



TIER II CERTIFIED

# 580M Series 2 Loader/Backhoe

## ENGINE

Model..... Case 445/M2 diesel  
 Type..... 4-stroke, naturally aspirated  
 Cylinders ..... 4  
 Bore/Stroke..... 4.09" x 5.19"  
 (104 x 132 mm)  
 Displacement ..... 272 in<sup>3</sup> (4.5 L)  
 Fuel injection..... Direct  
 Fuel..... Diesel  
 Fuel filter..... w/water trap  
 Air intake ..... Cross-flow  
 Cooling..... Liquid  
 Engine speeds\* (rpm)  
 Rated speed, full load ..... 2200  
 Low idle..... 750 - 850  
 High idle, no load ..... 2380 - 2480  
 Horsepower  
 Gross ..... 80 (60 kW) @ 2200 rpm  
 Net ..... 76 (57 kW) @ 2200 rpm  
 Maximum torque @ 1400 rpm  
 Gross..... 236 lb-ft (320 N·m)  
 Net ..... 231 lb-ft (314 N·m)  
 Torque rise at rated speed ..... 23%

NOTE: Meets federal emission regulations.

## ENGINE COOLING

Radiator  
 Core type ..... Square wave  
 Core size area..... 487 in<sup>2</sup> (.315 m<sup>2</sup>)  
 Rows of tubes ..... 4  
 Fan  
 Style ..... 7 blade suction  
 Diameter ..... 19.2" (488 mm)  
 Ratio ..... 1.1:1  
 Water pump  
 Style ..... Integral  
 Engine oil  
 Pump..... Deep sump plate cooler  
 with pressurized  
 under-piston nozzles  
 Pump operating angle ratings  
 Side-to-side ..... Rated 35°  
 Fore and aft..... Rated 35°  
 Oil filtration..... Replaceable,  
 full-flow cartridge

## TIRES

Front  
 2WD - 11L x 16.1, 10-ply rating  
 4WD - 12 x 16.5, 8-ply rating  
 Rear  
 2/4WD - 17.5L x 24, 10-ply rating  
 2/4WD - 19.5L x 24, 10-ply rating

## POWERTRAIN

Transmission ..... 4-speed  
 synchromesh with hydraulically  
 actuated clutches and electric F/R  
 shuttle control, clutch disconnect  
 buttons on the transmission shifter  
 and loader control lever  
 Gear ratios Forward Reverse  
 1st..... 5.491 ..... 4.550  
 2nd ..... 3.043 ..... 2.522  
 3rd..... 1.584 ..... 1.313  
 4th ..... 0.793 ..... 0.657  
 Torque converter  
 Ratio ..... 3.337  
 Differential lock..... On-the-go  
 push-button activation  
 Front axle  
 Differential ratio ..... 2.0  
 Planetary hub ratio ..... 6.0  
 Total reduction ratio ..... 12.0  
 Rear axle  
 Differential ratio ..... 2.333  
 Planetary hub ratio ..... 6.923  
 Total reduction ratio ..... 16.153  
 Service brakes.. Individually applied,  
 hydraulically actuated,  
 maintenance-free, self-adjusting,  
 inboard mounted, wet disc  
 Disc area ..... 53 in<sup>2</sup> (.03 m<sup>2</sup>)  
 Parking brakes..... Mechanically  
 applied with electric activation  
 sensors at each brake  
 Travel speeds - mph (km/h)  
 1st 2nd 3rd 4th  
 Forward..... 3.5..... 6.4..... 12.3..... 24.5  
 (5.7) (10.3) (19.7) (39.4)  
 Reverse..... 4.3..... 7.7.... 14.8 ... 29.6  
 (6.9) (12.4) (23.8) (47.6)

NOTE: Travel speeds at 2288 engine rpm with 19.5 x 24 tires. Speeds decrease with 17.5L x 24 rear tires.

