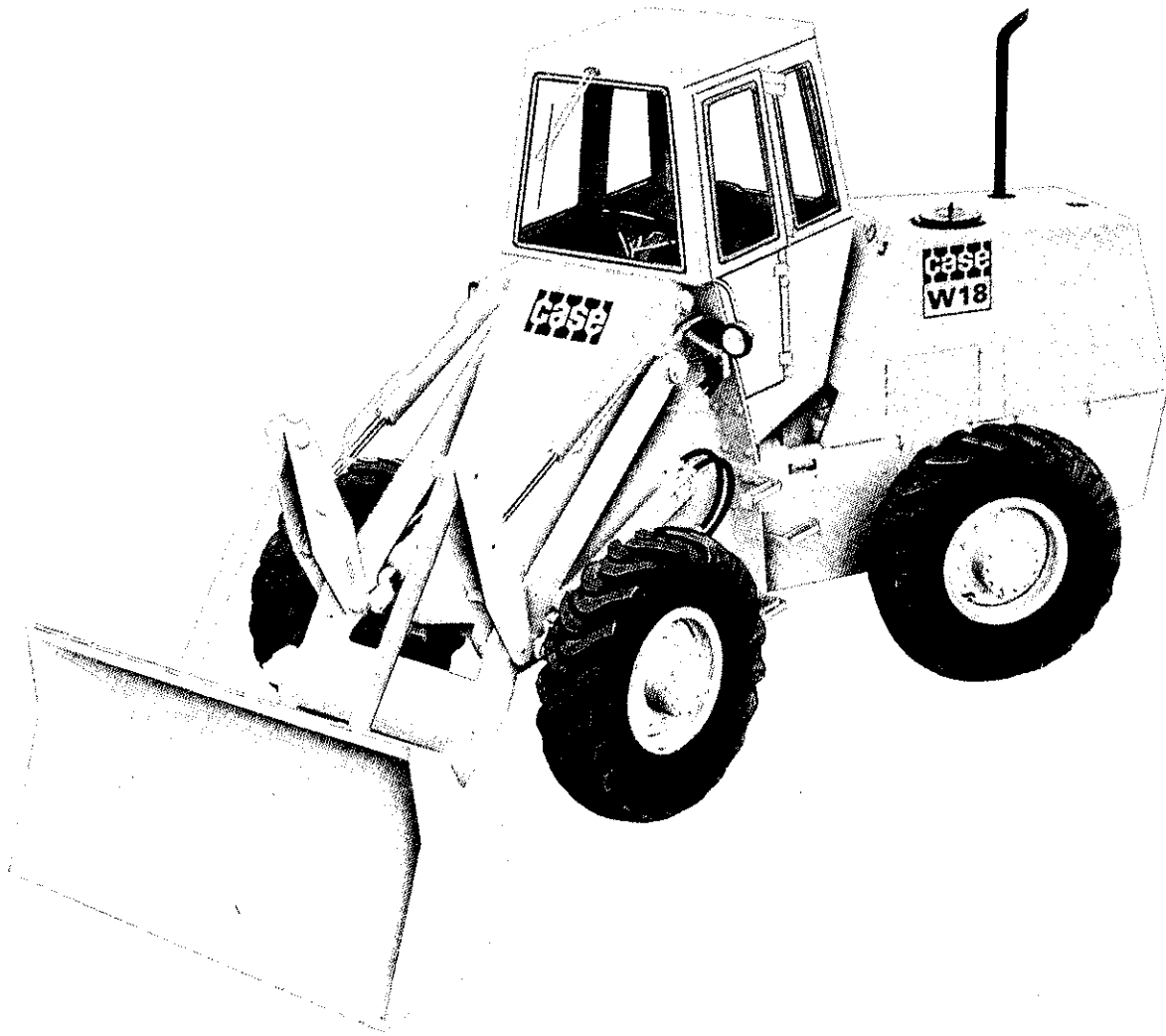




# W18 LOADER



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**103 FLYWHEEL HORSEPOWER**  
Case diesel engine

