dia. x 165,1 mm stroke)

#### CAPACITIES

Cooling system	5.25 gals. (19,8 liters)
Fuel tank	22 gals. (83 liters)
Engine lubricating oil w/filter	7 qts. (6,6 liters)
w/o filter	6 qts. (5,7 liters)
Transmission	2 qts. (1,9 liters)
Steering	3 qts. (2,8 liters)
Reservoir fill	1 qt. (1,9 liters)
Hydraulic reservoir refill	11.5 gals. (43,5 liters)
Hydraulic reservoir refill and filter	12 gals. (45,4 liters)

#### TRAVEL SPEEDS mph (km/h) of standard loader/backhoe

Synchronized shuttle shift transmission with ferrometallic clutch @ high idle (2050 rpm), 14.9x24, R4 tires:

	1st		2nd		3rd		4th	
	mph	km/h	mph	km/h	mph	km/h	mph	km/h
<b>Low range</b>								
Forward	1.7	2,7	3.5	5,6	6.7	10,8	12.9	20,8
Reverse	2.3	3,7	4.5	7,2	8.5	13,7	16.0	25,8
<b>Direct range</b>								
Forward	3.0	4,8	5.9	9,5	11.2	18,0	20.3	32,7
Reverse	3.8	6,1	7.2	11,6	13.7	22,0	25.0	40,2

#### TRACTOR DIMENSIONS

Overall length	10'6" (3200 mm)
Overall width	6'5.5" to 6'8.1" (1968 mm to 2034 mm)
Height: to top of ROPS	8'6" (2591 mm)
Height: to top of cab	8'6" (2591 mm)
Height: to top of exhaust stack	8'9" (2667 mm)
Height: to top of steering wheel	5'8.9" (1750 mm)
Ground clearance (tractor main frame)	10.8" (356 mm)
Front wheel tread	4'11" to 5'2" (1499 mm to 1575 mm)
Rear wheel tread (fixed rim)	5'2" to 5'6" (1575 mm to 1676 mm)
Wheel base	6'8" (2032 mm)

NOTE: specifications taken with 24" (610 mm) trenching bucket, 74" (1880 mm) short lip loader bucket, 7.50 x 16, 10PR, (I1) rib front tires, 14.9 x 24, 6PR, (R4) rear tires, ROPS canopy and standard equipment unless otherwise specified.

#### TRACTOR OPERATIONAL DATA

Curb clearance circle diameter - w/o brakes	23'5" (7137 mm)
w/brakes	20'1" (6121 mm)

#### TRACTOR APPROXIMATE SHIPPING WEIGHT

Drawbar tractor with ROPS	5,341 lbs. (2423 kg)
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#### 480C TIRES

Used on all machines

Type	Size	Ply Rating	Tread	PSI	Pressure kg/cm <sup>2</sup>
Front	7.50x16	6	(I1) Rib	40	2,8
Front	7.50x16	10	(I1) Rib	56	3,9
Front	7.50x16	10	(F3) Truck Tread	56	3,9
Front	11Lx16	10	(F3) Truck Tread	48	3,4
Rear	14.9x24	6	(R4) Utility Traction	20	1,4
Rear	16.9x24	6	(R4) Utility Traction	18	1,2
Rear	17.5Lx24	6	(R4) Ind. Sure Grip	16	1,1

