

**case**

W30 Loader

**153 (114.1 kW) NET FLYWHEEL HORSEPOWER**

Case 504 in³ (8.26 L) 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, SEALED LOADER LINKAGE

Low profile design. All linkage in line with the loader lift arms for good visibility to bucket work area. Sealed pins extend maintenance intervals

**FRONT MOUNTED
OPERATOR'S COMPARTMENT**

Visibility, controllability, serviceability, comfort and noise reduction

**LONG 122 in (3.10 m) WHEELBASE
PLUS 40° ARTICULATION**

Combines operational stability and balance with short turning radius

CENTER-PIVOT ARTICULATION

Allows rear and front tires to track at all times

PRIORITY/DEMAND HYDRAULICS

Provides power to system in demand; loader-steering-drive train, more efficient use of horsepower available
Unit shown is equipped with non-standard items.

JI Case

A Tenneco Company



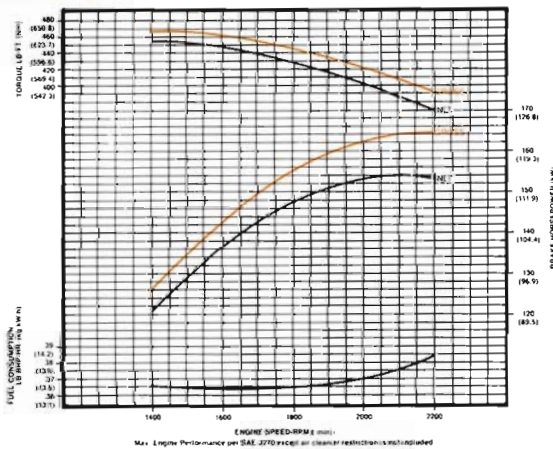
700 State Street Racine, WI 53404 U.S.A.

W30 SPECIFICATIONS

ENGINE

Make and model..... Case A504BDT
 Fuel..... Diesel
 Maximum rated horsepower
 (1) Gross165 @ 2200 rpm
 (123 kW @ 2200 r/min)
 (2) SAE net153 @ 2200 rpm
 (114.1 kW @ 2200 r/min)
 Torque, maximum lbs-ft.
 Gross466 @ 1400 rpm
 (631.8 Nm @ 1400 r/min)
 Net446 @ 1400 rpm
 (604.7 Nm @ 1400 r/min)
 Cylinders, number (valve-in-head) 6
 Bore and stroke 4.6" x 5"
 (117 mm x 127 mm)
 Displacement 504 in³ (8.26 L)
 Air cleaner (with service indicator) Two element, dry type
 Oil filter..... Full-flow type
 (1) Manufacturer's rating of maximum engine horsepower at flywheel per SAE J270.
 (2) SAE net flywheel horsepower of engine as applied to this vehicle when equipped with operating accessories per SAE 270.

POWER CURVE



ELECTRICAL SYSTEM

Voltage..... 24 volt
 Standard alternator 40 amp
 Batteries..... (4) 12 volt
 System protected by circuit breakers and fuses.

TRAVEL SPEEDS (with 20.5 x 25 tires)

	1st		2nd		3rd		4th	
	mph	km/h	mph	km/h	mph	km/h	mph	km/h
Forward	3.4	5.5	7.8	12.6	12.0	19.3	25.8	41.5
Reverse	3.7	6.0	8.5	13.7				

TRANSMISSION

Four speeds forward, two speeds reverse, powershift. Single lever control. Modulated clutching. Transmission shifts automatically from first to second and third to fourth.

TORQUE CONVERTER

Twin turbine integral with transmission. 4.92 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 16.6" (422 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, 4-wheel, caliper disc. Air actuated mechanical parking brake with transmission disconnect. Automatically sets if air pressure drops below effective operating level. Red warning light indicates when parking brake is engaged.

STEERING

Center pivot articulated design with hydrostatic power steering. Front and rear wheels always track.

Steering angle—each direction from center..... 40°

Steering cylinders..... 3.25" dia. x 15.0" stroke
 (82.6 mm dia. x 381.0 mm stroke)

Turning circle outside tires 36'6" (11.13 m)

LOADER HYDRAULIC SYSTEM

Cylinders: Double-acting with hardened and chrome-plated rods to increase strength and resist corrosion.

Lift (2)..... 5.5" dia. x 33.48" stroke
 (139.7 mm dia. x 850.4 mm stroke)

Bucket (2) 4.5" dia. x 39.55" stroke
 (114.3 mm dia. x 1005 mm stroke)

Pump: Dual tandem, gear-type, engine driven, transmission mounted.