**FULL POWERSHIFT TRANSMISSION**  
Four speeds forward, two reverse

**SINGLE LEVER SHIFT CONTROL**  
Modulated transmission clutching for fast, smooth directional changes

**IN-LINE-PLANE LOADER LINKAGE**  
Excellent view of bucket work area

**LONG WHEEL BASE**  
Good operational stability

**CENTER-PIVOT STEER**  
Allows rear and front tires to track at all times

Unit shown is equipped with non-standard items.  
Manufactured by J I Case Company, Racine Wisconsin USA

**J I Case**  
A Tenneco Company



# LOADER SPECIFICATIONS

## ENGINE

Make and model ..... Case A401BD  
 Fuel ..... diesel  
 Maximum rated horsepower  
 (1) Gross ..... 114 @ 2200 rpm  
 (2) SAE net ..... 103 @ 2200 rpm  
 Torque, maximum net  
 At 500' (152 m) altitude,  
 85°F (29°C) ..... 298 lbs/ft @ 1400 rpm  
 (411,8 Nm @ 1400 tr/mn)  
 Cylinders, number (valve-in-head) ..... 6  
 Bore and stroke ..... 4 $\frac{1}{8}$ " x 5"  
 (105 mm x 127 mm)  
 Displacement ..... 401 cu in (6.55 lit)  
 Starting ..... 24 volt electric  
 Air cleaner (with service indicator) ..... two element, dry type  
 Oil filter ..... full-flow type

- (1) Manufacturer's rating of maximum engine horsepower 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 (15°C) dry air.  
 (2) SAE net flywheel horsepower 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 m) altitude with .38" (9,5 mm) Hg vapor pressure, 29.38" (746 mm) Hg observed barometer and 85°F (29°C) per SAE J816 specifications.

## TRAVEL SPEEDS

	1st		2nd		3rd		4th	
	mph	km/h	mph	km/h	mph	km/h	mph	km/h
Forward	3.7	5,95	7.5	12,07	12.0	19,31	25.5	41,04
Reverse	4.7	7,56	9.5	15,29				

## TRANSMISSION

Four speeds forward, two speeds reverse, powershift. Single lever control. Modulating clutching. First low to first high and second low to second high is done automatically.

## TORQUE CONVERTER

Twin turbine integral with transmission. 4.8 to 1.0 stall ratio.

## AXLES (front and rear)

Front axle fixed. Rear axle oscillates up or down 12°, 24° total oscillation. One wheel can drop 16" (406 mm) with all wheels remaining on the ground for maximum traction. Axles may be removed without disturbing the wheels or planetaries.

## DIFFERENTIALS

Torque proportioning differentials, front and rear for maximum traction.

## BRAKES

Air over hydraulic, internal-expanding, 4-wheel. Air actuated mechanical parking brake. Automatically sets if air pressure drops below safe operating level. Red warning light indicates when parking brake engaged.

## STEERING

Center pivot articulated design with hydrostatic power steering. Front and rear wheels always track.  
 Steering angle-each  
 direction from center ..... 40°  
 Steering pump ..... 23 gpm @ 2200 rpm @ 2000 psi  
 (87 lit/min @ 2200 tr/mn @ 141 kg/cm<sup>2</sup>)  
 Steering cylinders ..... 3" dia. x 15" stroke, 1 $\frac{1}{2}$ " rod  
 (76 mm dia. x 381 mm stroke, 38 mm rod)

## LOADER HYDRAULIC SYSTEM

**Cylinders:** Double-acting with hardened and chrome-plated rods to increase strength and resist corrosion.  
 Lift (2) ..... 5" dia. x 30.1" stroke, 3" rod  
 (127 mm dia. x 764 mm stroke, 76 mm rod)  
 Bucket (2) ..... 4" dia. x 28.35" stroke, 2" rod  
 (102 mm dia. x 720 mm stroke, 51 mm rod)

**Pump:** Dual-stage, gear-type, converter-driven. 48 gpm @ 2200 rpm @ 2150 psi (182 lit/min @ 2200 tr/mn @ 151 kg/cm<sup>2</sup>).

