

# Loader/Landscaper

Case 63 Net Horsepower (47 kW) Diesel  
8300 lbf (36 920 N) Breakout Force  
Modular 3-point Hitch  
Choice of 2-wheel or 4-wheel Drive

# 480F LL



**Case**

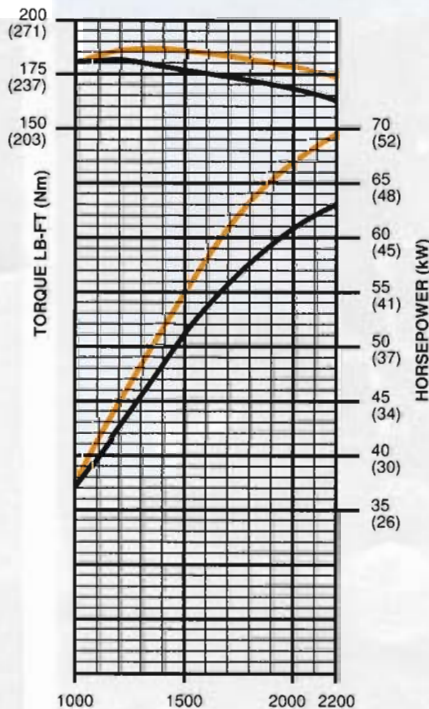
**480F LL**

# 480F LL Basic Tractor

## ENGINE

Make and Model	Case 4-390
Type of fuel	No. 2 diesel
No. of cylinders	4
Bore and stroke	4.02" x 4.72" (102 mm x 120 mm)
Displacement	239 in <sup>3</sup> (3917 cm <sup>3</sup> )
Compression ratio	17.0:1
Fuel induction	Injectors
Fuel supply	Injection pump
Air cleaner	Dry type — replacement element
Oil filter	Replaceable spin-on cartridge, full flow
Lubrication	Positive pressure
Cooling system	Pressurized — 14 psi (96 kPa)
Horsepower	
(1) Gross	69 @ 2200 rpm (51 kW @ 2200 r/min)
(2) SAE net	63 @ 2200 rpm (47 kW @ 2200 r/min)
Max torque ft-lb	
(1) Gross	186 @ 1200 rpm (252 Nm @ 1200 r/min)
(2) SAE net	181 @ 1200 rpm (245 Nm @ 1200 r/min)
(1) Gross engine horsepower or torque at flywheel per SAE Standard J1349.	
(2) Net engine horsepower or torque at flywheel per SAE Standard J1349.	

## POWER CURVE



ENGINE SPEED - RPM (r/min)  
■ GROSS ENGINE PERFORMANCE  
■ NET ENGINE PERFORMANCE

## ELECTRICAL

System voltage	12 volts, negative ground
Battery (1)	Maintenance free, 650 cold cranking amps at 32°F (0°C)
Alternator	65 amp

## POWER TRAIN

Transmission: Full power shuttle and torque converter, 4 speed; sliding spur gear in 1st and 2nd. Synchromesh in 3rd and 4th permits on the go shifting up from 2nd to 3rd to 4th and back down from 4th to 3rd.

Torque converter: Single stage hydrokinetic type (2.78 to 1 ratio).

Reversing unit: Power hydraulic clutches.

Brakes: Individual or simultaneous foot operated, hydraulic actuated. 8" (203 mm) double disc, with 246 in<sup>2</sup> (1587 cm<sup>2</sup>) braking surface. Over-center hand-operated dry disc parking brake.

Final drives:  
 Front (4-WD)..... outboard planetaries  
 Rear..... multiple gear reduction

4-wheel drive: operator engaged front wheel mechanical drive by lever located next to operator's seat.