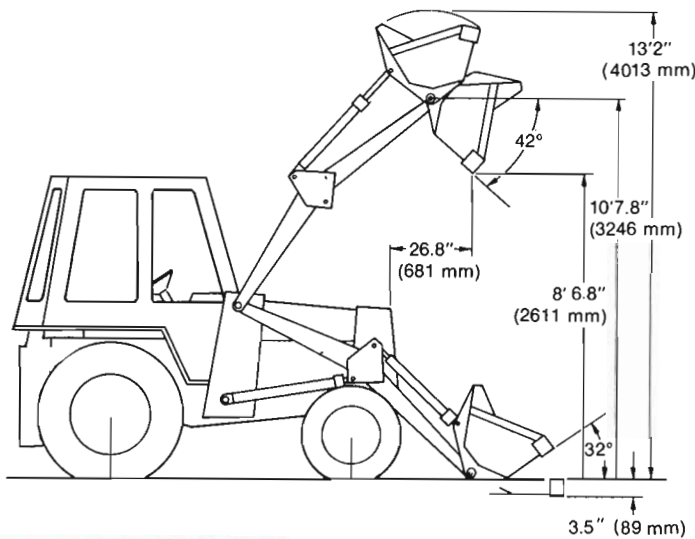
## TRACTOR STANDARD EQUIPMENT

Anti-freeze solution to -20°F. Heavy-duty front axle with fixed tread of 59". Dry type replaceable cartridge air cleaner. Heavy-duty clutch. Swinging drawbar. 12-volt electrical system. Case G188D diesel. Rear fenders. Full flow oil filter. Floor plates. Front wrapper and heavy-duty grille. Gauges and instruments: condition light for loader and backhoe hydraulic system filter, fuel level gauge, temperature gauge, hourmeter, engine speed indicator (tachometer), voltmeter, engine oil pressure warning light, alternator indicator light, air cleaner restriction light. Illuminated instrument cluster. ROPS canopy with two shock-mounted headlights and combination rear working and red taillight. Up-right oval muffler with deflector. Deluxe easy-ride seat. Seat belt. Hydrostatic steering. Hand and foot throttles. 14.9 x 24, 6PR, (R4). Utility Traction tread rear tires. 7.50 x 16, 10PR, 11 front tires. Tool box. 8-speed mechanical shuttle transmission with clutch. Hydraulic brakes and over-center parking brake.

## OPTIONAL EQUIPMENT

ROPS cab with seat belt. Anti-freeze to -40°F. Engine side panels. Lock-up kit. Horn. Combination tail, stop, directional lights with flasher attachment. 19 hp., 540 rpm hydrostatic PTO with 6 tooth SAE 1.375" shaft. Front end weights. Modular 3-point hitch. Rigid drawbar. Noise suppression kit. Back-up alarm. SMV emblem. Spark-arresting muffler. Cold weather starting aid. Arm rest. Rotating beacon. Heater and defroster. Special paint.

## 480C LOADER



## OPERATIONAL DATA\*

Lift capacity to full height	3000 lbs. (1361 kg)
Height to bucket hinge pin	10'7.8" (3246 mm)
Bucket rollback at ground line	32°
Breakout force	5700 lbs. (25,355 N)
Dump angle at full height	42°
Grading angle	11°
Digging depth below ground, bucket flat	3.5" (89 mm)
Dump clearance at full height, 42° dump	8'6.8" (2611 mm)
Dump reach at full height, 42° dump	26.8" (681 mm)
Reach - bucket on ground	5'10.2" (1783 mm)
Raising time to full height	4.4 sec.
Bucket dumping time	2.1 sec.
Lowering time, power down	1.9 sec.
Lowering time, float down	3.4 sec.

\*Measurements taken with backhoe installed.

## LOADER DIMENSIONS

Overall operating height	13'1.2" (4013 mm)
Overall length-with C/W	15'1.8" (4618 mm)
with 3 point hitch	15'1.8" (4618 mm)
Overall height to top of loader upright	5'3.5" (1613 mm)
Overall width -with C/W or 3 pt. hitch	6'5.5" (1968 mm)
Turning clearance circle-bucket rollback hinge pin at SAE carry position	
- brake turn	29'2" (8890 mm)
- without brakes	31'8" (9652 mm)

## LOADER APPROXIMATE SHIPPING WEIGHT (less buckets)

NOTE: Weights include loader without bucket - with rear mounting arms - without rear attachments. Each machine is with 7.50 x 16, 10PR, (11) rib front tires and 14.9 x 24, 6PR, (R4) rear tires. Tractor with loader only ..... 6,142 lbs. (635 kg) Rear counterweight ..... add 1,400 lbs. (635 kg) (Required if no rear attachments are used.)

## LOADER BUCKET SIZE

Width Inch	mm	Type	Capacities (SAE)		Struck		Weight	
			Heaped cu. ft.	m <sup>3</sup>	cu. ft.	m <sup>3</sup>	lbs.	kg
74	1880	Short Lip	21.06	0.60	17.81	0.50	600	272

## LOADER HYDRAULIC SYSTEM

Hydraulic pump: ..... Positive displacement, gear type  
Pump capacity: ..... 23.5 gpm @ 1900 rpm @ 2200 ± 50 psi  
(98 l/min @ 1900 r/min @ 15,17 ± 344 kPa)

Control valve main relief pressure  
Loader valve cartridge relief ..... 2200 ± 50 psi (15,17 ± 344 kPa)  
3-point hitch: ..... 1800 ± 50 psi (12,41 ± 344 kPa)

Filtration: 40 micron, full-flow replaceable cartridge on return line. Condition indicator gauge for filter.