Capacities:

Total pumps..... 76 gpm @ 2300 rpm @ 2450 psi
 (288 lit/min @ 2300 r/min @ 16 892 KPa)

Secondary pump 38 gpm @ 2300 rpm @ 2450 psi
 (144 lit/min @ 2300 r/min @ 16 892 KPa)

Primary pump 38 gpm @ 2300 rpm @ 2600 psi
 (144 lit/min @ 2300 r/min @ 17 926 KPa)

Control valve: Open-center, series parallel circuit.

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

Reservoir: Closed, positive air pressurized reservoir insures exclusion of contaminants and positive input flow to pump. All hydraulic oil passes through two 10 micron filters, furnishing clean oil to all components of the hydraulic system.

Hydraulic cycle time:

(Rated load in bucket)	Seconds
Raise	5.7
Lower	3.6
Dump	2.1
Total	11.4

LOADER LIFT ARMS

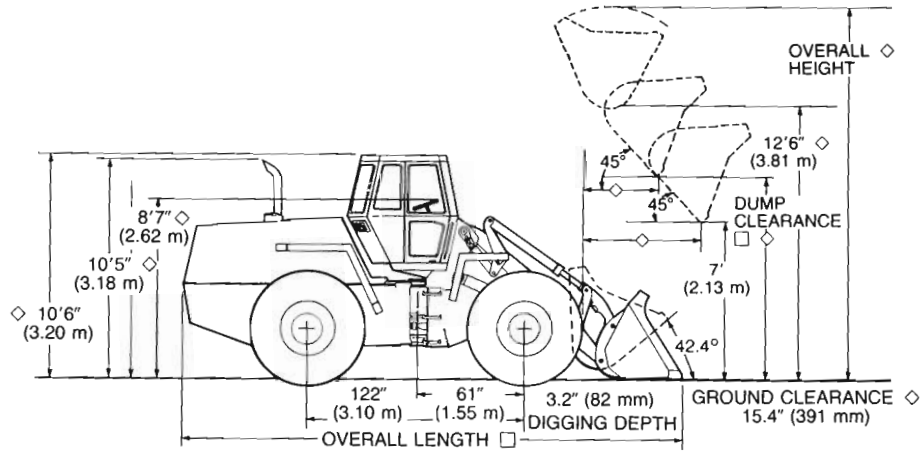
All loader and bucket pins are of sealed design for lubrication retention and dirt exclusion. Sealed pins allow service intervals of 100 hours on all loader and bucket pins.

SERVICE CAPACITIES

	U.S. Gals	Litres
Fuel tank	80.0	302.8
Hydraulic system (tank only)	28.1	106.4
Hydraulic system (total)	48.0	181.7
Transmission and torque converter	8.0	30.3
Engine crankcase with filter	7.0	26.5
Differentials and final drives (front and rear)		
Differentials, each	3.25	12.3
Wheel ends, each	1.0	3.8
Cooling system	14.8	56.0

NOTE: Specifications herein are in accordance with all Society of Automotive Engineer's standards (SAE). The applicable loader standard is SAE J732C.

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



PERFORMANCE SPECIFICATIONS — Loader ratings are governed by SAE J732c and 742B.