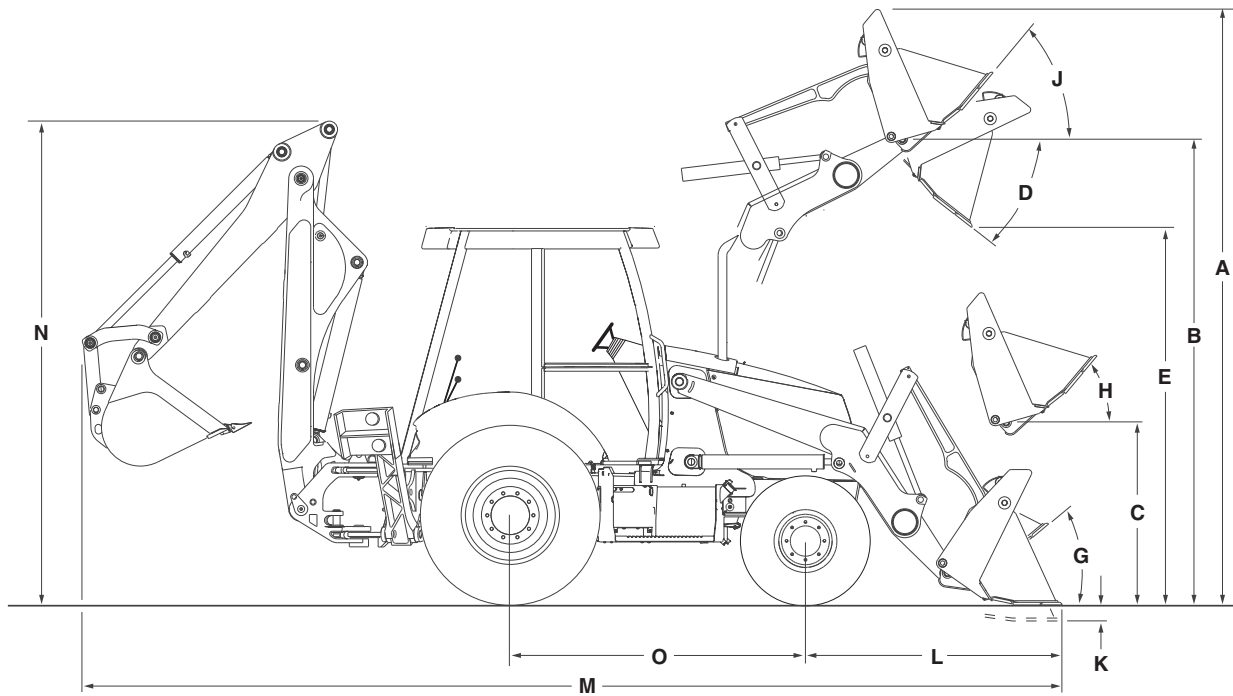
## ELECTRICAL

Voltage .... 12 volts, negative ground  
 Alternator ..... 90 amp  
 Battery..... 850 cold-cranking amps  
 Optional batteries ..... (2) 600  
 cold-cranking amps  
 Power plugs..... (2) 30 amps ea.

## HYDRAULICS

Pump..... Gear-type,  
 transmission driven  
 Main relief pressure  
 3050 + 50 - 50 psi @ 28.5 gpm  
 (210 + 3 - 3 bar @ 108 L/min)  
 Filtration ..... 7-micron,  
 full flow replaceable  
 cartridge on return line,  
 condition indicator light for filter  
 Oil cooler ..... Heavy-duty  
 Loader flow @ rated engine rpm  
 28.5 gpm @ 3050 psi  
 (108L/min @ 210 bar)  
 Loader control valve ..... Monoblock  
 single lever control for  
 lift, tilt and auxiliary hydraulics,  
 positive hold float and  
 return-to-dig  
 Loader auxiliary hydraulics  
 with full loader flow available  
 Backhoe flow @ rated engine rpm  
 28.5 gpm @ 3050 psi  
 (108 L/min @ 210 bar)  
**Manual Backhoe Controls**  
 Backhoe Control Valve... Monoblock  
 open-center, parallel circuits.  
 Boom and dipper, with pilot operated  
 checks  
**Pilot Backhoe Controls**  
 Backhoe Control Valve..... Sectional  
 closed-center with inlet  
 compensator and circuits  
 in parallel  
**Backhoe auxiliary hydraulics.....**  
 Uni-directional flow, adjustable  
 variable flow from 0 to 28.5 gpm  
 (108L/min)  
 Control operation  
 Manual... Foot switch activated  
 Pilot .....Button on left joystick  
 Bi-Directional flow, variable flow from  
 0 to 28.5 gpm  
 (108 L/min) @ rated engine rpm  
 Control Operation  
 Manual..... Hand Lever  
 Pilot ....Buttons on Left Joystick





