

Zettelmeyer

made in W-Germany

ZL 5001 F

Wheel Loader Featuring Load-Sensitive Suspension



Progress is our Tradition

Wheel Loader ZL5001 F



Engine

Make Deutz diesel, 4-cycle
 Type F 10L 413F
 Gross Power @ 2200 rev/min 222/302 kW/hp
 Net Power @ 2200 rev/min DIN 70020 198/269 kW/hp
 Max. torque @ 1400 rev/min 1015 Nm
 No. cylinders/configuration 10/V
 Bore/stroke 125/130 mm
 Total displacement 15953 cm³
 Combustion system direct injection
 Cooling air

Electrical system:

Batteries 2 x 12/143 V/Ah
 Alternator 28/55 V/A
 Starter 24/5.4 V/kW



Transmission

Full powershift planetary-type transmission with integral torque converter and automatic lock up in 3rd and 4th gear.
 Four speeds forward/reverse. Soft-shift feature for full-power direction change in 1st and 2nd gear.
 Optional long differential ratio for fast top speed.

	Speed	
	Short Diff. Ratio Forward/Reverse km/h	Long Diff. Ratio Forward/Reverse km/h
1st gear	5.0	6.0
2nd gear	10.5	13.0
3rd gear	25.0	31.0
4th gear	48.0	62.0



Axles and Suspension

Two hydropneumatic cylinders front and two rear with leading and trailing frames provide a constant load sensitive suspension system.
 Spiral bevel pinion and ring gear differentials.
 All wheel drive. Limited slip differentials with hub mounted planetary final drives in both axles.

Ground clearance 440 mm
 Track 2180 mm
 Wheel travel 300 mm
 Angle of oscillation ± 8°



Brakes

1. Service brake: air over hydraulic actuated disc brakes on all four wheels. Two calipers on each wheel. Dual circuit for front and rear axles. Automatic transmission declutch with brake pedal depression.
2. Parking brake: spring applied air released disc brake mounted at the transmission output shaft acting upon all four wheels.



Tyres

Standard: 26.5 R 25 (traction tread) (L-2) Rim
 22.00-25
 Optional: 23.5 R 25 (traction tread) (L-2) 22.00-25
 23.5 R 25 (rock tread) (L-3) (L-4) (L-5) 19.50-25

NOTE: Under certain job conditions, a specific tread pattern may be required or, the t-km/h capability of standard or optional tyres may be exceeded. We recommend that tyre manufacturers be consulted for optimum tyre selection.



Steering

Articulated frame steering with 40° steering angle to both sides.
 Semi integral power steering.

Two double-acting steering cylinders

Axial piston pump with constant flow rate and pressure-compensation control.

Flow @ 2200 rev/min 100 litres/min
 Relief valve pressure 170 bar

Emergency steering pump: transmission mounted ground driven radial piston pump.



Hydraulics

Two double-acting tilt cylinders
 Two double-acting lift cylinders

Control valve- two spool system as standard equipment.

Gear-type tandem pump provides two hydraulic speeds.

Flow @ 2200 rev/min 2 x 188.5 litres/min
 Relief valve pressure 180 bar

Common tank for working and steering hydraulics safeguarded by a breather valve.

Filters can be changed without having to drain the tank.