**Control valve:** Open-center, series parallel circuit.

**Hydraulic lines:** Steel tubing with brazed fittings and wire-braid, high-pressure hose with swaged fittings.

**Reservoir:** Closed, positive air pressurized reservoir insures exclusion of contaminants and positive input flow to pump. All input oil to pump passes through micron filter, furnishing clean oil to all components of the hydraulic system.

## Hydraulic cycle time:

Rated load in bucket	Seconds
Raise	6.1
Lower	3.5
Dump	1.7
Total	11.3

## SERVICE CAPACITIES

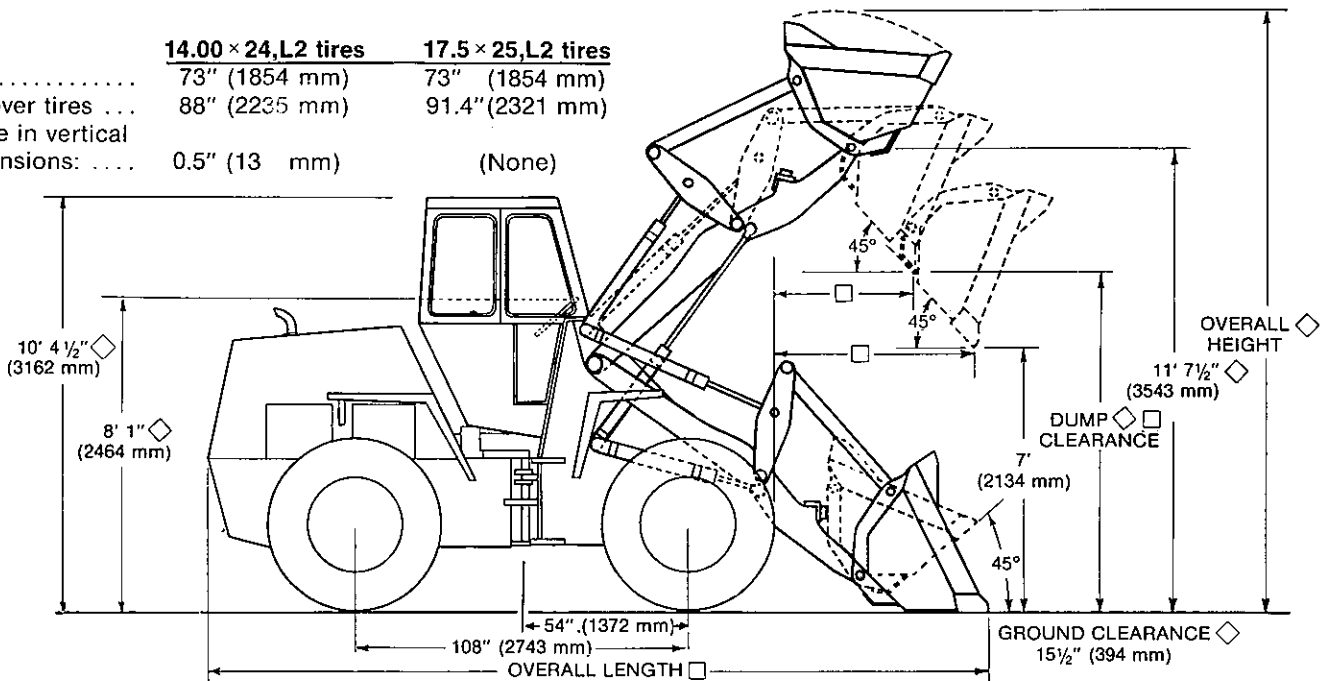
	U.S. Gals.	Liters
Fuel tank	50.0	189
Hydraulic system	29.0	110
Transmission and torque converter	9.0	34
Engine crankcase	3.0	
Differentials and final drives		
Front	4.0	15
Rear	4.0	15
Cooling system	13.0	49

**NOTE:** Specifications herein are in accordance with all Society of Automotive Engineers' standards (SAE). The applicable Loader Standard is SAE J732C and is denoted by §.

# OPERATING DIMENSIONS

◇ Varies with tire size  
 □ Varies with bucket size, refer to performance specifications.