## LOADER DIMENSIONS

### General Purpose Bucket\* 4 IN 1® Bucket

A. Overall operating height – fully raised .....	13'8" (4.17 m)	14'3" (4.34 m)
Height to –		
B. Bucket hinge pin fully raised.....	11'2" (3.4 m)	11'2" (3.4 m)
C. Bucket hinge pin @ SAE carry .....	12.7" (323 mm)	14.6" (372 mm)
D. Dump angle @ full height.....	46°	45°
E. Dump clearance @ full height, 45° dump –		
Bucket.....	8'8" (2.64 m)	8'11" (2.72 m)
Clam open.....	NA	9'8" (2.95 m)
F. Dump reach @ full height, 45° dump –		
Bucket .....	28.2" (717 mm)	27.7" (704 mm)
Clam open.....	NA	14.2" (360 mm)
Bucket rollback –		
G. @ groundline.....	40°	40°
H. @ SAE carry.....	45°	45°
J. @ full height.....	Adjustable	Adjustable
K. Digging depth below grade –		
Bucket flat.....	7.8" (199 mm)	7.1" (180 mm)
Clam open (dozing) .....	NA	4.4" (111 mm)
L. Reach from front axle centerline – bucket on ground.....	77.6" (1.91 m)	75.2" (1.85 m)
Lift capacity to full height .....	6,182 lb (2804 kg)	5,514 lb (2501 kg)
Breakout force –		
Lift cylinders.....	9,164 lbf (40 760 N)....	8,766 lbf (39 600 N)
Dump cylinders .....	9,480 lbf (42 170 N)..	10,325 lbf (45 820 N)
Bucket cutting edge width.....	82" (2.08 m)/93" (2.36 m)	82" (2.08 m)
Maximum grading angle .....	116°	116°
Maximum clam opening.....	NA	38.3" (972 mm)
Moldboard height .....	NA	36.8" (934 mm)
Raising time to full height.....	5.3 sec	5.3 sec
Bucket dumping time.....	1.1 sec	1.1 sec
Lowering time –		
Power down.....	2.4 sec	2.4 sec
Return-to-dig.....	3.2 sec	3.2 sec
Clam –		
Open time .....	NA	2.3 sec
Close time .....	NA	3.1 sec

NOTE: Loader dimensions taken with 4WD,  
19.5L x 24 rear tires and 82" (2.08 m) general  
purpose bucket \*without bolt-on cutting edge.

# DIMENSIONS

## Standard Backhoe

## Extendahoe®

		Retracted	Extended
M. Overall transport length –			
General purpose bucket.....	23'2" (7.07 m)	23'2" (7.07 m)	NA
4 IN 1® bucket.....	23'1" (7.05 m)	23'1" (7.05 m)	NA
Overall transport width.....	7'2" (2.18 m)	7'2" (2.18 m)	NA
Height –			
To top of canopy.....	8'9" (2.67 m)	8'9" (2.67 m)	8'9" (2.67 m)
To top of cab.....	8'11" (2.72 m)	8'11" (2.72 m)	8'11" (2.72 m)
To top of exhaust stack.....	8'8" (2.64 m)	8'8" (2.64 m)	8'8" (2.64 m)
N. Transport.....	11'3" (3.42 m)	11'7" (3.53 m)	11'7" (3.53 m)
Ground clearance at backhoe frame.....	14.8" (376 mm)	14.8" (376 mm)	14.8" (376 mm)
Angle of departure.....	20°	20°	20°
Front wheel tread –			
2WD.....	67.5" (1.71 m)	67.5" (1.71 m)	67.5" (1.71 m)
4WD.....	67.7" (1.72 m)	67.7" (1.72 m)	67.7" (1.72 m)
Width across tires			
17.5L x 24.....	81.7" (2.074 m)	81.7" (2.074 m)	81.7" (2.074 m)
19.5L x 24.....	81.4" (2.67 m)	81.4" (2.67 m)	81.4" (2.67 m)
O. Wheelbase –			
2WD.....	84" (2.13 m)	84" (2.13 m)	84" (2.13 m)
4WD.....	84.5" (2.15 m)	84.5" (2.15 m)	84.5" (2.15 m)