Automatic bucket leveller

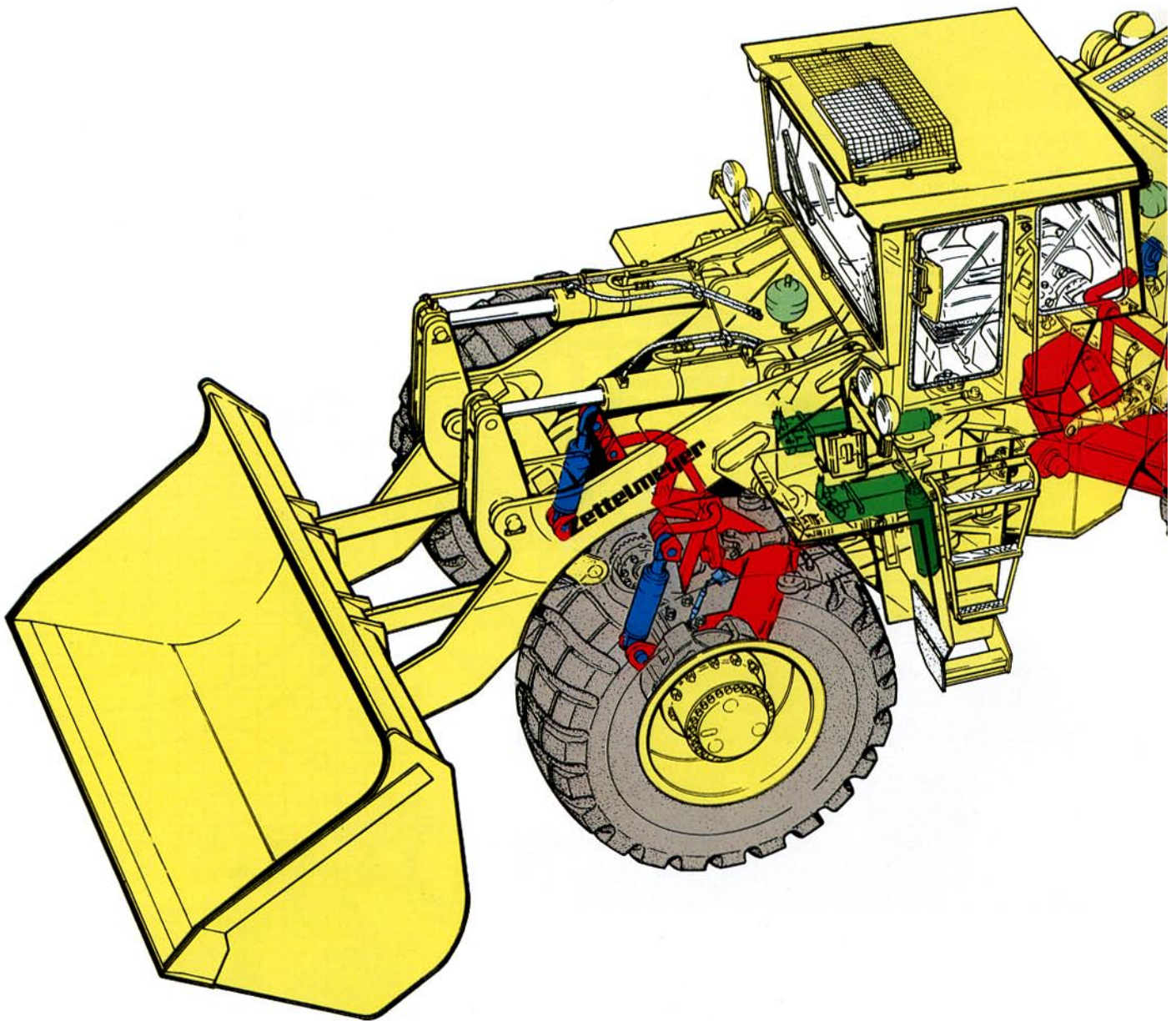
Lift time 6.8 sec.
 Lowering time 4.6 sec.
 Dump time 1.7 sec.
 Crowd time 1.3 sec.










