



## Clark 500 Internal Combustion Rider

### C500 Y 300 D Internal Combustion Pneumatic Tire Truck

**30000 lbs. Rated Capacity  
at 24-in. Load Center**

*13 600 kg Rated Capacity  
at 600 mm Load Center*

**Diesel**

SPEED ON GRADE:	Loaded		Empty	
	mi/h	km/h	mi/h	km/h
Perkins				
0% .....	14.1	22.7	19.4	31.2
10% .....	2.5	4.0	4.7	7.6
24.9% .....	@ 1.0	1.6	—	—
Detroit				
0% .....	15.2	24.5	20.0	32.2
10% .....	2.6	4.2	5.0	8.0
26.0% .....	@ 1.0	1.6	—	—
Cummins				
0% .....	20.5	33.0	24.0	38.6
10% .....	3.8	6.1	7.2	11.6
32.8% .....	@ 1.0	1.6	—	—

MAX. DRAWBAR PULL:	lbs.	N
Perkins, loaded.....	22 346	99 395
Empty @ 0.9 cf.....	12 074	53 705
Detroit, loaded.....	23 449	104 301
Empty @ 0.9 cf.....	12 074	53 705
Cummins, loaded.....	25 820	114 847
Empty @ 0.9 cf.....	12 074	53 705

MAX. GRADEABILITY %	Loaded	Empty
Perkins (0.9 cf).....	37.3	33.6
Detroit (0.9 cf).....	39.4	33.6
Cummins (0.9 cf).....	44.1	33.6

LIFTING SPEEDS:	ft/min	m/s
Loaded-Perkins & Det.....	54.0	0.27
Empty*-Perkins & Det.....	114.0	0.58
Loaded, Cummins.....	50.0	0.25
Empty*, Cummins.....	114.0	0.58

\* In high speed lift mode.

LOWERING SPEEDS:	ft/min	m/s
Loaded.....	61.0	0.31
Empty.....	66.0	0.34

**ENGINE: STANDARD** - Perkins Model 6.354, six-cylinder, four-cycle diesel with direct fuel injection.

Displacement.....354 cu in (5.81 L)  
Max. No Load Governed Speed 2800 RPM

**OPTIONAL** - Detroit Diesel Model 4-53N45, four-cylinder, two-cycle diesel with direct fuel injection.

Displacement.....212 cu in (3.48 L)  
Max. No Load Governed Speed 2800 RPM

**OPTIONAL** - Cummins Diesel Model V-504-C eight-cylinder, four-cycle diesel with camshaft-actuated fuel injectors.

Displacement.....504 cu in (8.3 L)  
Max. No Load Governed Speed 2640 RPM

Fuel tank capacity 56 gallons (212 L). Cooling system capacity 19 quarts (18 L) Perkins & Detroit Models; 33 quarts (31 L) Cummins Models.

**FILTERS:** Replacement cartridge type engine oil filter. Donaldson Cyclopac, vertically mounted, two stage, dry type air cleaner with five-micron (*five-micrometer*) replaceable cartridge. Transmission oil filter is high capacity full-flow replacement cartridge type with built-in bypass valve. Hydraulic system employs two parallel 25-micron (*25-micrometer*) full-flow cartridge type filters with bypass valves located prior to the main pump. Five-micron (*five-micrometer*) filter in sump breather cap.

**ELECTRICAL SYSTEM:** 12-volt, 42-amp\* Delco alternator and sealed electric starter with positive pinion engagement, and anti-reengagement devices. Gauges for reading engine hours, engine oil pressure, engine temperature, battery charging rate, fuel level and air pressure of brake system. Electric horn with button on steering wheel. Indicator lights for transmission warn of high torque converter oil temperature and low transmission charging pump pressure. Warning buzzer for low pressure in brake system.

**HYDRAULIC SYSTEM:** Lift, lower, tilt and auxiliary control levers that are seat deck mounted for right hand operation. Two speed lift system provides increased lift rate for raising unloaded forks. Main hydraulic pump is gear driven by transmission. System fluid capacity is 46.5 gallons (176 L). Sump tank of 60 gallons (227 L) capacity is integral with truck frame.

**DRIVE AXLE:** Clark planetary, double reduction drive axle. Reduction ratio of 5.3:1<sup>†</sup> at the differential and 3.5:1 at the axle end. Drum type parking brake that is located on differential pinion shaft.

**HYDRATORK TRANSMISSION:** Clark constant mesh, three speed, full reversing, powershift transmission. Torque converter multiplies engine torque 3:1. Transmission fluid is cooled in an oil cooler located in the engine radiator. Gear drives on the transmission housing provide accessible location for power steering, main hydraulic and transmission charging pumps. Transmission test ports and filter are provided in same location for ease of access. Cowl mounted speed range and directional control levers are cable operated. A left foot pedal provides both inching and braking control. Right pedal for braking only.