	14.00 x 24, L2 tires	17.5 x 25, L2 tires
Tread .....	73" (1854 mm)	73" (1854 mm)
Width over tires ...	88" (2235 mm)	91.4" (2321 mm)
Increase in vertical dimensions: .....	0.5" (13 mm)	(None)



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# PERFORMANCE SPECIFICATIONS §

BUCKET TYPE - Capacity SAE Rated (nominally heaped) §	GENERAL PURPOSE 1¾ Cu/Yds (1,34 m³)	LIGHT MATERIAL 2 Cu/Yds (1,53 m³)	LIGHT MATERIAL 2½ Cu/Yds (1,91 m³)	4-IN-1 1½ Cu/Yds (1,2 m³)
Dump Clearance @ 45° Dump — Full Height § ◇	9' 2" (2794 mm)	8' 11½" (2730 mm)	8' 8" (2642 mm)	9' ½" (2756 mm)
Bucket Reach @ Full Height & 45° Dump §	2' 11" (889 mm)	3' 1" (940 mm)	3' 4½" (1029 mm)	3' 2½" (978 mm)
Bucket Reach @ 7' Clearance 45° Dump §	4' 4" (1321 mm)	4' 5" (1346 mm)	4' 7" (1397 mm)	4' 8½" (1435 mm)
Loader Clearance Circle — Bucket In Carry Position §	36' 2" (11024 mm)	36' 4" (11074 mm)	36' 6" (11125 mm)	36' 10" (11227 mm)
Overall Length §	19' 11" (6071 mm)	20' 2" (6147 mm)	20' 7¼" (6280 mm)	20' 5" (6223 mm)
Overall Height § ◇	15' 0" (4572 mm)	15' 3" (4648 mm)	15' 8" (4775 mm)	15' 5½" (4712 mm)
SAE Breakout Force	22,000 (9979 kg)	20,035 (9088 kg)	17,225 (7813 kg)	22,075 (10013 kg)
Tipping Load, Straight lbs. ** §	12,860 (5833 kg)	12,720 (5770 kg)	12,515 (5677 kg)	11,415 (5178 kg)
35° Turn	11,675 (5296 kg)	11,545 (5837 kg)	11,360 (5153 kg)	10,360 (4699 kg)
40° Turn	11,335 (5141 kg)	11,210 (5085 kg)	11,035 (5005 kg)	10,065 (4565 kg)
SAE Operating Weight, lbs.**	18,830 (8541 kg)	18,880 (8564 kg)	18,930 (8586 kg)	19,440 (8818 kg)

\*\*For select items, add to or deduct from the machine operating weight and tipping loads as given in the chart below. All dimensions and specifications based upon unit with 17.5 x 25, L2 tires and ROPS cab.

## Selected Items

## Operating Weight Adjustments

## Tipping Load Adjustments

	Operating Weight Adjustments		Tipping Load Adjustments					
	lbs	kg	Straight		35° Turn		40° Turn	
			lbs	kg	lbs	kg	lbs	kg
ROPS enclosed cab	-584	-265	-419	-190	-419	-190	-419	-190
17.5 x 25 L2 w/75% Ca Cl <sub>2</sub>	+1194	+542	+1713	+777	+1568	+707	+1513	+686
14.00 x 24 G2	-144	-65	-103	-47	-94	-43	-91	-41
14.00 x 24 G2 w/75% Ca Cl <sub>2</sub>	+766	+347	+1202	+545	+1094	+496	+1062	+482
W/ROPS Canopy	-200	-91	-143	-65	-143	-65	-143	-65