BUCKET TYPE — Capacity	GENERAL PURPOSE	GENERAL PURPOSE	MATERIAL HANDLING	4-IN-1*
SAE Rated (nominally heaped)	2.5 yd ³ (1.91 m ³)	3.0 yd ³ (2.29 m ³)	3.5 yd ³ (2.68 m ³)	2.5 yd ³ (1.91 m ³)
Struck	2.0 yd ³ (1.53 m ³)	2.5 yd ³ (1.87 m ³)	2.9 yd ³ (2.20 m ³)	2.1 yd ³ (1.64 m ³)
Cutting edge width	105.3 in (2.68 m)	105.3 in (2.68 m)	105.3 in (2.68 m)	105.4 in (2.68 m)
Weight	1910 lbs (866 kg)	2080 lbs (944 kg)	2225 lbs (1009 kg)	2500 lbs (1134 kg)
Dump Clearance @ 45° Dump — Full Height	9'4.9" (2.87 m)	9'3.2" (2.82 m)	8'10.9" (2.72 m)	9'1.3" (2.78 m)
Bucket Reach @ Full Height & 45° Dump	3'4.7" (1.03 m)	3'6.4" (1.08 m)	3'10.7" (1.19 m)	3'1.9" (.96 m)
Bucket Reach @ 7' (2.13 m) Clearance & 45° Dump	4'9.7" (1.47 m)	4'10.8" (1.49 m)	5'6.5" (1.69 m)	4'5.5" (1.36 m)
Loader Clearance Circle — Bucket in Carry Position	39'4" (11.99 m)	39'6" (12.04 m)	39'8" (12.09 m)	39'8" (12.09 m)
Overall Length	23'1" (7.04 m)	23'4" (7.11 m)	23'10" (7.26 m)	24' (7.32 m)
Overall Height	15'8" (4.78 m)	16'5" (5.00 m)	16'7" (5.06 m)	16'9" (5.11 m)
SAE Breakout Force, lbs	27,820 (12 619 kg)	26,000 (11 793 kg)	22,410 (10 165 kg)	28,100 (12 746 kg)
SAE Tipping Load, Straight, lbs**	26,030 (11 807 kg)	25,884 (11 741 kg)	25,715 (11 664 kg)	24,700 (11 204 kg)
35° Turn	22,781 (10 333 kg)	22,693 (10 693 kg)	22,472 (10 193 kg)	21,617 (9805 kg)
40° Turn	21,838 (9906 kg)	21,768 (9874 kg)	21,531 (9766 kg)	20,724 (9400 kg)
Operating Load, lbs**	10,919 (4953 kg)	10,884 (4937 kg)	10,766 (4883 kg)	10,362 (4700 kg)
Maximum Rated Load, lbs (kg)***	10,200 (4627 kg)	10,200 (4627 kg)	10,200 (4627 kg)	10,200 (4627 kg)
Hydraulic Lifting Capacity @ Full Height	16,230 (7362 kg)	16,050 (7280 kg)	15,920 (7221 kg)	15,880 (7203 kg)
SAE Operating Weight, lbs**	29,060 (13 181 kg)	29,230 (13 258 kg)	29,375 (13 324 kg)	29,650 (13 449 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 20.5 X 25 X RAT 1* tires, with 1800 lbs (816 kg) CaCl₂ solution in rear tires, ROPS cab, fenders, counterweight, fully serviced, and with 175 lb (79.4 kg) operator.

***Continuous loads exceeding specified rated load can affect service life of machine.

Selected Items	Operating Weight Adjustments		Tipping Load Adjustments					
			Straight		35° Turn		40° Turn	
	lbs	kg	lbs	kg	lbs	kg	lbs	kg
W/ROPS canopy	-565	-256	-475	-216	-509	-231	-520	-236
17.5 x 25, L2, 12PR	-2844	-1290	-3380	-1533	-2908	-1319	-2775	-1259
17.5 x 25, L2, 12PR W/75% CaCl ₂	-1644	-746	-1622	-736	-1424	-646	-1359	-616
17.5 x 25, L3, 12PR	-2736	-1241	-3302	-1498	-2841	-1289	-2712	-1230
17.5 x 25, L3, 12PR W/75% CaCl ₂	-1436	-651	-1545	-701	-1358	-616	-1305	-592
17.5 x 25 X RAT 1*	-2540	-1152	-3162	-1434	-2721	-1234	-2596	-1178
17.5 x 25 X RAT 1* W/75% CaCl ₂	-1340	-608	-1405	-637	-1237	-561	-1190	-540
20.5 x 25, L2, 12PR	-2280	-1034	-2964	-1345	-2523	-1144	-2398	-1088
20.5 x 25, L2, 12PR W/75% CaCl ₂	-480	-218	-339	-154	-289	-131	-275	-125
20.5 x 25, L2, 16PR	-2112	-958	-2855	-1295	-2457	-1115	-2344	-1063
20.5 x 25, L2, 16PR W/75% CaCl ₂	-312	-142	-220	-100	-188	-85	-179	-81
20.5 x 25, L3, 12PR	-1944	-882	-2735	-1241	-2353	-1067	-2246	-1019
20.5 x 25, L3, 12PR W/75% CaCl ₂	-144	-65	-102	-46	-86	-39	-83	-38
20.5 x 25, L3, 16PR	-1800	-816	-2632	-1194	-2264	-1027	-2161	-980
20.5 x 25, L3, 16PR W/75% CaCl ₂	0	0	0	0	0	0	0	0
20.5 x 25, X RAT 1*	-1800	-816	-2632	-1194	-2264	-1027	-2161	-980
20.5 x 25, X RAT 1* W/75% CaCl ₂	0	0	0	0	0	0	0	0
23.5 x 25, L2, 12PR	-516	-234	-1718	-779	-1487	-675	-1412	-641
23.5 x 25, L3, 12PR	-112	-51	-1298	-589	-1118	-507	-1072	-486
23.5 x 25, X RAT 1*	+48	+22	-1318	-598	-1144	-519	-1095	-497
Without Fenders	-350	-159	-268	-122	-239	-108	-230	-104
Without Counterweight	-1246	-566	-2885	-1311	-2457	-1117	-2328	-1058
With Bucket Teeth	+150	+68	-193	-88	-245	-111	-261	-119