**UPRIGHT:** Interlocking "I" beams that are reinforced with heavy tie bars. Four canted,

variable retainment upright rollers and four canted load rollers on the carriage. Six lateral thrust carriage rollers that bear on the inner rails to resist deflection due to off-center loading. Upright rollers are shim adjustable and thrust rollers are eccentric adjustable without major upright disassembly. Non-rigid lift cylinder and tilt cylinder mounts that minimize side loading on cylinder rods, seals and packings. Lift and tilt cylinders that are serviceable without cylinder removal. Tilt cylinders that are key locked to yokes for positive adjustment. Cylinder rods are chrome plated. Trunnion mount upright has stainless steel inserts that operate on replaceable, low friction synthetic fiber trunnion bushings. Urethane rod wipers and double "U" cup packings on lift and tilt cylinders. Hydraulic counterbalance valve in tilt circuit. Load lowering control valve regulates lowering speed in relation to load weight. Upset forged and heat treated forks that have full section strength at fork heel.

**FRAME:** Heavy, precision aligned, one piece structure with integral fuel and hydraulic tanks. Frame sections of .75 in. (19 mm) thick by 22 in. (559 mm) high longitudinal members that are enclosed with machine formed .38 in. (9.5 mm) plate.

**POWER BRAKES:** Hydraulic actuated air brakes operated by right and left foot pedals. 6.0 in. (152 mm) wide brake shoes operate in 16.5 in. (419 mm) diameter drums. Brake system is designed to provide multiple brake applications with engine off. Operating air pressure is 100 psi (690 kPa).

**POWER STEERING SYSTEM:** Full time, fluid linked for low maintenance and positive hand wheel control. High strength steer axle articulates up to 8.0 in. (203 mm) on two synthetic bushings. Pressure lubricant fittings on axle mount bushings, king pins and tie rod ends.

**OVERHEAD GUARD:** Meets ANSI B56.1 safety standards and has been subjected to an impact test of 36 000 ft-lbs (48 800 N·m).

**ADDED ADVANTAGES:** Protectoseal fuel tank cap; recessed tow pin; and multipass muffler. Standard bolts are SAE grade 5, and are zinc phosphate coated or cadmium plated to resist corrosion.

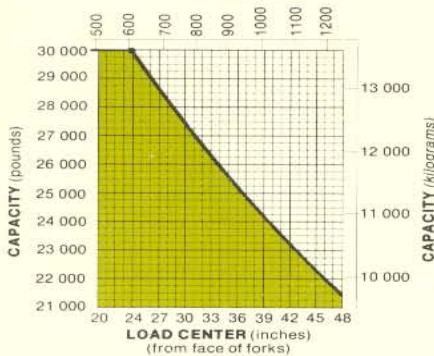
**PAINT:** Exposed surfaces have been shot-blasted, primed and painted with weather-resistant paint. Standard color is high visibility Clark green.

\* 60 amp with Cummins engine. † 5.1:1 with Cummins Engines

# C500 Y 300 D

**30000 lbs. Rated Capacity at 24-in. Load Center**  
 13 600 kg Rated Capacity at 600 mm Load Center

## GENERAL CAPACITY CHART



**NOTE:** Capacities shown above are computed with upright in vertical position. Capacity up to 30 000 lbs. at 24 in. load center applies to uprights with maximum fork heights up to 216 in. Capacity up to 13 600 kg at 600 mm load center applies to uprights with maximum fork heights up to 5486 mm. For trucks equipped with uprights above these maximum fork heights, contact factory. Specific capacities will be shown on truck nameplates.

### UPRIGHT DIMENSION TABLE

MAXIMUM FORK HEIGHT	OVERALL HEIGHT LOWERED		OVERALL HEIGHT RAISED		
	in	mm	in	mm	
144	3658	127	3226	207.5	5271
180	4572	145	3683	243.5	6185
204	5182	157	3988	267.5	6795
*216	5486	163	4140	279.5	7099
240	6096	175	4445	303.5	7709

Other upright heights available, contact Clark representative.  
 \*Preferred standard height.

### SERVICE WEIGHT:

	lb	kg
with 216 in (5486 mm) upright		
C500 Y300D	34 000	15 422

### UNDERCLEARANCES:

with rated load	
Upright	9.2 in (234 mm)
Drive Axle	10.7 in (272 mm)
with no load	
Fork Carriage	9.0 in (229 mm)
Steer Axle	13.6 in (345 mm)
Frame	16.0 in (406 mm)
Counterweight	15.2 in (386 mm)

**INSURANCE CLASSIFICATIONS:** Classified by Underwriters' Laboratories Inc. as to fire hazard only; types D, and DS industrial trucks. See UL Index of Classified Products.

### PERFORMANCE CRITERIA...

Performance values based on full power engine operating conditions in accordance with SAE Standard J816 [85°F and 500 ft. altitude (29°C and 152 m)].

**NOTE:** Production engine and driveline components may vary in output and/or efficiency by ±5%. The performance shown represents nominal values which may be obtained under typical operating conditions of a standard machine. Slight variations may be expected due to local temperature and altitude and/or individual machine accessory and loaded weight conditions.

Metric specifications shown are equivalents of U.S. dimensions.

Clark products and specifications are subject to improvements and changes without notice.