# CYLINDERS

	Bore Diameter	Rod Diameter	Stroke
Loader			
Lift (2).....	3.25" (82.6 mm)	1.75" (44.5 mm)	30.2" (766 mm)
Bucket (2).....	2.75" (69.9 mm)	1.5" (38.1 mm)	20.6" (522 mm)
4 IN 1® clam (2).....	3.0" (76 mm)	1.75" (44.5 mm)	9.1" (231 mm)
Backhoe			
Boom.....	4.5" (114 mm)	2.25" (57.2 mm)	38.6" (981 mm)
Dipperstick.....	4.25" (108 mm)	2.25" (57.2 mm)	27.0" (686 mm)
Bucket.....	3.25" (82.6 mm)	2.25" (57.2 mm)	34.3" (872 mm)
Extendahoe®.....	3.0" (76 mm)	1.75" (44.5 mm)	42.0" (1.07 m)
Swing (2).....	3.75" (95.3 mm)	2.0" (50.8 mm)	11.5" (292 mm)
Stabilizer (2).....	4.0" (101.6 mm)	2.0" (50.8 mm)	21.8" (553 mm)
Steering			
2WD.....	2.75" (69.9 mm)	1.5" (38.1 mm)	6.7" (170 mm)
4WD.....	2.48" (63 mm)	1.5" (38.1 mm)	9.53" (242 mm)

# BACKHOE LIFT CAPACITIES

Boom Lift	Standard Backhoe		Extendahoe®			
	Distance from swing pivot (m)	Backhoe lift capacity - lb (kg)	Retracted		Extended	
			Distance from swing pivot (m)	Backhoe lift capacity - lb (kg)	Distance from swing pivot (m)	Backhoe lift capacity - lb (kg)
+16' (4.87 m)					12'7" (3.84)	810 (367)
+14' (4.27 m) ... 8'3" (2.52)	1,950 (885)	9'6" (2.89)	1,280 (581)	14'8" (4.47)	1,400 (635)	
+12' (3.66 m) .. 10'9" (3.28)	2,700 (1225)	11'10" (3.61)	1,940 (880)	16'2" (4.93)	1,430 (649)	
+10' (3.05 m) .. 12'7" (3.84)	2,700 (1225)	13'5" (4.09)	2,200 (998)	17'3" (5.26)	1,540 (699)	
+8' (2.44 m) .... 13'6" (4.11)	2,750 (1247)	14'7" (4.45)	2,220 (1007)	18'1" (5.52)	1,610 (730)	
+6' (1.83 m) .... 14'5" (4.40)	2,730 (1238)	15'3" (4.65)	2,260 (1025)	18'8" (5.69)	1,620 (735)	
+4' (1.22 m) .... 14'9" (4.50)	2,720 (1234)	15'10" (4.82)	2,290 (1039)	19'0" (5.79)	1,660 (753)	
+2' (0.61 m) .. 14'11" (4.55)	2,680 (1216)	16'0" (4.88)	2,290 (1039)	19'1" (5.82)	1,700 (771)	
Ground Level .... 14'8" (4.47)	2,490 (1129)	15'11" (4.85)	2,270 (1030)	18'10" (5.74)	1,730 (785)	
-2' (0.61 m)..... 14'3" (4.35)	2,440 (1107)	15'7" (4.75)	2,260 (1025)	18'6" (5.64)	1,720 (780)	
-4' (1.22 m)..... 13'4" (4.06)	2,440 (1107)	14'10" (4.52)	2,240 (1016)	17'10" (5.43)	1,730 (785)	
-6' (1.83 m)..... 12'0" (3.66)	2,440 (1107)	13'10" (4.21)	2,270 (1030)	17'0" (5.18)	1,740 (789)	
-8' (2.44 m)..... 10'2" (3.10)	2,500 (1134)	12'6" (3.81)	2,350 (1066)	15'9" (4.80)	1,780 (807)	
-10' (3.05 m)..... 7'0" (2.13)	2,780 (1261)	10'4" (3.15)	2,350 (1066)	14'1" (4.30)	1,870 (848)	
-12' (3.66 m).....				11'9" (3.58)	2,040 (925)	
-14' (4.27 m) .....				8'1" (2.47)	2,610 (1184)	
<b>Dipper Lift</b>						
+14' (4.27 m) .....				13'4" (4.06)	2,120 (962)	
+12' (3.66 m) .... 9'9" (2.97)	3,950 (1792)	10'8" (3.25)	3,430 (1556)	14'2" (4.32)	2,210 (1002)	
+10' (3.05 m) .. 10'4" (3.15)	3,690 (1674)	11'1" (3.38)	3,170 (1438)	14'6" (4.42)	2,200 (998)	
+8' (2.44 m) .... 10'2" (3.10)	3,750 (1701)	11'0" (3.35)	3,240 (1470)	14'5" (4.40)	2,160 (980)	
+6' (1.83 m) ..... 9'4" (2.84)	4,100 (1860)	10'2" (3.10)	3,610 (1637)	13'10" (4.21)	2,230 (1012)	
+4' (1.22 m) ..... 7'6" (2.29)	4,710 (2136)	8'2" (2.49)	4,290 (1946)	12'10" (3.91)	2,420 (1098)	