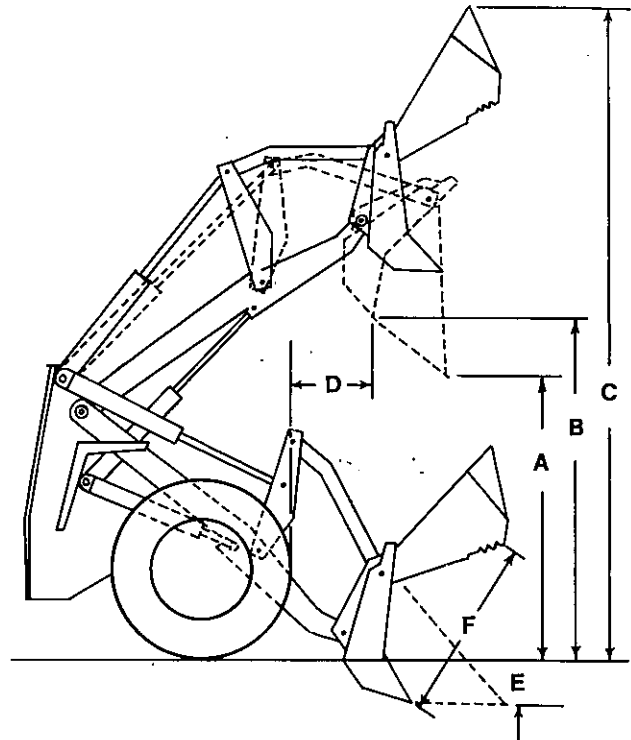
# EQUIPMENT ATTACHMENTS

## BUCKETS

TYPE	Material Weight per cu/yd (m <sup>3</sup> )		Capacity		Cutting Edge Width	
	lbs	kg	SAE Rated cu/yd m <sup>3</sup>	Struck cu/yd m <sup>3</sup>	Inches	mm
General Purpose .....	3000	1361 kg	1.75 1,34 m <sup>3</sup>	1.41 1,08 m <sup>3</sup>	94.5"	2401 mm
Light Material .....	2600	1179 kg	2.0 1,53 m <sup>3</sup>	1.63 1,25 m <sup>3</sup>	94.5"	2401 mm
Light Material .....	2100	953 kg	2.5 1,91 m <sup>3</sup>	2.07 1,58 m <sup>3</sup>	94.5"	2401 mm
4-in-1 .....	3000	1361 kg	1.5 1,2 m <sup>3</sup>	1.29 1,0 m <sup>3</sup>	96.0"	2438 mm

### 4-in-1 SPECIFICATIONS:

- A — Forward dumping clearance  
@ 45° discharge ◇ ..... 9' 1/2" (2756 mm)
- B — Bottom dumping clearance  
@ 45° discharge ◇ ..... 10' 11 1/2" (3340 mm)
- C — Overall height ◇ ..... 17' 1 1/2" (5220 mm)
- D — Bottom dumping reach  
@ 45° discharge ..... 15 1/2" (394 mm)
- E — Digging depth ..... 14" (356 mm)
- F — Bucket opening ..... 3' 10" (1168 mm)
- Tilt back @ ground level ..... 45°
- Closure force, clamp to cutting edge . 12,850 lb (5829 kg)
- Weight ..... 1960 lb (889 kg)
- § SAE code adhered to.
- ◇ Varies with tire size — 17.5 x 25  
12 PR tires used - Refer to  
performance specifications.



**Sold and serviced by:**

### STANDARD EQUIPMENT

Alternator. Voltage regulator. Batteries. 24 volt start. Front and rear flood lights. Taillight and stop light. Pusher fan. Two-element, dry-type air cleaner. Air horn. Powershift transmission. Air over hydraulic brakes. Parking brake. Alternator light, engine oil pressure light, engine water temperature gauge, fuel level gauge, converter oil temperature gauge, clutch pressure light, air pressure gauge with low oil pressure warning buzzer, tachometer. Drawbar.

### OPTIONAL EQUIPMENT

Automatic, adjustable bucket height kickout. Automatic return-to-dig mechanism. Cab. ROPS cab, ROPS canopy, seat belt accompanies ROPS. Buckets. Log forks. Pallet forks. Power train guard. Engine side panels. Fenders. Heater and defroster. Cold weather starting equipment. Lockup kit. Tire inflation kit. Turn signals. Additional driving lights. Spark arresting muffler.

### TIRES (front and rear)

- 14.00 x 24, 10 PR, traction type, G2
- 14.00 x 24, 12 & 16 PR, traction type, G2
- 14.00 x 24, 12 & 16 PR, rock type, G3
- 17.5 x 25, 10 & 12 PR, traction type, L2
- 17.5 x 25, 12 PR, rock type, L3
- 17.5 x 25, 12 PR, super steel guard, L3