Loader control valves: Mono-cast, two spool. Dual lever control for lift and tilt. Lift lever has positive hold "float" position.

Loader cylinders:  
Lift (2) ..... 2.5" dia. x 31.4" stroke, 1.5" rod  
(64 mm dia. x 798 mm stroke, 38 mm rod)  
Tilt (2) ..... 2.5" dia. x 29.5" stroke, 1.5" rod  
(64 mm dia. x 749 mm stroke, 38 mm rod)

Hydraulic lines: steel tubing with brazed or flared fittings and wire-braid, high-pressure hose with crimped, full-flow fittings.

## LOADER MODEL STANDARD EQUIPMENT

All tractor standard equipment with fixed disc wheels (no drawbar) plus loader (less bucket) and complete hydraulic system. Dual lever control. Bucket position gauge.

## LOADER MODEL OPTIONAL EQUIPMENT

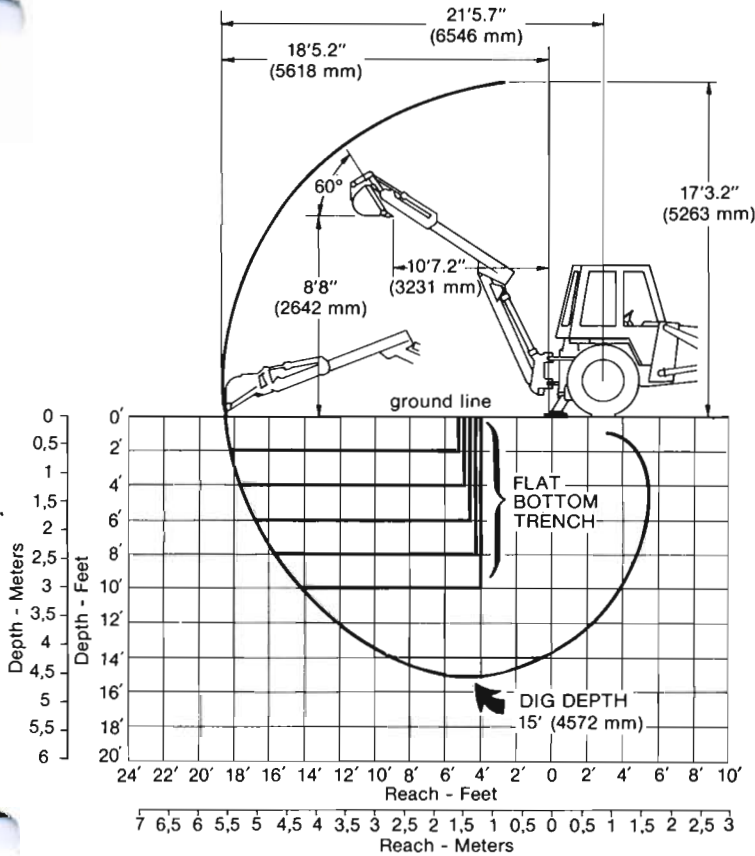
All tractor optional equipment plus: Rear counterweight. Backfill blade. Pallet forks.



Optional 12'-15' Extindahoe digs deeper, loads high-sided trucks.



# 12' - 15' EXTENDAHOE



## HYDRAULIC EXTENDAHOE DIMENSIONS

Overall height, maximum	15'6"	17'3"
	(4729 mm)	(5263 mm)
Transport height	10'5.5"	
	(3188 mm)	
Overall width - travel position	6'11"	6'11"
	(2108 mm)	(2108 mm)
Overall length, loader bucket - SAE carry position		
- short lip bucket	23'1.2"	23'1.2"
	(7041 mm)	(7041 mm)
- long lip bucket	23'5.7"	23'5.7"
	(7155 mm)	(7155 mm)
Ground clearance at backhoe		
main frame	9.5"	9.5"
	(241 mm)	(241 mm)

NOTE: Specifications taken with 24" (610 mm) trenching bucket, 74" (1880 mm) short lip loader bucket, 7.50 x 16, 10 PR, (F3) front tires. 14.9 x 24, 6 PR, (R4) rear tires, front 700 lb. (318 kg) counterweight, ROPS canopy and standard equipment unless otherwise specified.