Service Refill Capacities

Fuel tank 450.0 litres
 Engine 28.0 litres
 Hydraulic system incl. tank 400.0 litres
 Front axle 20.5 litres
 Rear axle 20.5 litres
 Transmission 38.0 + 7.0 litres

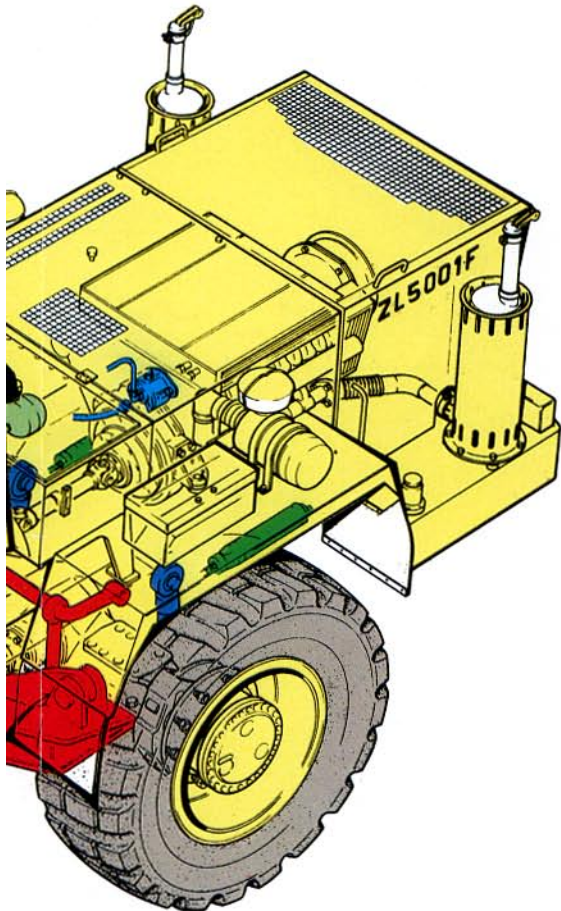
Hydropneumatic Suspension – the Key to Unrivalled Cost-Effectiveness and Unique Operator Comfort



-  free floating axle A-frames and stabilizers
-  suspension cylinders
-  suspension pump (axial piston type)
-  levelling valve

-  master accumulators
-  wheel accumulators (piston side of cylinder)
-  low pressure accumulators (rod side of cylinder)

Zettelmeyer ZL 5001 F – the Future Today



Your Problems . . .

- Extensive wear and tear in loader frame linkage, articulation joint, and power train components;
- high amount of bucket spillage;
- limited productivity; particularly as haul distances increase;
- operator discomfort and low efficiency.

. . . Our Solution:

The **load-sensitive suspension system** of the ZL 5001, trend-setting technology from Zettelmeyer – unique in the world!

- The hydropneumatic suspension adjusts automatically to load conditions (empty, laden, working at the face). As bucket lifts through its loading arc, suspension automatically actuates and so boosts the breakout force;
- purpose built for load and carry operations;
- a revolutionary concept for contracting, mining and quarrying industries utilizing well matched components;
- a proven design from 10 years of engineering experience with hydropneumatic suspensions.

for Your Benefit . . .!

- Highly effective reduction in shockloads to all structural and powertrain components **reduces operating costs**;
- **bucket spillage minimized** thereby increasing production and reducing haul road maintenance;
- **high productivity** through speed and efficiency rather than volume with the additional benefit of **boosted breakout force**. Extension of economical load and carry distances, with **less capital investment and lower fuel costs**;
- improved ride comfort for the operator and low noise levels, reduces operator fatigue and **increases job efficiency**.

