

**case**

W18 Loader

**103 (76.8 kW) SAE NET FLYWHEEL HORSEPOWER**

Case 401 in³ (6.55 lit) diesel engine

FULL POWERSHIFT TRANSMISSION

Four speeds forward, two reverse

SINGLE LEVER SHIFT CONTROL

Modulated transmission clutching for fast, smooth, on the go directional changes

TWIN TURBINE TORQUE CONVERTER

Automatically shifts to meet changing load demands for optimum cycling productivity

IN-LINE LOADER LINKAGE

All linkage mounted in line with the loader lift arms for good visibility to bucket work area

LONG 108" (2743 mm) WHEELBASE PLUS 40° ARTICULATION

Combines operational stability and balance with excellent turning radius

CENTER-PIVOT STEER

Allows rear and front tires to track at all times

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.

LOADER SPECIFICATIONS

ENGINE

Make and model	Case A401BD
Fuel	diesel
Maximum rated horsepower	
(1) Gross	114 @ 2200 rpm (85 kW @ 2200 r/min)
(2) SAE net	103 @ 2200 rpm (76.8 kW @ 2200 r/min)
Torque, maximum	
At 500' (152 m) altitude, 85°F (29°C)	298 lbs-ft @ 1450 rpm (411.8 Nm @ 1450 r/min)
Cylinders, number (valve-in-head)	6
Bore and stroke	4.125" x 5" (105 mm x 127 mm)
Displacement	401 in ³ (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).

TRAVEL SPEEDS (with 17.5 x 25 tires)

	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	23.0	37.01
Reverse	4.7	7.56	9.5	15.29				

TRANSMISSION

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

TORQUE CONVERTER

Twin turbine integral with transmission, 5.11 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. Axle shafts 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 r/min @ 141 kg/cm²)

Steering cylinders 3" dia. x 15" stroke
(76 mm dia. x 381 mm stroke)

Turning circle outside tires 32.7" (9931 mm)

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 (127 mm dia. x 764 mm stroke)
Bucket (2)	4" dia. x 28.35" stroke (102 mm dia. x 720 mm stroke)

Pump: Dual-stage, gear-type, converter-driven, 48 gpm @ 2200 rpm @ 2150 psi (182 lit/min @ 2200 r/min @ 151 kg/cm²).

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

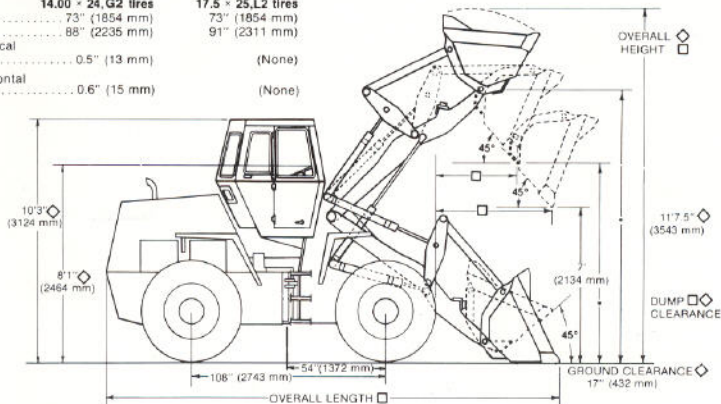
SERVICE CAPACITIES

	U.S. Gals.	Liters
Fuel tank	50	189
Hydraulic system	29	110
Transmission and torque converter	9	34
Engine crankcase	3	11
Differentials and final drives		
Front	4.5	17
Rear	4.5	17
Cooling system	13	49

OPERATING DIMENSIONS

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

14.00 × 24, G2 tires	17.5 × 25, L2 tires
Tread 73" (1854 mm)	73" (1854 mm)
Width over tires 88" (2235 mm)	91" (2311 mm)
Decrease in vertical dimensions: 0.5" (13 mm)	(None)
Increase in horizontal dimensions: 0.6" (15 mm)	(None)



PERFORMANCE SPECIFICATIONS

Loader ratings are governed by SAE J732C and 742b.

BUCKET TYPE - Capacity
SAE Rated (nominally heaped)

GENERAL PURPOSE
1.75 yd³
(1.34 m³)

GENERAL PURPOSE
2 yd³
(1.53 m³)

GENERAL PURPOSE
2.5 yd³
(1.91 m³)

4-IN-1
1.5 yd³
(1.2 m³)