OPERATING DIMENSIONS

	17.5 x 25, L2/L3/X RAT 1* tires	20.5 x 25, L2/L3/X RAT 1* tires	23.5 x 25, L2/L3/X RAT 1* tires
Tread	79.9" (2.03 m)	79.9" (2.03 m)	80.7" (2.05 m)
Width over tires	97.8" (2.48 m)	102.0" (2.59 m)	105.7" (2.69 m)
Change in vertical dimensions	-2.5" (63 mm)	None	+2.64" (67 mm)

EQUIPMENT ATTACHMENTS

4-IN-1® BUCKET SPECIFICATIONS

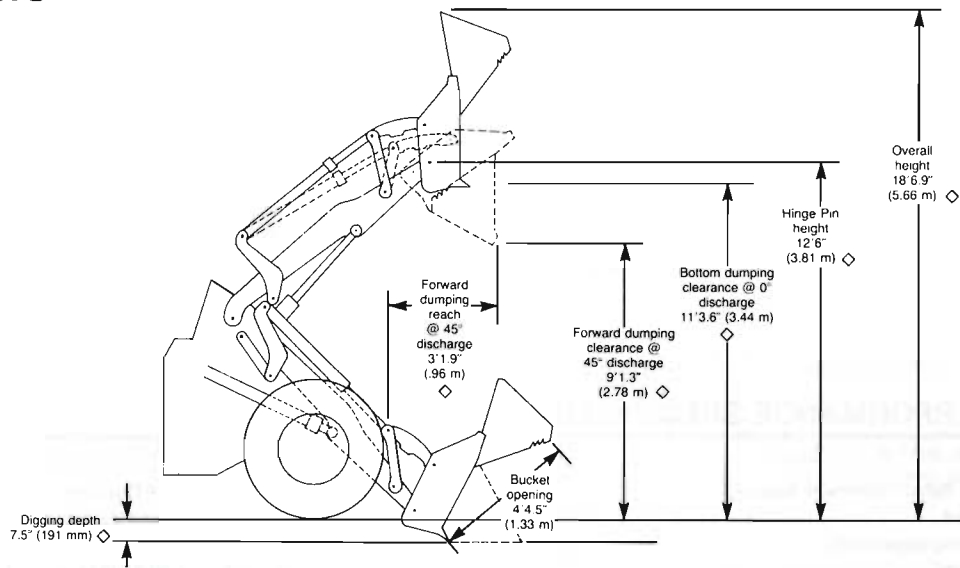
Reach @ 45° dump angle, 7'0"
(2.13 m) clearance, 4'5.5" (1.36 m)

Tilt back @ ground level, 47.2°

Weight, 2500 lbs (1134 kg)

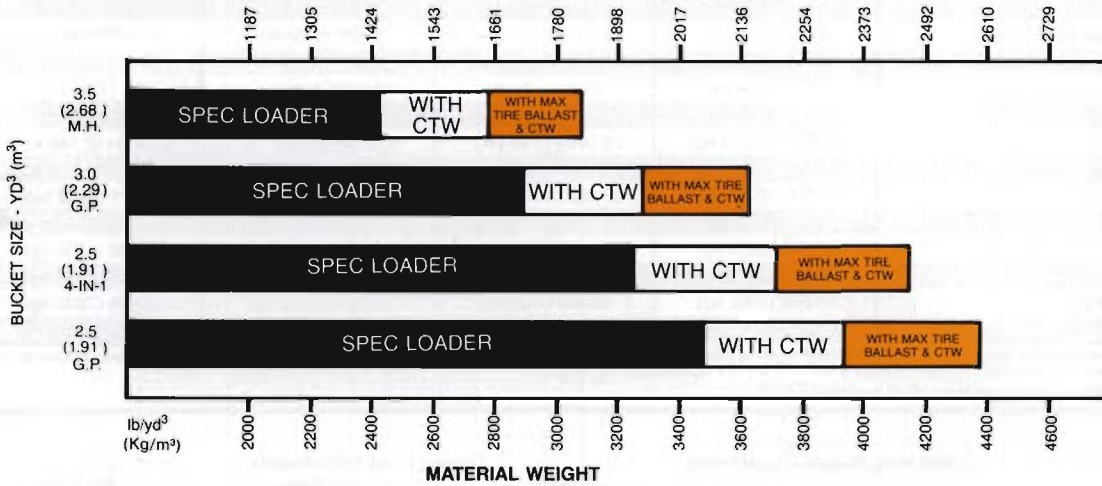
NOTE: 20.5 x 25
X RAT 1" tires used.