Front suspension cylinders with stabilizing valve



Front levelling valve



Rear suspension cylinder and accumulator





Operating Data

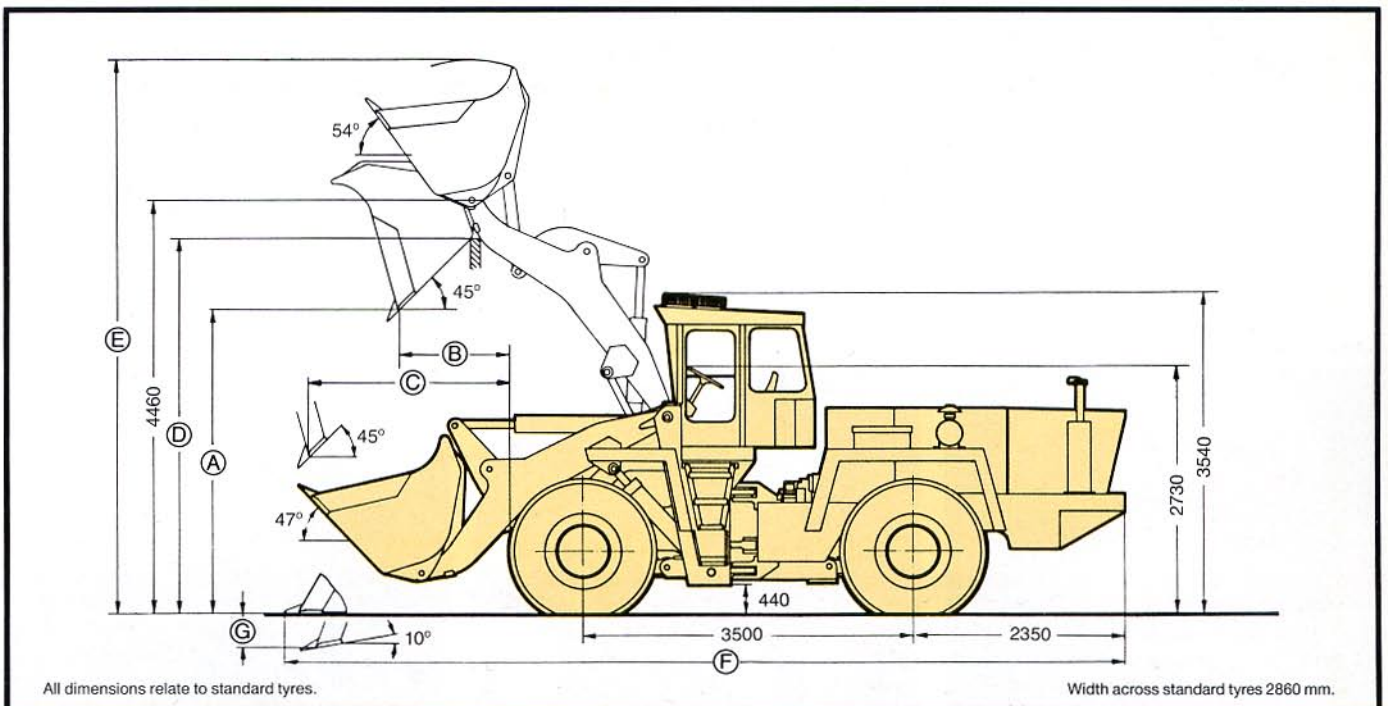
Buckets		Bucket	Rock Bucket Spade Nose	Bucket	Rock Bucket Straight	Bucket	Bucket
Dimensions and weights with standard tyres and 500 kg standard counterweight							
Material density max.	t/m ³	2.3	2.2	1.9	1.8	1.7	1.1
Capacity, heaped	m ³	3.5	3.5	4.0	4.0	4.5	6.0
Capacity, struck	m ³	3.0	3.0	3.5	3.5	3.9	5.2
Bucket weight with teeth	kg	1850	2450	2000	2600	2100	2300
Bucket teeth		9	8	9	8	9	9
Static-tipping load, straight	kg	18500	18300	18300	17700	18000	17300
Static-tipping load at 40°	kg	16300	16100	16100	15600	15800	15200
Breakout force	daN	22000	18500	20500	20000	18400	16500
Hydraulic lifting capacity	daN	25100	24500	24800	24200	24500	23400
Operating weight	kg	23450	24050	23600	24200	23700	23900



Dimensions

(A) Dump height	mm	3330	3150	3270	3230	3170	2930
(B) Reach at max. height	mm	1020	1140	1080	1050	1180	1420
(C) Reach max.	mm	1900	2020	1960	1930	2060	2300
(D) Load over height	mm	4070	4050	4070	4050	4070	4070
(E) Lift height max.	mm	5910	6090	5980	6090	6040	6260
(F) Total length	mm	8750	8970	8840	8850	8990	9320
(G) Digging depth at 10°	mm	295	380	310	360	335	390
Turning radius, outside bucket	mm	6880	6900	6920	6920	6980	7200
Bucket width	mm	3000	3000	3000	3000	3000	3000

Operating data in accordance with SAE standards. All technical data relate to the standard version. Machine illustrations may show optional features.