## AXLES RATINGS (Manufacturer's)

Front (2-WD)	9,000 lbs (4082 kg)
(4-WD)	12,500 lbs (5670 kg)
Rear	13,500 lbs (6123 kg)

## AXLE OSCILLATION

Front (2-WD)	27°
(4-WD)	24°
Rear	Fixed

## STEERING

Power steering..... Hydrostatic

Hydraulic pump..... Front-mounted, positive displacement, gear type

Pump capacity.....  
 23 gpm @ 2200 rpm @ 2450 psi  
 (87 l/min @ 2200 r/min @ 16 892 kPa)

Steering system: Utilizes same hydraulic pump as the hydraulic system. Steering system is a load sensing, supply on demand system that requires a maximum of 3.0 gpm (11.4 l/min) when turning wheels from stop to stop. Excess oil not being utilized by steering system is then made available to equipment by hydraulic system.

Main relief setting..... 2100 ± 50 psi  
 (14 479 ± 345 kPa)

Turning ratio (stop to stop)..... 2.75 turns

Steering cylinders, double-acting  
 (2)..... 1.5" dia x 6.5" stroke  
 (38 mm dia x 165 mm stroke)

## SERVICE CAPACITIES

	U.S.	Litres
Cooling system		
w/heater	18 qt	17
w/o heater	17 qt	16.1
Fuel tank	23.5 gal	89
Engine oil		
w/filter	11.6 qt	11
w/o filter	10.6 qt	10
Power shuttle	8 qt	7.6
Transaxle	19 qt	18.0
Hydraulic reservoir		
w/filter	10.8 gal	41.0
w/o filter	10.5 gal	39.7
Planetaries—		
each (4-WD)	1.5 qt	1.4
Differential (4-WD)	7 qt	6.6
Transfer case (4-WD)	1 pt	.5

## TRAVEL SPEEDS – MPH (km/h)

Engine at full throttle, 14.9 x 24, R4 tires.

	1st	2nd	3rd	4th
Forward	3.3 (5.4)	6.4 (10.3)	12.0 (19.2)	20.9 (33.7)
Reverse	3.0 (4.8)	5.7 (9.2)	10.7 (17.3)	18.2 (29.3)

## TIRES

Size	Ply Rating	Tread	Pressure PSI (kPa)
<b>FRONT</b>			
7.50 x 16	6	I1	36 (248)
7.50 x 16	10	I1	60 (414)
8.00 x 16	10	F3	64 (441)
11L x 16	10	F3	52 (359)
*12 x 16.5	6	Lug	45 (310)
*12 x 16.5	8	Lug	60 (414)
<b>REAR</b>			
14.9 x 24	6	R4	20 (138)
16.9 x 24	6	R4	18 (124)
*17.5L x 24	6	R4	16 (110)

\*Must be used on machines equipped with 4-WD

## TRACTOR

Overall length	9'10" (3.39 m)
Overall width	6'3.3" to 6'11.1" (1.91 m to 2.11 m)
Height: to top of canopy	8' (2.44 m)
Height: to top of exhaust stack	8'9" (2.67 m)
Height: to top of steering wheel	5'8.9" (1.75 m)
Ground clearance (tractor main frame)	12.6" (321 mm)
Front wheel tread (2-WD)	4'11.1" to 5'2.2" (1.50 m to 1.58 m)
(4-WD)	5'7" (1.7 m)
Rear wheel tread	5'0.2" to 5'6.2" (1.53 m to 1.68 m)
Wheel base (2-WD)	6'8" (2.03 m)
(4-WD)	6'8.5" (2.04 m)

## TURNING CLEARANCE CIRCLE (Tractor only)

With brakes — 2-WD	20'9" (6.3 m)
Without brakes — 2-WD	23'7" (7.19 m)
With brakes — 4-WD	26'0" (7.93 m)
Without brakes — 4-WD	31'1" (9.47 m)

# 480F LL Loader

## HYDRAULIC SYSTEM

Hydraulic pump: Front mounted, positive displacement, gear type.

Pump capacity:

23 gpm @ 2200 rpm  
(87 l/min @ 2200 r/min)

Main relief pressure: 2450 psi (16 892 kPa)

Filtration: 10 micron, full flow replaceable cartridge on return line. Condition indicator light for filter.

Loader control valve: sectional valve with single-lever control.