## HYDRAULIC EXTENDAHOE APPROXIMATE SHIPPING WEIGHTS

Tractor with loader and Extendahoe	9,842 lbs. (4464 kg)
3' Extendahoe only	3,200 lbs. (1451 kg)
Front counterweight for Extendahoe	700 lbs. (318 kg)

## EXTENDAHOE HYDRAULIC SYSTEM

See loader section for details.

## BACKHOE CYLINDERS

Backhoe	
Stabilizer (2)	3" dia. x 16.4" stroke, 1.75" rod (76 mm dia. x 416 mm stroke, 44 mm rod)
Extendahoe w/stabilizer (2)	3.5" dia. x 16.4" stroke, 1.75" rod (89 mm dia. x 416 mm stroke, 44 mm rod)
Swing (2)	3.5" dia. x 11" stroke, 1.5" rod (89 mm dia. x 279 mm stroke, 38 mm rod)
Boom (1)	4.0" dia. x 37.9" stroke, 2.25" rod (102 mm dia. x 963 mm stroke, 57 mm rod)
Dipper (1)	3.5" dia. x 33.1" stroke, 2.0" rod (89 mm dia. x 841 mm stroke, 51 mm rod)
Bucket (1)	3.0" dia. x 26.5" stroke, 1.75" rod (76 mm dia. x 673 mm stroke, 44 mm rod)
Dipper extension (1)	3" dia. x 36.4" stroke, 1.5" rod (76 mm dia. x 924 mm stroke, 38 mm rod)

## EXTENDAHOE STANDARD EQUIPMENT

All tractor standard equipment with fixed disc wheels. Loader (less bucket) with dual-lever control and bucket position gauge. Hydraulic telescoping Extendahoe (less bucket). Complete hydraulic system including three-lever, foot swing backhoe control. Quick-disconnect mounting. Single, turn around seat. Cleated stabilizers. Front counterweight.

## EXTENDAHOE OPTIONAL EQUIPMENT

Same as 12' backhoe.

## 3-POINT MOD HITCH OPERATIONAL DATA

Lift (1)	3" dia. x 8.4" stroke, 1.5" rod (76 mm dia. x 214 mm stroke, 38 mm rod)
Tilt (1)	2.5" dia. x 6.31" stroke, 1.25" rod (64 mm dia. x 160 mm stroke, 32 mm rod)
Pitch (1)	2.5" dia. x 7" stroke, 1.25" rod (64 mm dia. x 178 mm stroke, 32 mm rod)

## 480C TELESCOPING HYDRAULIC 12' TO 15' EXTENDAHOE

### HYDRAULIC EXTENDAHOE OPERATIONAL DATA

	Retracted	Extended
Digging depth - SAE (maximum)	12' (3658 mm)	15' (4572 mm)
Overall reach from rear axle centerline	18'6.5" (5652 mm)	21'5.7" (6546 mm)
Digging radius from swing pivot	15'6" (4724 mm)	18'5.2" (5618 mm)
Loading height	7'7.6" (2327 mm)	8'8" (2642 mm)
Loading reach	7'9.4" (2372 mm)	10'7.2" (3231 mm)
Bucket rotation - #1 position	147°	147°
#2 position	126°	126°
Swing arc	180°	180°
Stabilizer spread in operating position	8'10" (2692 mm)	8'10" (2692 mm)
Digging force, bucket cylinder, SAE	6192 lbs. (27,543 N)	6192 lbs. (27,543 N)
Digging force, dipper cylinder, SAE	4458 lbs. (19,830 N)	3213 lbs. (14,292 N)
Leveling angle (maximum grade on which the backhoe will make a vertical cut)	10°	10°

### MOD HITCH HYDRAULICS

3-point hitch: Sectional valve with four spools - lift, tilt, pitch and auxiliary. This is a pressure compensated valve with a detented "float" position in the lift spool. The main relief valve in this valve is adjusted lower than loader system pressure. (Optional lock check and globe valve kit.)

### MOD HITCH APPROXIMATE SHIPPING WEIGHTS

Rear counterweight ..... 1400 lbs. (635 kg)  
3-point hitch ..... 645 lbs. (293 kg)

Extendahoe, and Construction King are trademarks of J I Case Company.

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

### Important

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



Case 3-point Mod Hitch adds to 480C owner's earning power.



Loader has a 3,000 lb. lift capacity to full height.



Operator has excellent visibility, easy control of his machine.

**Sold and serviced by:**