NOTE: Stated figures apply straight to the rear of prime mover. Equipped with 24" (610 mm) general purpose trenching bucket and links. For heavy-duty universal bucket and coupler, deduct 175 lb (79 kg) from each weight.

# BACKHOE OPERATIONAL DATA

	Extendahoe®		
	Standard Backhoe	Retracted	Extended
<b>Digging depth –</b>			
Maximum .....	14'3" (4.34 m)	14'10" (4.52 m)	18'3" (5.56 m)
2' (610 mm) flat bottom .....	14'2" (4.32 m)	14'8" (4.47 m)	18'2" (5.54 m)
8' (2.44 m) flat bottom .....	13'3" (4.04 m)	13'9" (4.19 m)	17'6" (5.33 m)
<b>Overall reach from –</b>			
Rear axle centerline .....	21'5" (6.53 m)	22'0" (6.70 m)	25'5" (7.75 m)
Swing pivot .....	17'10" (5.44 m)	18'5" (5.61 m)	21'10" (6.65 m)
Loading height .....	11'2" (3.40 m)	11'5" (3.48 m)	13'3" (4.04 m)
Loading reach – dipper retracted .....	8'9" (2.67 m)	8'8" (2.64 m)	11'6" (3.50 m)
Swing arc .....	180°	180°	180°
<b>Bucket rotation –</b>			
#1 position .....	170°	170°	170°
#2 position .....	170°	170°	170°
Stabilizer spread – operating .....	9'5" (2.87 m)	9'5" (2.87 m)	9'5" (2.87 m)
<b>Digging force –</b>			
Bucket cylinder .....	11,212 lbf (49 873 N)	11,212 lbf (49 873 N)	11,212 lbf (49 873 N)
Dipper cylinder .....	7,049 lbf (31 356 N)	6,686 lbf (29 741 N)	4,884 lbf (21 725 N)
	w/bucket @ 46°	w/bucket @ 50°	w/bucket @ 55°
<b>Leveling angle</b>			
maximum slope that backhoe will make vertical cut .....	12°	12°	12°

# STANDARD EQUIPMENT

## OPERATOR'S COMPARTMENT

See page 2

## ENGINE

Case 445/M2 diesel  
Automatic fan belt tensioner  
Integral engine oil cooling  
Fuel filter w/water trap  
Dual element air cleaner  
90 amp alternator  
850 CCA 12-volt battery  
Heavy-duty radiator w/ deaeration bottle  
Spark-arresting muffler

## LOADER

See page 2

## BACKHOE

See page 2

## POWERTRAIN

2WD  
4F/4R Power shuttle synchromesh transmission  
Torque converter  
Transmission de-clutch  
Electro-hydraulic differential lock  
Hydrostatic steering  
Wet disc brakes