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

Loader cylinders:

Lift (2), 3" dia x 32" stroke, 1.75" rod  
(76.2 mm dia x 813 mm stroke, 44.4 mm rod)

Tilt (2), 2.5" dia x 20.0" stroke, 1.5" rod  
(64 mm dia x 508 mm stroke, 38 mm rod)

## LOADER BUCKET SIZES

(Capacities SAE)

Width in	Type	Heaped yd <sup>3</sup>	Struck m <sup>3</sup>	Heaped yd <sup>3</sup>	Struck m <sup>3</sup>
74	Short lip	.78	.6	.66	.5
82	Long lip	1.0	.78	.87	.67

## THREE POINT MOD HITCH

Hydraulic pump; Front mounted, positive displacement, gear type.

Control valve: 5 spool sectional valve with flow control for hydraulic control of lift, tilt, pitch, and auxiliary with "float" detent in the lift spool.

The main relief valve in this system is adjusted lower than the loader system pressure.

Mod hitch cylinders:

Lift (1): . . . 3" dia. x 8.4" stroke, 1.5" rod  
(76 mm dia x 213 mm stroke, 38 mm rod)

Tilt (1): . 2.5" dia x 6.3" 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)

Lift Capacity:

@ end of lift arms . . . 5197 lbs (2362 kg)

@ 24" (610 mm) behind

hitch point . . . . . 2850 lbs (1295 kg)

Hitch

Category I/II — Standard

## TURNING CLEARANCE CIRCLE

(Loader)

Bucket rollback — hinge pin at SAE carry position

2-wheel drive

74" short lip bucket

with brakes . . . . . 30'1" (9.17 m)  
without brakes . . . . . 31'3" (9.52 m)

82" long lip bucket

with brakes . . . . . 29'9" (9.07 m)  
without brakes . . . . . 32'0" (9.75 m)

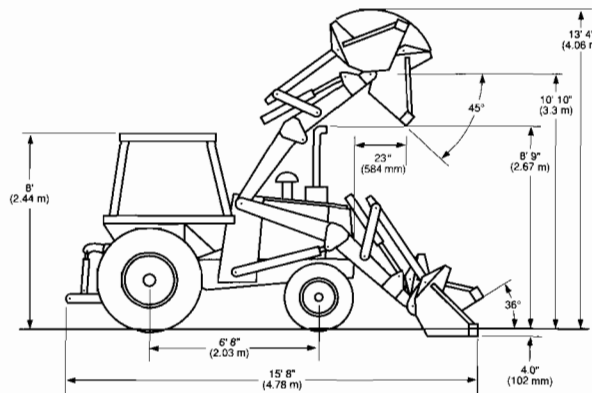
4-wheel drive

74" short lip bucket

with brakes . . . . . 32'5" (9.88 m)  
without brakes . . . . . 39'2" (11.94 m)

82" long lip bucket

with brakes . . . . . 32'9" (9.98 m)  
without brakes . . . . . 40'8" (12.4 m)



## OPERATIONAL DATA

### GENERAL PURPOSE BUCKET

	74" SHORT LIP		82" LONG LIP	
	(2-WD)	(4-WD)	(2-WD)	(4-WD)
Breakout force - combined . . . . .	8300 lbf (36 920 N)	8300 lbf (36 920 N)	7500 lbf (33 362 N)	7500 lbf (33 362 N)
Grading angle . . . . .	112°	112°	113°	113°
Overall length, bucket at ground level . . . . .	15'8" (4.78 m)	15'8" (4.78 m)	16'0" (4.88 m)	16'0" (4.88 m)
Overall width . . . . .	6'7" (2.0 m)	6'7" (2.0 m)	6'7" (2.0 m)	6'7" (2.0 m)
Overall operating height . . . . .	13'4" (4.06 m)	13'6" (4.12 m)	13'4" (4.06 m)	13'6" (4.12 m)
Height to bucket hinge pin . . . . .	10'10" (3.30 m)	10'11" (3.33 m)	10'10" (3.30 m)	10'11" (3.33 m)
Digging depth below grade —				
bucket flat . . . . .	4.0" (102 mm)	3.0" (76 mm)	4.0" (102 mm)	3.0" (76 mm)
Dump clearance at full height,				
45° dump . . . . .	8'9" (2.67 m)	8'11" (2.72 m)	8'5" (2.57 m)	8'7" (2.62 m)
Dump angle at full height . . . . .	45°	45°	45°	45°
Dump reach at full height . . . . .	23" (584 mm)	23" (584 mm)	27" (686 mm)	27" (686 mm)
Raising time to full height . . . . .	5.1 s	5.1 s	5.0 s	5.0 s
Bucket dumping time . . . . .	0.8 s	0.8 s	0.8 s	0.8 s
Lowering time, power down . . . . .	2.5 s	2.5 s	2.1 s	2.1 s
Bucket rollback @ groundline . . . . .	36°	36°	36°	36°
Lift capacity to full height . . . . .	4600 lb (2087 kg)	4800 lb (2177 kg)	4600 lb (2087 kg)	4800 lb (2177 kg)