Standard Equipment

Comfort ROPS cab

- Detachable walk-through cab with flexible mountings, located on the front frame for better sound and thermal insulation whilst providing excellent all-round visibility on the job.
- Insulating and acoustic lining
- Lockable doors
- 4-way adjustable driver's seat
- Passenger's seat
- Seat belts

- Steering wheel spinner knob
- Neutral start switch

Gauges:

- Fuel gauge
- Hour meter
- Speedometer
- Tachograph
- Transmission temp. gauge
- Transmission shift press. gauge
- Hydraulic pressure gauge
- Dual air pressure gauge
- Engine temperature gauge
- Engine oil pressure gauge

Indicator lamps for:

- Direction indicator
- Main beam
- Battery charging
- Hydraulic pump (2nd speed)
- Suspension

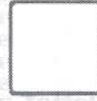
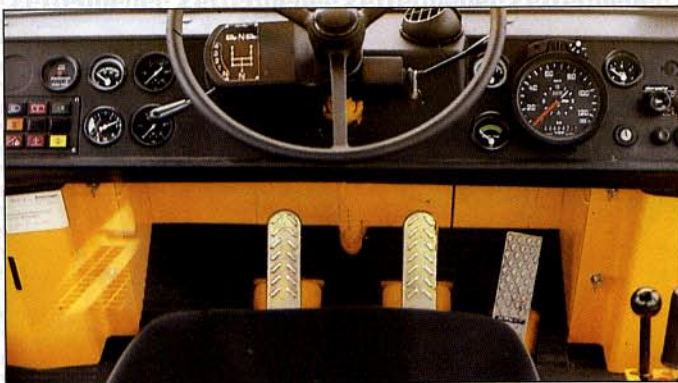
Warning lights for:

- Air filter restriction
- Hydraulic filter restriction
- Parking brake
- Brake fluid
- Emergency steering pump

- 24 V power socket
- Heater with defroster
- Instrument lighting
- Storage compartment in the cab
- Tool box
- Interior lighting
- Radio
- Safety glass
- Windscreen wiper front and rear
- Windscreen washer
- Sliding windows in the doors
- Hinge-out cab roof hatch

General

- Automatic drainage of air system
- Alcohol evaporator
- Tyre inflation kit
- Alternator 55 A
- Dry-type air filter with safety cartridge
- Cold start aid
- Transmission declutch
- Automatic bucket leveller
- Front working floodlights
- Fenders and service platforms
- Hoodsides
- Lockable fuel-tank cap
- Vertical exhaust
- Towing device
- External rear view mirrors
- Safety kit
- Counterweight
- Reversing lights



Optional Equipment

- Dual air filtration
- Long differential ratio
- Whirl chamber combustion engine with reduced emission

- Dashboard cover
- Air conditioning
- Single lever loader control
- Auxiliary hydraulics, front
- Extended lift arms

- »QC« Quick change attachment carrier, mechanical or hydraulic
- Attachments:
 - QC Snow plow
 - QC Snow blower
 - QC Front winch
 - QC Hydraulic breaker
- QC Tree transplanting bucket
- QC Log grapple

- Lifting eyes
- FOPS guard
- FOPS plate
- Wide range of bucket sizes and types with or without teeth
- Silo bucket
- Extra-wide bucket
- Brick bucket
- 4 in 1 bucket
- High-tip bucket
- Bolt-on cutting edge