## HYDRAULICS

2-spool loader control valve  
6-spool backhoe control valve  
Heavy-duty oil cooler

## OTHER

Forward tilt engine hood  
Replaceable, molded front bumpers  
Front/rear tie downs  
Reflective logos  
Lights - Cab and Canopy  
2 Rear tail/stop  
2 Front flashers/turn  
2 Rear flashers/turn  
Cab only  
4 Front & 4 rear adjustable halogen lights (55 w)  
Canopy only  
2 Front & 2 rear adjustable halogen lights (55 w)

# OPTIONAL EQUIPMENT

## OPERATOR'S COMPARTMENT

Cab with –  
Heater  
Defroster  
Dome light - door activated w/switch  
Wipers, front and rear  
Tinted glass  
Floor mat  
Side window partial hold open  
Inside release for side windows  
Operator Convenience Package  
Tilt wheel  
Windshield washer w/adjustable nozzles (front & rear)  
Sun visor  
Deluxe Cab Package  
Operator Convenience Package PLUS  
Vinyl-covered interior  
Radio-ready kit w/antenna and speakers  
Reduced sound level to 72 dB(A)  
Vinyl or cloth-covered mechanical suspension seat  
Air Ride suspension seat  
3" (76 mm) retractable seat belt  
Cab air-conditioning, 100% filtered air, in-cab filter access, 8 adjustable roof vents, 2 floor vents, w/heater  
Ride Control  
Cab, right door

Canopy Convenience Package  
Front windshield w/wiper & washer  
85 dB(A) sound  
Floor mat  
Sun visor

## LOADER

Hydraulic front quick coupler  
Attachment auxiliary hydraulics  
3 spool valve hydraulics w/control  
Buckets (see page 2)

## BACKHOE

Case coupler  
Attachment auxiliary hydraulics  
Extendahoe®  
Two-lever control  
Joystick Actuated Pilot Operated Control System  
Fingertip Proportional  
Electrohydraulic stabilizer controls.  
Thumb operated Proportional  
Electrohydraulic Extendahoe control  
Thumb operated horn button  
Thumb operated Auxiliary Hydraulic Control  
Infinitely Adjustable Towers  
In-Cab Switchable "Excavator to Backhoe" control pattern change  
Stabilizer pads  
Flip-over  
Rubber pad

Front counterweights  
440 lb (200 kg)  
900 lb (408 kg)

## ENGINE

Cold weather grid heater starting aid  
Dual, 12-volt, 600CCA batteries  
Fuel tank, 40 gal (151 L)  
Exhaust aspirated air cleaner

## POWERTRAIN

4WD w/outboard planetary drive, on-the-go push-button activation and 12 x 16.5 front tires

## HYDRAULICS

Auxiliary backhoe uni-directional hydraulics  
Auxiliary backhoe bi-directional hydraulics

## OTHER

Outside breakaway mirror  
17.5L x 24 rear tires  
19.5L x 24 rear tires  
Tool box  
Special paint  
Lights - canopy  
Additional 2 front and 2 rear halogen lights (55 w)

## CASE CONSTRUCTION EQUIPMENT CONTACT INFORMATION

### NORTH AMERICA/MEXICO:

700 STATE STREET  
RACINE, WISCONSIN 53404

### LATIN AMERICA:

AV. GENERAL DAVID SARNOFF 2237  
32210 – 900 CONTAGEM – MG  
BELO HORIZONTE BRAZIL

### EUROPE/AFRICA/MIDDLE EAST:

18, PLACE DES NYMPHEAS  
ZI PARIS NORD 11 95915  
ROISSY CDG CEDEX FRANCE

### ASIA PACIFIC:

31-67 KURRAJONG ROAD  
ST. MARY'S  
NEW SOUTH WALES 2760 AUSTRALIA

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

Form No. CCE9030304

Replaces Form No. CE 251-10-00

IMPORTANT: Case, LLC reserves the right to change these specifications without notice and without incurring any obligation relating to such change. Case, LLC does not warrant the safety or reliability of attachments from other manufacturers.

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