# Equipment Data

## STANDARD EQUIPMENT

### TRACTOR

Antifreeze solution to  $-20^{\circ}\text{F}$  ( $-29^{\circ}\text{C}$ ) • Axle (front), heavy-duty with 59" (1.50 m) fixed tread • Brakes, hydraulic • Brakes, parking, over-center • Electrical system, 12 volt • Engine, 63 hp (47 kW) Case, 4-390 diesel • Fenders, rear • Floor plates • Fuel opening, lockable • Gauges and instruments: air cleaner restriction light, alternator charge warning lamp, condition light for loader and mod hitch hydraulic system filter, converter temperature gauge, engine oil pressure warning light, engine water temperature gauge, fuel level gauge, hourmeter, tachometer, voltmeter • Grille, heavy-duty • Headlights, one rear working and one red tail • Instrument cluster, illuminated • Muffler, upright oval with deflector • Oil filter, full flow • Power shuttle, with torque converter, 4-speed transaxle with differential lock • ROPS canopy • Seat belt • Seat • Side panels, full length of engine, lockable • Steering, hydrostatic • Throttle, hand and foot • Tires (front), 7.50 x 16, 10PR (I1) • Tires (rear), 14.9 x 24, 6PR, (R4) utility traction tread • Tool box • Wheel weights • Wrapper, front

### LOADER

All tractor standard equipment • Control, single lever with self leveling • Hydraulic system, complete • Indicator, bucket level • Loader (less bucket) • Support strut, lift arm • Return to dig

### HITCH

Category I/II modular three-point • Control valve, five-spool with flow control

## OPTIONAL EQUIPMENT

### TRACTOR

Alarm, backup • Antifreeze to  $-40^{\circ}\text{F}$  ( $-40^{\circ}\text{C}$ ) • Beacon, rotating • Emblem, SMV • Floor mat • Full lockup package • Horn • Hourmeter, electric • Lights, combination tail, stop, directional and flasher • Muffler, spark arresting • Noise suppression package • PTO (Hydrostatic), 540 rpm with 6 tooth SAE 1.375" (35 mm) shaft • Paint, special • Seat, deluxe • Start kit, cold weather • Tires, various sizes — see tractor section • 4-wheel drive

### LOADER

All tractor optional equipment • Bucket teeth • Auxiliary loader hydraulics

## APPROXIMATE SHIPPING WEIGHTS

**NOTE:** Specifications take with 11L x 16 front tires, 17.5L x 24 rear tires, plus ROPS canopy and other standard equipment unless otherwise specified.

### TRACTOR WITH LOADER (Less Bucket)

W/ROPS canopy, hitch and  
1000 lb (457 kg) wheel weights . 8472 lb  
(3843 kg)  
4-wheel drive . . . . . add 454 lb (206 kg)

### LOADER BUCKETS (Optional)

74" (1.88 m) short lip . . . . . 600 lb (272 kg)  
82" (2.08 m) long lip . . . . . 760 lb (345 kg)

### MOD HITCH

3 point hitch . . . . . 631 lb (286 kg)



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**NOTE:** All specifications are stated in accordance with 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. Unit illustrated is equipped with non-standard equipment.

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