	1.75 yd ³ (1.34 m ³)	2 yd ³ (1.53 m ³)	2.5 yd ³ (1.91 m ³)	1.5 yd ³ (1.2 m ³)
Dump Clearance @ 45° Dump - Full Height ◇	9'2" (2794 mm)	9'0" (2743 mm)	8'8" (2642 mm)	9'0" (2743 mm)
Bucket Reach @ Full Height & 45° Dump	2'11" (889 mm)	3'1" (940 mm)	3'5" (1041 mm)	3'2" (965 mm)
Bucket Reach @ 7' (2134 mm) Clearance 45° Dump	4'4" (1321 mm)	4'5" (1346 mm)	4'7" (1397 mm)	4'6" (1372 mm)
Loader Clearance Circle - Bucket in Carry Position	35'4" (10770 mm)	35'6" (10820 mm)	35'9" (10897 mm)	35'10" (1092 mm)
Overall Length	19'11" (6071 mm)	20'2" (6147 mm)	20'7" (6274 mm)	20'5" (6223 mm)
Overall Height ◇	15'0" (4572 mm)	15'3" (4648 mm)	15'8" (4775 mm)	14'5" (4394 mm)
SAE Breakout Force, lbs.	22440 (10179 kg)	20438 (9271 kg)	17572 (7971 kg)	21628 (9810 kg)
SAE Tipping Load, Straight lbs.*	13608 (6172 kg)	13473 (6111 kg)	13272 (6020 kg)	11955 (5423 kg)
35° Turn	12463 (5653 kg)	12339 (5597 kg)	12156 (5514 kg)	10953 (4968 kg)
40° Turn	12126 (5500 kg)	12007 (5446 kg)	11828 (5365 kg)	10659 (4835 kg)
SAE Operating Weight, lbs.*	19881 (9018 kg)	19931 (9041 kg)	19981 (9063 kg)	20431 (9267 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, 12 PR tires, ROPS cab, fenders, optional seat, fully serviced and 175 lbs. (79.4 kg) operator.

Selected Items

Operating Weight Adjustments

Tipping Load Adjustments

	Operating Weight Adjustments		Tipping Load Adjustments			
	lbs	kg	35° Turn		40° Turn	
	lbs	kg	lbs	kg	lbs	kg
17.5 × 25 L2 w/75% Ca Cl ₂	+1218	+552	+1752	+795	+1594	+723
14.00 × 24 G2	-737	-334	-531	-241	-482	-219
14.00 × 24 G2 w/75% Ca Cl ₂	-233	-106	+865	+392	+787	+357
W/ROPS Canopy	-530	-240	-443	-201	-443	-201
W/O Fenders	-202	-92	-183	-83	-171	-78
					-1547	-702
					-468	-212
					+764	+347
					-443	-201
					-168	-76

EQUIPMENT ATTACHMENTS

BUCKETS

TYPE

TYPE	SAE Rated Capacity		Struck		Cutting Edge Width	
	yd ³	m ³	yd ³	m ³	Inches	mm
General Purpose	1.75	1.34	1.41	1.08	94.6	2403
General Purpose	2.0	1.53	1.63	1.25	94.6	2403
General Purpose	2.5	1.91	2.07	1.58	94.6	2403
4-in-1	1.5	1.2	1.29	1.0	95.6	2469
4-in-1	1.75	1.34	1.41	1.08	95.6	2469

4-in-1 SPECIFICATIONS

A — Forward dumping clearance @ 45° discharge	9'0" (2743 mm)
B — Bottom dumping clearance @ 45° discharge	11'0" (3353 mm)
C — Hinge pin height	11'7.5" (3543 mm)
D — Overall height	17'0" (5182 mm)
E — Forward dumping reach @ 45° discharge	3'2" (965 mm)
F — Digging depth	9" (229 mm)
G — Bucket opening	3'10" (1168 mm)
Reach @ 45° dump angle, 7" (2130 mm) clearance	4'6" (1372 mm)
Tilt back @ ground level	50°
Closure force, clamp to cutting edge	12,850 lb (5829 kg)
Weight	1900 lb (862 kg)

NOTE: SAE code adhered to, 17.5 x 25 L2, 12 PR tires used.

STANDARD EQUIPMENT

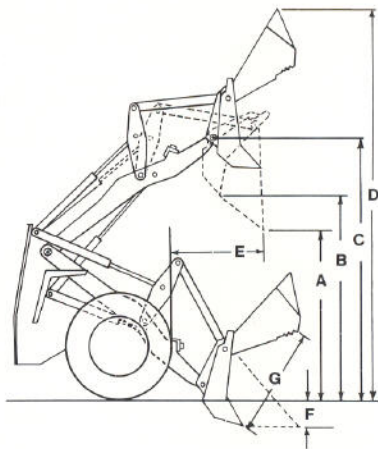
ROPS canopy with seat belt. Alternator with voltage regulator. Batteries. 24 volt start. Front and rear flood lights. Taillight and stop light. Pusher fan. Two-element, dry-type air cleaner. Air horn. Powershift transmission. Air-over hydraulic brakes. Parking brake. Alternator warning light, engine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

OPTIONAL EQUIPMENT

ROPS cab with air pressurization and sound suppression, 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. Automatic, adjustable bucket height kickout. Automatic return-to-dig mechanism. Spark arresting muffler. Air conditioning. Suspension seat. Back-up alarm. Auxiliary steering. Rotating beacon.

TIRES (front and rear)

14.00 x 24, 10 PR, traction-type, G2
17.5 x 25, 12 PR, traction-type, L2
17.5 x 25, 12 PR, rock type, L3



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.