◇ Varies with tire size – refer to performance specifications



W30 BUCKET SELECTION CHART

Spec Loader includes all standard equipment, 20.5 x 25 X RAT 1" tires, ROPS cab, fenders, 175 lb (79 kg) operator, and fully serviced



MATERIAL	lg/yd³	kg/m³
Sand, wet	3500	2075
Sand & Gravel, wet	3375	2000
Gravel, wet, 1/2" x 2"	3375	2000
Sand, slightly damp	3240	1920
Gravel, pit run (graveled sand)	3240	1920
Clay & gravel, wet	3085	1830
Slag, broken	2970	1760
Trap rock, broken	2950	1750
Sand & gravel, dry	2916	1730
Earth, soft loose mud	2916	1730
Gravel, dry, 1/4" x 2"	2835	1680
Granite, broken or crushed	2778	1645
Stone, crushed	2700	1600
Sand, dry loose	2700	1600
Gypsum, crushed	2700	1600
Gravel, sand & clay, loose	2700	1600
Earth, wet excavated	2700	1600
Clay & gravel, dry	2700	1600
Clay, wet lumps	2700	1600
Limestone, broken or crushed	2625	1555
Gravel, loose dry	2565	1520
Sandstone, broken	2550	1510
Earth, moist excavated	2430	1440
Earth, loam, dry excavated	2100	1245
Coal, anthracite, broken	1857	1100
Clay, dry excavated	1847	1095
Clay, dry lumps	1822	1080
Coal, bituminous, broken	1413	840
Garbage, wet	1350	801
Ashes	1100	653
Silage	865	513
Snow, wet	400	237
Snow, dry	150	89

Bucket recommendations shown above are based on normal materials and average operation conditions. When selecting the proper bucket for a specific application other factors, such as loadability, material characteristics, terrain and other pertinent job conditions must also be considered.

STANDARD EQUIPMENT

40 amp alternator with voltage regulator • Batteries, 24 volt electric start • Front and rear flood lights • Stop and tail lights • ROPS canopy with seat belt • Pusher fan • Two element, dry-type air cleaner with rain cap • Air cleaner restrictor indicator • Full-flow hydraulic system filters with replaceable elements • Bucket type seat • Air horn • Bucket and lift levers with power assist and electromagnetic detents • Hydraulic power shift transmission • Planetary axles with torque proportioning differentials • Transmission oil cooler • 4-wheel, air over hydraulic caliper disc brakes • Parking brake with transmission disconnect • Hydrostatic power steering • Tubeless tires • Diesel engine • Drawbar • Drawbar pin • Automatic return-to-dig • Automatic height control • Hydraulic oil cooler • Centrally located fuse box • Low air pressure warning buzzer • Gauges (Engine water temperatures, converter oil temperature, air pressure, fuel level, hourmeter, tachometer) • Indicator lights (Alternator, engine oil pressure, transmission clutch pressure, air cleaner restrictor, hydraulic filter restrictor, parking brake) • Bucket position indicator, anti-freeze.

OPTIONAL EQUIPMENT

ROPS cab with air pressurization and sound suppression, seat belt accompanies cab • 3-spool hydraulic plumbing • Buckets • Bucket teeth • Hood side panels • Fenders • Beacon • Heater (36,000 Btu/hr) • Defogger • Air conditioner (2-ton) • Turn signals and flashers • Suspension seats • Retractable 2" and 3" seat belts • Flood and driving light guards • Floodlights • Driving lights • 65 amp alternator • Spark arrestor muffler • Lockup kit • Cold weather starting equipment • Counterweights • Auxiliary steering-ground drive • Backup alarm • Rear windshield wipers • Pre-cleaner • Lift and tie-down brackets • Cigar lighter • Tire inflation kit • Voltmeter and engine oil pressure gauges • Drive line guards.

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.

Sold and Serviced by: